

out of proportion to the event that seemed to trigger it (departure of a client to another firm). She had withdrawn from other people and was no longer able to work or to participate in any kind of social activity. The onset of her depression was accompanied by a number of other symptoms, including feelings of guilt, lack of energy, and difficulty sleeping. Finally, the quality of her mood was more than just a feeling of sadness; she was so profoundly miserable that she felt numb. For all of these reasons, Cathy's problems would fit the description of major depression.

Our next case illustrates the symptoms of mania, which often appear after a person has already experienced at least one episode of depression. People who experience episodes of both depression and mania are given a diagnosis of bipolar mood disorder. The symptoms of a full-blown manic episode are not subtle. People who are manic typically have terrible judgment and may get into considerable trouble as a result of their disorder. The central feature of mania is a persistently elevated or irritable mood that lasts for at least one week.

## **CASE STUDY** Debbie's Manic Episode

Debbie, a 21-year-old single woman, was admitted to a psychiatric hospital in the midst of a manic episode. She had been in psychotherapy for depression for several months while she was in high school but had not received any type of treatment since then. After she completed two semesters at a community college, Debbie found a good-paying job in the advertising office of a local newspaper, where she had been working for two years.

Debbie's manic episode could be traced to experiences that began three or four months prior to her admission to the hospital. Debbie had been feeling unusually good for several weeks. At first she didn't think anything was wrong. In fact, her impression was quite the opposite. Everything seemed to be going right for her. Her energy level was up, and she felt a renewed confidence in herself and her relationships with other people, especially with her boyfriend, who had recently moved to a distant city. Debbie initially welcomed these feelings, especially because she had been so lethargic and also tended to be reserved with people.

One day when she was feeling particularly exhilarated, Debbie impulsively quit her job and went to visit her boyfriend. Giving up her job without careful consideration and with no prospect for alternative employment was the first indication that Debbie's judgment was becoming impaired. Although she left home with only enough money to pay for her airplane ticket, she stayed for several weeks, mostly engaged in leisure activities. It was during this time that she started having trouble sleeping. The quality of her mood also began to

change. It was less often cheerful and frequently irritable. She was extremely impatient and would become furious if her boyfriend disagreed with her. On one occasion, they had a loud and heated argument in the parking lot of his apartment complex. She took off her blouse and angrily refused to put it on again in spite of his demands and the presence of several interested bystanders. Shortly after the fight, she packed her clothes and hitchhiked back home.

After returning to her parents' home, Debbie argued with them almost continuously for several days. Her moods shifted constantly. One moment she would be bubbling with enthusiasm, gleefully throwing herself into new and exciting activities. If her plans were thwarted, she would fly into a rage. She phoned an exclusive tennis club to arrange for private lessons, which she obviously could not afford, especially now that she was unemployed. Her mother interrupted the call and canceled the lessons. Debbie left the house in a fury and set off to hitch a ride to the tennis club. She was picked up by two unknown men, who persuaded her to accompany them to a party rather than go to the club. By the time they arrived at the party, her mood was once again euphoric. She stayed at the party all night and had intercourse with three men whom she had never met before.

The following day, Debbie borrowed money from a friend and took a train home. Another argument ensued when she arrived at home. Debbie struck her father and took the family car. Angry and frightened by her apparently irrational behavior, her

parents phoned the police, who found her and brought her home. When another argument broke out, even more hostile than the first, the police took Debbie to their precinct office, where she was interviewed by a psychiatrist. Her attitude was flippant, and her language was abusive and obscene. On the basis of her clearly irrational and violent mood, as well as her marked impairment in judgment, the psychiatrist arranged for her to be committed to a psychiatric hospital.

***"I am a psychic therapist, filled with the healing powers of the universe. I see things so clearly and deeply, and I must share this knowledge with everyone else."***

Debbie's behavior on the ward was belligerent, provocative, and demanding. Although she hadn't slept a total of more than four hours in the previous three days, she claimed to be bursting with energy. She behaved seductively toward some of the male patients, sitting on their laps, kissing them, and occasionally unfastening her clothing. Although her speech was coherent, it was rapid and pressured. She expressed several grandiose ideas, including the boast that she was an Olympic swimmer and that she was a premed student in college. She had no insight into the severity of her mental condition. Failing to recognize that her judgment was impaired, she insisted that she had been brought to the ward so that she could help the other patients.

"I am a psychic therapist, filled with the healing powers of the universe. I see things so clearly and deeply, and I must share this knowledge with everyone else."



**TABLE 5.2 Important Considerations in Distinguishing Clinical Depression from Normal Sadness**

1. The mood change is pervasive across situations and persistent over time. The person's mood does not improve, even temporarily, when he or she engages in activities that are usually experienced as pleasant.
2. The mood change may occur in the absence of any precipitating events, or it may be completely out of proportion to the person's circumstances.
3. The depressed mood is accompanied by impaired ability to function in usual social and occupational roles. Even simple activities become overwhelmingly difficult.
4. The change in mood is accompanied by a cluster of additional signs and symptoms, including cognitive, somatic, and behavioral features.
5. The nature or quality of the mood change may be different from that associated with normal sadness. It may feel "strange," like being engulfed by a black cloud or sunk in a dark hole.

## Symptoms

The cases of Cathy and Debbie illustrate many of the most important symptoms and signs of mood disorders, which can be divided into four general areas: emotional symptoms, cognitive symptoms, somatic symptoms, and behavioral symptoms. Episodes of major depression and mania typically involve all four kinds of symptoms.

### EMOTIONAL SYMPTOMS

We all experience negative emotions, such as sadness, fear, and anger. These reactions usually last only a few moments, and they serve a useful purpose in our lives, particularly in our relationships with other people. Emotional reactions serve as signals to other people about our current feelings and needs. They also coordinate our responses to changes in the immediate environment.

Depressed, or **dysphoric** (unpleasant), mood is the most common and obvious symptom of depression. Most people who are depressed describe themselves as feeling utterly gloomy, dejected, or despondent. The severity of a depressed mood can reach painful and overwhelming proportions. An-



The quality of a depressed mood is often different from the sadness that might arise from an event such as the loss of a loved one. Some depressed people say that they feel like they are drowning or suffocating.

drew Solomon (2001) has described the progression from sadness to severe depression in the following ways:

I returned, not long ago, to a wood in which I had played as a child and saw an oak, a hundred years dignified, in whose shade I used to play with my brother. In twenty years, a huge vine had attached itself to this confident tree and had nearly smothered it. It was hard to say where the tree left off and the vine began. The vine had twisted itself so entirely around the scaffolding of tree branches that its leaves seemed from a distance to be the leaves of the tree; only up close could you see how few living oak branches were left. I empathized with that tree. My depression had grown on me as that vine had conquered the oak; it had been a sucking thing that had wrapped itself around me, ugly and more alive than I. (p. 18)

In contrast to the unpleasant feelings associated with clinical depression, manic patients like Debbie experience periods of inexplicable and unbounded joy known as euphoria. Debbie felt extremely optimistic and cheerful—"on top of the world"—in spite of the fact that her inappropriate behavior had made a shambles of her current life circumstances. In bipolar mood disorders, periods of elated mood tend to alternate with phases of depression.

Kay Jamison, professor of psychiatry at Johns Hopkins University School of Medicine, has written an eloquent and moving description of her own experiences with mania and depression.

My manias, at least in their early and mild forms, were absolutely intoxicating states that gave rise to great personal pleasure, an incomparable flow of thoughts, and a ceaseless energy that allowed the translation of new ideas into papers and projects. (1995, pp. 5–6)

Unfortunately, as these feelings become more intense and prolonged, they can become ruinous. It may not be clear when the person's experience crosses the unmarked boundary between being productive and energetic to being out of control and self-destructive. Jamison described this subtle transition in the following way:

There is a particular kind of pain, elation, loneliness, and terror involved in this kind of madness. When you're high it's tremendous. The ideas and feelings are fast and frequent like shooting stars, and you follow them until you find better and brighter ones. Shyness goes, the right words and gestures are



suddenly there, the power to captivate others a felt certainty. There are interests found in uninteresting people. Sensuality is pervasive, and the desire to seduce and be seduced irresistible. Feelings of ease, intensity, power, well-being, financial omnipotence, and euphoria pervade one's marrow. But, somewhere, this changes. The fast ideas are far too fast, and there are far too many; overwhelming confusion replaces clarity. Memory goes. Humor and absorption on friends' faces are replaced by fear and concern. Everything previously moving with the grain is now against—you are irritable, angry, frightened, uncontrollable, and enmeshed totally in the blackest caves of the mind. (p. 67)

Many depressed and manic patients are irritable. Their anger may be directed either at themselves or at others, and frequently at both. Even when they are cheerful, people in a manic episode, like Debbie, are easily provoked to anger. Debbie became extremely argumentative and abusive, particularly when people challenged her grandiose statements about herself and her inappropriate judgment.

Anxiety is also common among people with mood disorders, just as depression is a common feature of some anxiety disorders (see Chapter 6). People who are depressed are sometimes apprehensive, fearing that matters will become worse than they already are or that others will discover their inadequacy. They sometimes report that they are chronically tense and unable to relax.

## COGNITIVE SYMPTOMS

In addition to changes in the way people feel, mood disorders also involve changes in the way people think about themselves and their surroundings. People who are clinically depressed frequently note that their thinking is slowed down, that they have trouble concentrating, and that they are easily distracted. Cathy's ability to concentrate was so disturbed that she became unable to work. She had extreme difficulty making even the simplest decisions. After she started staying home, she sat in front of the television set but was unable to pay attention to the content of even the simplest programs.

Guilt and worthlessness are common preoccupations. Depressed patients blame themselves for things that have gone wrong, regardless of whether they are in fact responsible. They

focus considerable attention on the most negative features of themselves, their environments, and the future—a combination known as the “depressive triad” (Beck, 1967).

In contrast to the cognitive slowness associated with depression, manic patients commonly report that their thoughts are speeded up. Ideas flash through their minds faster than they can articulate their thoughts. Manic patients can also be easily distracted, responding to seemingly random stimuli in a completely uninterpretable and incoherent fashion. Grandiosity and inflated self-esteem are also characteristic features of mania.

Many people experience self-destructive ideas and impulses when they are depressed. Interest in suicide usually develops gradually and may begin with the vague sense that life is not worth living. Such feelings may follow directly from the overwhelming fatigue and loss of pleasure that typically accompany a seriously depressed mood. In addition, feelings of guilt and failure can lead depressed people to consider killing themselves. Over a period of time, depressed people may come to believe that they would be better off dead or that their family would function more successfully and happily without them. Preoccupation with such thoughts then leads to specific plans and may culminate in a suicide attempt.

## SOMATIC SYMPTOMS

The **somatic symptoms** of mood disorders are related to basic physiological or bodily functions. They include fatigue, aches and pains, and serious changes in appetite and sleep patterns. People, like Cathy, who are clinically depressed often report feeling tired all the time. The simplest tasks, which she had previously taken for granted, seemed to require an overwhelming effort. Taking a shower, brushing her teeth, and getting dressed in the morning became virtually impossible.

Sleeping problems are also common, particularly trouble getting to sleep. This disturbance frequently goes hand in hand with cognitive difficulties mentioned earlier. Worried about her endless problems and unable to relax, Cathy found that she would toss and turn for hours before finally falling asleep. Some people also report having difficulty staying asleep throughout the night, and they awaken two or more hours before the usual time. Early-morning waking is often associated with particularly severe depression. A less common symptom is for a depressed individual to spend more time sleeping than usual.

In the midst of a manic episode, a person is likely to experience a drastic reduction in the need for sleep. Some patients report that reduced sleep is one of the earliest signs of the onset of an episode. Although depressed patients typically feel exhausted when they cannot sleep, a person in a manic episode will probably be bursting with energy in spite of the lack of rest.

Depressed people frequently experience a change in appetite. Although some patients report that they eat more than usual, most reduce the amount that they eat; some may eat next to nothing. Food just doesn't taste good any more. Depressed people can also lose a great deal of weight, even without trying to diet.

People who are severely depressed commonly lose their interest in various types of activities that are otherwise sources of pleasure and fulfillment. One common example is a loss of sexual desire. Depressed people are less likely to initiate sexual activity, and they are less likely to enjoy sex if their partners can persuade them to participate.

Various ill-defined somatic complaints can also accompany mood disorders. Some patients complain of frequent headaches



Manic episodes are associated with euphoria as well as boundless energy and enthusiasm.



and muscular aches and pains. These concerns may develop into a preoccupation with bodily functions and fear of disease.

## BEHAVIORAL SYMPTOMS

The symptoms of mood disorders also include changes in the things that people do and the rate at which they do them. The term **psychomotor retardation** refers to several features of behavior that may accompany the onset of serious depression. The most obvious behavioral symptom of depression is slowed movement. Patients may walk and talk as if they are in slow motion. Others become completely immobile and may stop speaking altogether. Some depressed patients pause for very extended periods, perhaps several minutes, before answering a question.

In marked contrast to periods when they are depressed, manic patients are typically gregarious and energetic. Debbie's behavior provided many examples, even after her admission to the psychiatric hospital. Her flirtatious and provocative behavior on the ward was clearly inappropriate. She found it impossible to sit still for more than a moment or two. Virtually everything was interesting to her, and she was easily distracted, flitting from one idea or project to the next. Like other manic patients, Debbie was full of plans that were pursued in a rather indiscriminate fashion. Excessive pursuit of life goals is frequently associated with the onset of manic episodes.

## OTHER PROBLEMS COMMONLY ASSOCIATED WITH DEPRESSION

Many people with mood disorders suffer from some clinical problems that are not typically considered symptoms of depression. Within the field of psychopathology, the simultaneous manifestation of a mood disorder and other syndromes is

referred to as comorbidity, suggesting that the person exhibits symptoms of more than one underlying disorder. The greatest overlap is with anxiety disorders. Among people who meet the diagnostic criteria for major depression at some point during

*Should normal sadness or grief following a loss ever be considered a disorder?*

their lives, 60 percent also qualify for a diagnosis of at least one anxiety disorder (Kessler, Merikangas, & Wang, 2007).

Alcoholism and depression are also closely related phenomena. Many people who are depressed also drink heavily, and many people who are dependent on alcohol—approximately 40 percent—have experienced major depression at some point during their lives (Swendsen & Merikangas, 2000). The order of onset for the depression and alcoholism varies from one person to the next. Some people become depressed after they develop a drinking problem; others begin drinking after being depressed. There is also an association between these disorders within families. Alcohol abuse is common among the immediate families of patients with mood disorders. Eating disorders and anxiety disorders are also more common among first-degree relatives of depressed patients than among people in the general population.

## Diagnosis

Psychopathologists have proposed hundreds of systems for describing and classifying mood disorders. In the following section we will describe briefly some of the historical figures who played

a prominent role in the development of classification systems (Berrios, 1992). This discussion should help place our description of the current diagnostic system, DSM-IV-TR, in perspective.

## BRIEF HISTORICAL PERSPECTIVE

Although written descriptions of clinical depression can be traced to ancient times, the first widely accepted classification system was proposed by the German physician Emil Kraepelin (1921). Kraepelin divided the major forms of mental disorder into two categories: *dementia praecox*, which we now know as schizophrenia (see Chapter 13), and *manic-depressive psychosis*. He based the distinction on age of onset, clinical symptoms, and the course of the disorder (its progress over time). The manic-depressive category included all depressive syndromes, regardless of whether the patients exhibited manic and depressive episodes or simply depression. In comparison to *dementia praecox*, manic-depression typically showed an episodic, recurrent course with a relatively good prognosis. Kraepelin observed that most manic-depressive patients returned to a normal level of functioning between episodes of depression or mania.

Despite the widespread acceptance and influence of Kraepelin's diagnostic system, many alternative approaches have been proposed. Two primary issues have been central in the debate regarding definitions of mood disorders. First, should these disorders be defined in a broad or a narrow fashion? A narrow approach to the definition of depression would focus on the most severely disturbed people—those whose depressed mood seems to be completely unrelated to any precipitating events, is entirely pervasive, and is completely debilitating. A broader approach to the definition would include milder forms of depression. Some recent critics have argued that the current diagnostic system has expanded the definition of depression to include normal sadness because it does not *exclude* reactions to a wide array of negative events, such as betrayal by a romantic partner or failing to reach an important life goal (Horwitz & Wakefield, 2007). This issue is, of course, a question about the validity of this diagnostic category (see Chapter 4). Is depression necessarily “normal” if it follows a stressful event? The resolution of this debate will depend on a consideration of research evidence (Zisook & Kendler, 2007).

The second issue regarding the diagnosis of mood disorders concerns heterogeneity. All depressed patients do not have exactly the same set of symptoms, the same pattern of onset, or the same course over time. Some patients have manic episodes, whereas others experience only depression. Some exhibit psychotic symptoms, such as delusions and hallucinations, in addition to their symptoms of mood disorder; others do not. In some cases, the person's depression is apparently a reaction to specific life events, whereas in others the mood disorder seems to come out of nowhere. Are these qualitatively distinct forms of mood disorder, or are they different expressions of the same underlying problem? Is the distinction among the different types simply one of severity?

## CONTEMPORARY DIAGNOSTIC SYSTEMS

The DSM-IV-TR approach to classifying mood disorders recognizes several subtypes of depression, placing special emphasis on the distinction between unipolar and bipolar disorders. The overall scheme includes two types of unipolar mood disorders and three types of bipolar mood disorders.





Bereavement is part of normal human experience. A clinical diagnosis would not be made following the loss of a loved one unless symptoms persist for more than two months or include marked functional impairment.

**Unipolar Disorders** The unipolar disorders include two specific types: major depressive disorder and dysthymia. In order to meet the criteria for major depressive disorder, a person must experience at least one major depressive episode in the absence of any history of manic episodes. Table 5.3 lists the DSM-IV-TR criteria for a major depressive episode. Although some people experience a single, isolated episode of major depression followed by complete recovery, most cases of unipolar depression follow an intermittent course with repeated episodes.

**Dysthymia** differs from major depression in terms of both severity and duration. Dysthymia represents a chronic mild depressive condition that has been present for many years.

In order to fulfill DSM-IV-TR criteria for this disorder, the person must, over a period of at least two years, exhibit a depressed mood for most of the day on more days than not. Two or more of the following symptoms must also be present:

1. Poor appetite or overeating
2. Insomnia or hypersomnia
3. Low energy or fatigue
4. Low self-esteem
5. Poor concentration or difficulty making decisions
6. Feelings of hopelessness

**TABLE 5.3 Symptoms Listed in DSM-IV-TR for Major Depressive Episode**

**Five or more of the following symptoms have been present during the same two-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood, or (2) loss of interest or pleasure.**

1. Depressed mood most of the day, nearly every day, as indicated either by subjective report (for example, feels sad or empty) or observation made by others (for example, appears tearful). Note: in children and adolescents, can be irritable mood.
2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day.
3. Significant weight loss when not dieting or weight gain (for example, a change of more than 5 percent of body weight in a month), or decrease or increase in appetite nearly every day. Note: in children, consider failure to make expected weight gains.
4. Insomnia or hypersomnia nearly every day.
5. Psychomotor agitation or retardation nearly every day (observable by others).
6. Fatigue or loss of energy nearly every day.
7. Feelings of worthlessness or excessive or inappropriate guilt nearly every day (not merely self-reproach or guilt about being sick).
8. Diminished ability to think or concentrate, or indecisiveness, nearly every day.
9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

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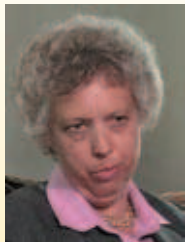
These symptoms must not be absent for more than two months at a time during the two-year period. If, at any time during the initial two years, the person met criteria for a major depressive episode, the diagnosis would be major depression rather than dysthymia. As in the case of major depressive disorder, the presence of a manic episode would rule out a diagnosis of dysthymia.

The distinction between major depressive disorder and dysthymia is somewhat artificial because both sets of symptoms are frequently seen in the same person. In such cases, rather than thinking of them as separate disorders, it is more appropriate to consider them as two aspects of the same disorder, which waxes and wanes over time. Some experts have argued that chronic depression is a single, broadly conceived disorder that can be expressed in many different combinations of symptoms over time (McCullough et al., 2003).

## MyPsychLab

### VIDEO CASE

#### Bipolar Mood Disorder with Psychotic Features



**ANN**

*"I felt very tense, like my mind was racing; that I was making unusual connections; that I couldn't sleep at night."*

Watch the video "Bipolar Mood Disorder with Psychotic Features: Ann" on MyPsychLab. Although Ann's manic episodes were associ-

ated with increased productivity, they also led to serious occupational and social problems.

**Bipolar Disorders** All three types of bipolar disorders involve manic or hypomanic episodes. Table 5.4 lists the DSM-IV criteria for a manic episode. The mood disturbance must be severe enough to interfere with occupational or social functioning. A person who has experienced at least one manic episode

would be assigned a diagnosis of *bipolar I disorder*. The vast majority of patients with this disorder have episodes of major depression in addition to manic episodes.

Some patients experience episodes of increased energy that are not sufficiently severe to qualify as full-blown mania. These episodes are called **hypomania**. A person who has experienced at least one major depressive episode, at least one hypomanic episode, and no full-blown manic episodes would be assigned a diagnosis of *bipolar II disorder*. The symptoms used in DSM-IV-TR to identify a hypomanic episode are the same as those used for manic episode (at least three of the seven symptoms listed in Table 5.4). The differences between manic and hypomanic episodes involve duration and severity. The symptoms need to be present for a minimum of only four days to meet the threshold for a hypomanic episode (as opposed to one week for a manic episode). The mood change in a hypomanic episode must be noticeable to others, but the disturbance must not be severe enough to impair social or occupational functioning or to require hospitalization.

**Cyclothymia** is considered by DSM-IV-TR to be a chronic but less severe form of bipolar disorder. It is, therefore, the bipolar equivalent of dysthymia. In order to meet criteria for cyclothymia, the person must experience several periods of time with hypomanic symptoms and frequent periods of depression (or loss of interest or pleasure) during a period of two years. There must be no history of major depressive episodes and no clear evidence of a manic episode during the first two years of the disturbance.

**Further Descriptions and Subtype** DSM-IV-TR includes several additional ways of describing subtypes of the mood disorders. These are based on two considerations: (1) more specific descriptions of symptoms that were present during the most recent episode of depression (known as *episode specifiers*) and (2) more extensive descriptions of the pattern that the disorder follows over time (known as *course specifiers*). These distinctions may provide a useful way to subdivide depressed patients, who certainly present a heterogeneous set of problems. On the other hand, the validity of these subtypes is open to question, especially those based on episode specifiers. Long-term follow-up studies suggest that a patient's subtype diagnosis is likely to change over repeated episodes (Angst, Sellaro, & Merikangas, 2000).

**TABLE 5.4 Symptoms Listed in DSM-IV-TR for Manic Episode**

- A. A distinct period of abnormally and persistently elevated, expansive, or irritable mood, lasting at least one week (or any duration if hospitalization is necessary).**
- B. During the period of mood disturbance, three or more of the following symptoms have persisted (four if the mood is only irritable) and have been present to a significant degree:**
  1. Inflated self-esteem or grandiosity.
  2. Decreased need for sleep—for example, feels rested after only three hours of sleep.
  3. More talkative than usual, or pressure to keep talking.
  4. Flight of ideas or subjective experience that thoughts are racing.
  5. Distractibility—that is, attention too easily drawn to unimportant or irrelevant external stimuli.
  6. Increase in goal-directed activity (either socially, at work or school, or sexually) or psychomotor agitation.
  7. Excessive involvement in pleasurable activities that have a high potential for painful consequences—for example, the person engages in unrestrained buying sprees, sexual indiscretions, or foolish business investments.

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One episode specifier allows the clinician to describe a major depressive episode as having melancholic features. **Melancholia** is a term that is used to describe a particularly severe type of depression. Some experts believe that melancholia represents a subtype of depression that is caused by different factors than those that are responsible for other forms of depression (Leventhal & Rehm, 2005). The presence of melancholic features may also indicate that the person is likely to have a good response to biological forms of treatment, such as antidepressant medication and electroconvulsive therapy (Taylor & Fink, 2008).

In order to meet the DSM-IV-TR criteria for melancholic features, a depressed patient must either (1) lose the feeling of pleasure associated with all, or almost all, activities or (2) lose the capacity to feel better—even temporarily—when something good happens. The person must also exhibit at least three of the following: (1) The depressed mood feels distinctly different from the depression a person would feel after the death of a loved one; (2) the depression is most often worst in the morning; (3) the person awakens early, at least two hours before usual; (4) marked psychomotor retardation or agitation; (5) significant loss of appetite or weight loss; and (6) excessive or inappropriate guilt.

Another episode specifier allows the clinician to indicate the presence of *psychotic features*—hallucinations or delusions—during the most recent episode of depression or mania. The psychotic features can be either consistent or inconsistent with the patient’s mood. For example, if a depressed man reports hearing voices that tell him he is a worthless human being who deserves to suffer for his sins, the hallucinations would be considered “mood congruent psychotic features.” Depressed patients who exhibit psychotic features are more likely to require hospitalization and treatment with a combination of antidepressant and antipsychotic medication (Parker et al., 1997).

Another episode specifier applies to women who become depressed or manic following pregnancy. A major depressive or manic episode can be specified as having a *postpartum onset* if it begins within four weeks after childbirth. Because the woman must meet the full criteria for an episode of major depression or mania, this category does not include minor periods of postpartum “blues,” which are relatively common (Seyfried & Marcus, 2003).

The DSM-IV-TR course specifiers for mood disorders allow clinicians to describe further the pattern and sequence of episodes, as well as the person’s adjustment between episodes. For example, the course of a bipolar disorder can be specified as *rapid cycling* if the person experiences at least four episodes of major depression, mania, or hypomania within a 12-month period. Patients whose disorder follows this problematic course are likely to show a poor response to treatment and are at greater risk than other types of bipolar patients to attempt suicide (Coryell et al., 2003).

A mood disorder (either unipolar or bipolar) is described as following a seasonal pattern if, over a period of time, there is a regular relationship between the onset of a person’s episodes and particular times of the year. The most typical seasonal pat-



Actress Gwyneth Paltrow has spoken candidly about her struggle with postpartum depression following the birth of her second child.

tern is one in which the person becomes depressed in the fall or winter, followed by a full recovery in the following spring or summer.

Researchers refer to a mood disorder in which the onset of episodes is regularly associated with changes in seasons as **seasonal affective disorder**.<sup>1</sup> The episodes most commonly occur in winter, presumably in response to fewer hours of sunlight. Seasonal depression is usually characterized by somatic symptoms, such as overeating, carbohydrate craving, weight gain, fatigue, and sleeping more than usual. Among outpatients who have a history of at least three major depressive episodes, approximately one out of six will meet criteria for the seasonal pattern (Westrin & Lam, 2007). Most patients with seasonal affective disorder have a unipolar disorder.

## Course and Outcome

To describe the typical sequence over time and outcome of mood disorders, it is useful to consider unipolar and bipolar disorders separately. Most studies point to clear-cut differences between these two conditions in terms of age of onset and prognosis.

<sup>1</sup>“Affect” and “mood” are sometimes used interchangeably in psychiatric terminology. Depression and mania were called “affective disorders” in DSM-III.



## UNIPOLAR DISORDERS

People with unipolar mood disorders typically have their first episode in their early thirties; the average age of onset is 32 (Kessler et al., 2007). The length of episodes varies widely. DSM-IV-TR sets the minimum duration at 2 weeks, but they can last much longer. Most unipolar patients will have at least two depressive episodes. The mean number of lifetime episodes is five or six.

The results of long-term follow-up studies of treated patients indicate that major depressive disorder is frequently a chronic and recurrent condition in which episodes of severe symptoms may alternate with periods of full or partial recovery (Thase, 2003). When a person's symptoms are diminished or improved, the disorder is considered to be in **remission**, or a period of recovery. **Relapse** is a return of active symptoms in a person who has recovered from a previous episode. These phases of the disorder are represented schematically in Figure 5.1.

Approximately half of all unipolar patients recover within six months of the beginning of an episode. After recovery from an episode of major depression, the risk of relapse goes down as the period of remission increases. In other words, the longer the person remains free of depression, the better his or her chance of avoiding relapse (Hart, Craighead, & Craighead, 2001).

## BIPOLAR DISORDERS

Onset of bipolar mood disorders usually occurs between the ages of 18 and 22 years, which is younger than the average age of onset for unipolar disorders. The first episode is just as likely to be manic as depressive. The average duration of a manic episode runs between two and three months. The onset of a manic episode is not always sudden. Jamison noted, for example:

*How do unipolar and bipolar disorders differ with regard to age of onset and sequence over time?*

I did not wake up one day to find myself mad. Life should be so simple. Rather, I gradually

became aware that my life and mind were going at an ever faster and faster clip until finally, over the course of my first summer on the faculty, they both had spun wildly and absolutely out of control. But the acceleration from quick thought to chaos was a slow and beautifully seductive one.

(1995, p. 68)

The long-term course of bipolar disorders is most often intermittent (Cuellar, Johnson, & Winters, 2005). Most patients

have more than one episode, and bipolar patients tend to have more episodes than unipolar patients. The length of intervals between episodes is difficult to predict. The long-term prognosis is mixed for patients with bipolar mood disorder. Although some patients recover and function very well, others experience continued impairment. Several studies that have followed bipolar patients over periods of up to 10 years have found that approximately half of the people are able to achieve a sustained recovery from the disorder. On the other hand, many patients remain chronically disabled.

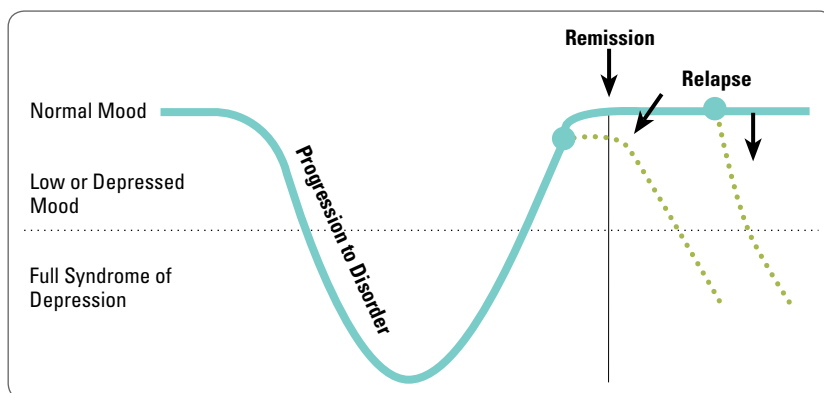
## Frequency

Several studies provide detailed information regarding the frequency of mood disorders in various countries around the world (Kessler, Merikangas, & Wang, 2007). Some are based on information collected from nonclinical samples of men and women by investigators using structured diagnostic interviews. In other words, the people who participated in these studies did not have to be in treatment at a hospital or clinic in order to be identified as being depressed. These studies are particularly important because large numbers of people experience serious depression without wanting or being able to seek professional help. Data based exclusively on treatment records would underestimate the magnitude of the problem.

## INCIDENCE AND PREVALENCE

Unipolar depression is one of the most common forms of psychopathology. In a representative sample of more than 9,000 people who were interviewed for the National Comorbidity Survey Replication (NCS-R), approximately 16 percent suffered from major depressive disorder at some point during their lives. Lifetime risk for dysthymia was approximately 3 percent. The lifetime risk for bipolar I and II disorders combined was close to 4 percent. Taken together, unipolar disorders are much more common than bipolar disorders. The ratio of unipolar to bipolar disorders is at least 5:1 (Kessler & Wang, 2008).

Because the NCS-R study identified a representative sample of community residents rather than patients already in treatment, it provides some insight regarding the proportion of depressed people who seek professional help for their problems. Slightly more than 20 percent of those people who met diagnostic criteria for a mood disorder in the past 12 months



**FIGURE 5.1** The Course of an Episode of Major Depression

The phases leading into (and out of) an episode of depression.

Source: Reprinted from *The Lancet*, 48, Ellen Frank, Holly A. Swartz, David J. Kupfer, Interpersonal and social rhythm therapy: managing the chaos of bipolar disorder, 593–604, Copyright © 2000, with permission from Elsevier.





Contrary to popular views, older people are actually less likely to be depressed than are younger people. Some subgroups of elderly people, however, are at high risk for depression.

had received adequate treatment during that same time period. These data indicate that a substantial proportion of people who are clinically depressed do not receive professional treatment for their disorders. Finding ways to help these people represents an important challenge for psychologists and psychiatrists who treat mood disorders.

## RISK FOR MOOD DISORDERS ACROSS THE LIFE SPAN

Age is an important consideration in the epidemiology of mood disorders. Some readers might expect that the prevalence of depression would be higher among older people than among younger people. This was, in fact, what many clinicians expected prior to large-scale epidemiological investigations, such as the NCS-R. This belief may stem from the casual observation that many older people experience brief episodic states of acute unhappiness, often precipitated by changes in status (for example, retirement, relocation) and loss of significant others (for example, children moving away, deaths of friends and relatives). But brief episodes of sadness and grief are not the same thing as clinical depression.

Although many people mistakenly identify depression with the elderly, data from the NCS-R project suggest that mood disorders actually are most frequent among young and middle-aged adults. These data are illustrated in Figure 5.2. Prevalence rates for major depressive disorder, dysthymia, and bipolar disorder were all significantly lower for people over the age of 60.

Several explanations have been offered for this pattern. One interpretation is based on the fact that elderly people are more likely to experience memory impairments (see Chapter 14). People who are in their sixties and seventies may have more trouble remembering, and therefore may fail to report, episodes of depression that occurred several months before the research interview is conducted. Also, because mood disorders are associated with increased mortality (for example, suicide), many severely depressed people might not have survived into old age. These are both plausible hypotheses that may have influenced the results of the NCS-R study. Nevertheless, the same pattern has been observed in several studies, and most investigators now believe that the effect is genuine: Clinical depression is less common among elderly people than it is among younger adults (Blazer, 2004).

The findings on age and depression also raise another important question: Has the frequency of depression increased in

(This item omitted from WebBook edition)

### FIGURE 5.2 Lifetime Prevalence of Mood Disorders by Age (NCS-R data)

Lifetime prevalence of major depression, dysthymia, and bipolar disorder in a representative community sample.

Source: From Kessler et al. (2005), "Lifetime Prevalence and Age-of-Onset Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication," *Archives of General Psychiatry*, 62, pp. 593–602. Copyright © 2005. Reprinted by permission of American Medical Association.



## Major Depression



## EVERETT

"You feel absolute worthlessness. You feel there is no hope for the future."

Watch the video "Major Depression: Everett" on MyPsychLab. Notice the importance and persistence of the negative way in which he views himself and his abilities.

recent years? The answer is apparently yes. People born after World War II seem to be more likely to develop mood disorders than were people from previous generations. In fact, several studies have reported a consistent trend toward higher lifetime rates of depression in successively younger generations. The average age of onset for clinical depression also seems to be lower in people who were born more recently (Kessler et al., 2005).

## GENDER DIFFERENCES

Women are two or three times more vulnerable to depression than men are (Kessler, 2006). This pattern has been reported in study after study, using samples of treated patients as well as community surveys, and regardless of the assessment procedures employed. The increased prevalence of depression among women is apparently limited to unipolar disorders. Gender differences are not typically observed for bipolar mood disorders.

Some observers have suggested that the high rates for unipolar mood disorders in women reflect shortcomings in the data collection process. Women simply might be more likely than men to seek treatment or to be labeled as being depressed. Another argument holds that culturally determined sanctions make it more difficult for men to admit to subjective feelings of distress such as hopelessness and despair. None of these alternatives has been substantiated by empirical evidence. Research studies clearly indicate that the higher prevalence of depression among women is genuine. Possible explanations for this gender difference have focused on a variety of factors, including sex hormones, stressful life events, and childhood adversity as well as response styles that are associated with gender roles (Hankin & Abramson, 2001; Kuehner, 2003). These issues are discussed later in this chapter.

## CROSS-CULTURAL DIFFERENCES

Comparisons of emotional expression and emotional disorder across cultural boundaries encounter a number of methodological problems (see Research Methods in Chapter 9). One problem involves vocabulary. Each culture has its own ways of interpreting reality, including different styles of expressing or communicating symptoms of physical and emotional disorder. Words and concepts

*In what ways are the symptoms of depression different in China?*

that are used to describe illness behaviors in one culture might not exist in other cultures. For example, some African cultures have only one word for both anger and sadness. Interesting adaptations are, therefore, required to translate questions that are

supposed to tap experiences such as anxiety and depression. One investigation, which employed a British interview schedule that had been translated into Yoruba—a language spoken in Nigeria—used the phrase "the heart goes weak" to represent depression (Leff, 1988). Our own diagnostic categories have been developed within a specific cultural setting; they are not culture-free and are not necessarily any more reasonable than the ways in which other cultures describe and categorize their own behavioral and emotional disorders (Lavender, Khodoker, & Jones, 2006).

Cross-cultural differences have been confirmed by a number of research projects that have examined cultural variations in symptoms among depressed patients in different countries. These studies report comparable overall frequencies of mood disorders in various parts of the world, but the specific type of symptom expressed by the patients varies from one culture to the next. In Chinese patients, depression is more likely to be described in terms of somatic symptoms, such as sleeping problems, headaches, and loss of energy (Kleinman, 2004). Depressed patients in Europe and North America are more likely to express feelings of guilt and suicidal ideas (Kirmayer, 2001).

These cross-cultural comparisons suggest that, at its most basic level, clinical depression is a universal phenomenon that is not limited to Western or urban societies. They also indicate that a person's cultural experiences, including linguistic, educational, and social factors, may play an important role in shaping the manner in which he or she expresses and copes with the anguish of depression. Cross-cultural variations should also be kept in mind when clinicians attempt to identify central or defining features of depression. We will return to this point later in the chapter when we discuss the rationale behind studies that rely on animal models of depression.

## Causes

In the next few pages we turn our attention to current speculation and knowledge about causes of mood disorders. Discussions of this topic must keep in mind the relatively high prevalence of these problems. Major depression is a severely disabling condition that affects at least 16 percent of the population, usually appearing during young adulthood when the person would be expected to be most active and productive. Why hasn't this problem been eliminated through the process of natural selection? Evolutionary theorists suggest that it is because, in addition to being painful and disruptive to a person's life, mild to moderate symptoms of depression may serve a useful purpose (Gilbert, 2006; Price, Gardner, & Erickson, 2004). This argument is focused on those situations in which depression represents a temporary response to circumstances in the person's environment. As we will see, many episodes of depression do seem to be triggered by stressful life events and harsh social circumstances. An evolutionary perspective would hold that the symptoms of depression—slowing down, loss of motivation, withdrawal from other people—may represent a response system that helps the person disengage from a situation that is not going well (Nesse, 1999). For example, someone who is involved in an unsuccessful marriage may eventually become depressed, withdraw, and reconsider the long-term benefits of investing further time and resources in a relationship that is likely to remain unrewarding. At low levels and over brief periods of time, depressed mood may help us refocus our motivations



and it may help us to conserve and redirect our energy in response to experiences of loss and defeat.

Psychological explanations for mood disorders focus on individual differences, and they are primarily concerned with the most severe and disabling forms of depression. Following difficult and challenging experiences, why do some people develop major depression and others do not? What factors are responsible for a relatively drastic failure of the psychological and biological systems that regulate mood? A disorder that is as common as depression must have many causes rather than one.

Our consideration of etiological factors is organized around different levels of analysis. We will consider social, psychological, and biological mechanisms that are involved in the onset and maintenance of mood disorders. This organization should help you appreciate the complementary nature of these analyses. After we have considered the impact of stressful life events on mood, we will discuss psychological factors, such as cognitive biases, that shape a person's response to stress. Then we will review what is known about hormones and brain activities that coordinate our responses to environmental stressors.

## SOCIAL FACTORS

It should not be surprising that much of the literature on depression focuses on interpersonal loss and separation. From birth to death, our lives are intertwined with those of other people. We are fundamentally social organisms, and we feel sad when someone close to us dies or a relationship ends. Similar feelings occasionally follow major disappointments, such as failure to win acceptance to the school of our choice or being fired from a job. In these cases, rather than losing other people, some clinicians have suggested that we may be losing "social roles" or ways in which we think about ourselves. Clues to the causes of depression may be found in studying these experiences of normal sadness. The onset and maintenance of clinical depression clearly involve a disruption or failure of the normal mechanisms that regulate the negative emotions following major losses.

Various theories of depression have been built around a consideration of the impact of stressful life events. Beginning around the turn of the twentieth century, psychodynamic theories emphasized the central role played by interpersonal relationships and loss of significant others in setting the stage for depression as well as in bringing about a depressive episode (Freud, 1917/1961). Freud's theory laid the intellectual foundation for many subsequent studies of psychological and social factors in the development and maintenance of unipolar depression. He focused interest on the possibility that stressful life events, such as the death of a close friend or family member, may precipitate the onset of mood disorders. Freud was also interested in the observation that some people who become depressed are extremely dependent on other people for the maintenance of their self-esteem. This hypothesis anticipated subsequent studies of social skills in depression and the importance of interpersonal relationships over the course of mood disorders.

**Stressful Life Events and Unipolar Disorders** Several investigations have explored the relationships between stressful life events and the development of unipolar mood disorders. Do people who become clinically depressed actually experience an increased number of stressful life events? The answer is yes. The experience of stressful life events is associated with an increased probability that a person will become depressed. This

## MyPsychLab

VIDEO CASE

### Unipolar Depression and Stressful Life Events



#### MARTHA

*"I felt like I was out of my mind. Everything was black. I did not eat. I did not sleep. I can't taste food. I was very weak."*

"Watch the video "Unipolar Disorder and Stressful Life Events" on MyPsychLab. What impact did cultural and social factors seem to play in the development and expression of Martha's depression?"

correlation has been demonstrated many times (Hammen, 2005; Monroe & Reid, 2009).

Investigators have faced difficult methodological issues in order to interpret the strong relationship between stressful life events and the onset of depression. One particularly troublesome problem involves the direction of the relationship between life events and mood disorders. For example, being fired from a job might lead a person to become depressed. On the other hand, the onset of a depressive episode, with its associated difficulties in energy and concentration, could easily affect the person's job performance and lead to being fired. Therefore, if depressed people experience more stressful events, what is the direction of effect? Does failure lead to depression, or does depression lead to failure?

By using prospective research designs, in which subjects are followed over time, investigators have been able to address the question of cause and effect (see Research Methods in Chapter 8). Prospective studies have found that stressful life events are useful in predicting the subsequent onset of unipolar depression (Brown, 2002; Monroe & Harkness, 2005). This evidence supports the argument that, in many cases, stressful life events contribute to (and are not merely consequences of) the onset of mood disorders.

Although many kinds of negative events are associated with depression, a special class of circumstances—those involving major losses of important people or roles—seems to play a crucial role in precipitating unipolar depression, especially a person's first lifetime episode. This conclusion is based, in large part, on a series of studies reported by George Brown, a sociologist, and Tirril Harris, a clinical psychologist, both at Guy's, King's, and St. Thomas' School of Medicine (University of London in England). Their studies have compared the living circumstances and life experiences of depressed and nondepressed women, regardless of whether they are receiving treatment for their problems. Brown and Harris (1978) found that *severe* events—those that are particularly threatening and have long-term consequences for the woman's adjustment—*increase* the probability that a woman will become depressed. On the other hand, the ordinary hassles and difficulties of everyday living (events that are not severe) do not seem to lead to the onset of depression (Stroud et al., 2010).

Severe events increase the probability of depression, but most women who experience a severe event do not become depressed. What is the difference between the circumstances of

**Do negative life events cause depression? Or does depression lead to negative events?**

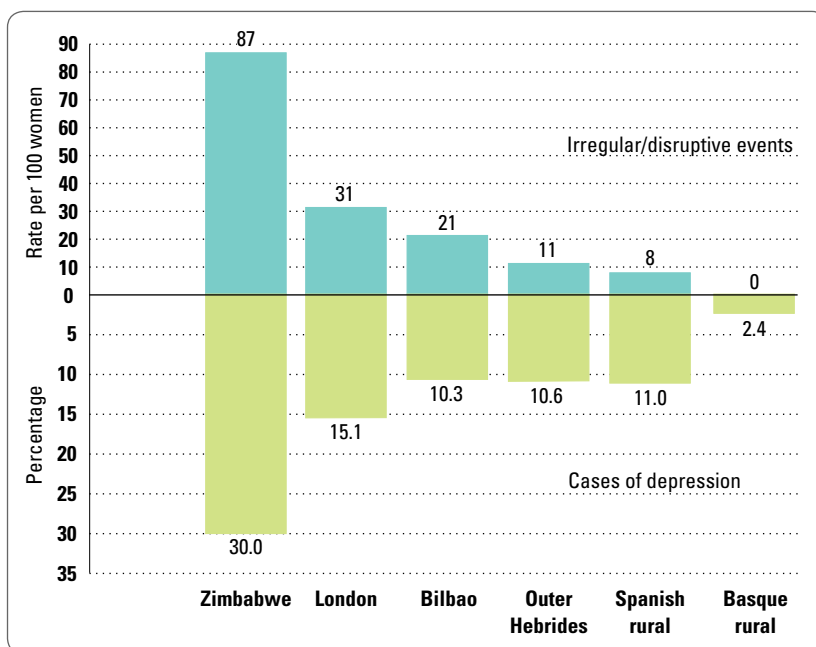




A series of studies comparing the life experiences of women in six communities—including Harare, Zimbabwe—found that the greater the frequency of severe events, the higher the prevalence of depression.

women who become depressed after a severe event and those who do not? Brown and his colleagues believe that depression is more likely to occur when severe life events are associated with feelings of humiliation, entrapment, and defeat (Brown, 1998, 2002). An example of a humiliating event would be a woman learning unexpectedly of her husband's long-standing infidelity. An example of an event fitting the entrapment theme would be a woman receiving official notification that her application to move out of appalling housing conditions had been denied. These data point to a particularly powerful relationship between the onset of depression and certain kinds of stressful life events. The likelihood that a woman will become depressed is especially high if she experiences a severe event that would be expected to lead to a sense of being devalued as a person or trapped with no way toward a brighter future (Kendler et al., 2003).

Comparisons among different populations can shed further light on the relation between severe life events and the etiology of depression. Brown (1998) repeated his study with women living in six different populations in Europe and Africa. Some of these are impoverished urban regions, such as a township in Harare, Zimbabwe, and others are rural. In each sample, Brown found that severe life events preceded the onset of most depressive episodes. He also found very large differences among these communities in terms of their overall prevalence of depression. These differences varied directly in proportion to the frequency with which their women experienced severe life events; communities with the highest rates of severe events produced the highest prevalence of major depression (see Figure 5.3). This pattern suggests that variations in the overall prevalence of depression are driven in large part by social factors that influence the frequency of stress in the community.



**FIGURE 5.3 Severe Life Events and Prevalence of Depression**

Yearly rate of irregular or disruptive severe events per 100 women in six populations and prevalence of cases of depression in the same year.

Source: *Social Psychiatry and Psychiatric Epidemiology*, 33, 1998, 363–372, “Genetic and Population Perspectives on Life Events And Depression,” G. W. Brown, © 1998. With permission of Springer Science+Business Media.



In fact, the relationship between stressful life events and depression actually runs in both directions. Some depressed people create difficult circumstances that increase the level of stress in their lives. Examples include breaking up with a romantic partner or being fired from a job. This phenomenon is known as *stress generation*. In comparison to people who are not depressed, depressed people generate higher levels of stress, especially in the context of interpersonal relationships (Hammen, 2005; Harkness & Stewart, 2009). Maladaptive tactics for coping with marital distress are important factors in this process. For example, when involved in a serious disagreement with a spouse, a depressed person might express escalating complaints and hostile, provocative comments rather than trying to work toward a solution to the conflict. This dynamic process leads to an escalation of stress.

Gender differences in the frequency and nature of stressful life events may help to explain gender differences in the prevalence of major depression. Some research evidence indicates that women who are depressed are more likely than men to report that they experienced a severe life event in the months prior to the onset of their mood disorder (Harkness et al., 2010). Furthermore, it is specifically negative interpersonal stress that seems to have a particularly detrimental impact in the lives of young women (Cyranowski & Frank, 2006; Shih & Eberhart, 2010). Women may be more likely to generate interpersonal stress and to suffer from its consequences because they are more likely than men to invest in, and base their evaluations of themselves upon, the importance of relationships with other people. Men, on the other hand, are more likely to focus on the importance of individual accomplishments related to school, work, and sports (Crick & Zahn-Waxler, 2003).

**Social Factors and Bipolar Disorders** Most investigations of stressful life events have been concerned with unipolar depression. Less attention has been paid to bipolar mood disorders, but some have found that the weeks preceding the onset of a manic episode are marked by an increased frequency of stressful life events (Miklowitz & Johnson, 2009). The kinds of events that precede the onset of mania tend to be different from those that lead to depression. While the latter include primarily negative experiences involving loss and low self-esteem, the former include schedule-disrupting events (such as loss of sleep) as well as goal attainment events. Some patients experience an increase in manic symptoms after they have achieved a significant goal toward which they had been working (Johnson et al., 2009). Examples of this kind of goal attainment event would be a major job promotion, being accepted to a competitive professional school program, or the blossoming of a new romantic relationship. These exhilarating experiences, coupled with the person's ongoing problems with emotion regulation, may contribute to a spiral of positive emotion and excess activity that culminates in a full-blown manic episode.

Aversive patterns of emotional expression and communication within the family can also have a negative impact on the adjustment of people with bipolar mood disorders. Longitudinal studies of bipolar patients have focused on the relation between frequency of relapse and the emotional climate within their families. Patients living with family members who are hostile toward or critical of the patient are more likely to relapse shortly after being discharged from the hospital

(Miklowitz, 2007). Furthermore, bipolar patients who have less social support are more likely to relapse and recover more slowly than patients with higher levels of social support (Cohen et al., 2004). This evidence indicates that the course of bipolar mood disorder can be influenced by the social environment in which the person is living.

## PSYCHOLOGICAL FACTORS

Severe events are clearly related to the onset of depression, but they do not provide a complete account of who will become depressed. Many people who do not become depressed also experience severe events. Presumably, those who become depressed are somehow more vulnerable to the effects of stress. Several psychological factors may contribute to a person's vulnerability to stressful life events. In the following pages, we will consider two principal areas that have received attention in the research literature: cognitive factors and social skills.

**Cognitive Vulnerability** Cognitive theories concerning the origins of unipolar depression are based on the recognition that humans are not only social organisms, they are also thinking organisms, and the ways in which people perceive, think about, and remember events in their world can have an important influence on the way that they feel. Two people may react very differently to the same event, in large part because they may interpret the event differently. Cognitive theories about vulnerability to depression have focused on the ways in which people attend to, think about, and recall information from their environment. Most often, this involves cognitive activity related to experiences involving loss, failure, and disappointment. According to the cognitive perspective, pervasive and persistent negative thoughts about the self and pessimistic views of the environment play a central role in the onset and subsequent maintenance of depression after these thoughts are activated by the experience of a negative life event (Gotlib & Joormann, 2010; Mathews & MacLeod, 2005).

Various types of distortions, errors, and biases are characteristic of the thinking of depressed people. One is the tendency to assign global, personal meaning to experiences of failure. An example might be a person who has been turned down after he tried out for a competitive sports team and says to himself, "This proves that I am a failure" rather than acknowledging that many talented people were being considered, that only a few people could be retained, and difficult decisions had to be made by the coach. Another cognitive distortion associated with depression is the tendency to overgeneralize conclusions about the self based on negative experiences. Following the example raised above, the person might also say to himself, "The fact that I was cut from the team shows that I am also going to fail at everything else." A third type of cognitive error involves drawing arbitrary inferences about the self in the absence of supporting evidence (often in spite of contradictory evidence). In this regard, consider a player who is a member of an athletic team. If the team loses a game and the coach is upset, the player might arbitrarily decide that the loss was his fault and the coach doesn't like him, even though nothing about his performance was particularly instrumental with regard to the team's performance in the game. The final type of cognitive bias related to depression is the tendency



to recall selectively events with negative consequences and to exaggerate the importance of negative events while simultaneously discounting the significance of positive events. For example, suppose that an athlete is looking back over her experiences during the course of an entire season. She would be more likely to feel depressed about her performance if she tends to dwell on the mistakes that she made and the games that the team lost rather than emphasizing the positive contributions that she made and the successes that she shared with her teammates.

How do these self-defeating biases lead to the onset of depression? One cognitive approach to depression is focused on the importance of *maladaptive schemas*, which are general patterns of thought that guide the ways in which people perceive and interpret events in their environment. Schemas are enduring and highly organized representations of prior experience. Although schemas may be latent—that is, not prominently represented in the person’s conscious awareness at any given point in time—they are presumably reactivated when the person experiences a similar event. Depressive schemas increase the probability that the person will overreact to similar stressful events in the future (Eberhart et al., 2011).

A similar view of cognitive vulnerability to depression has been described in terms of hopelessness (Alloy et al., 2009). Hopelessness refers to the person’s negative expectations about future events and the associated belief that these events

cannot be controlled. According to this view, depression is associated with the expectation that desirable events probably will not occur or that aversive events probably will occur regardless of what the person does. Fol-

**Why do some people become depressed after stressful life events while others do not?**

lowing a negative life event, the probability that the person will become depressed is a function of the explanations and importance that the person ascribes to these events. These explanations are known as *causal attributions*.

Some people tend to explain negative events in terms of internal, stable, global factors. This pattern has been called a depressogenic attributional style. For example, after failing an important exam, someone who uses this cognitive style would probably think that her poor performance was the result of her own inadequacies (internal), which she has recognized for a long time and which will persist into the future (stable), and which also are responsible for her failure in many other important tasks, both academic and otherwise (global). As in other cognitive views of depression, this kind of attributional style is not considered to be a sufficient cause of depression. It does represent an important predisposition to depression, however, to the extent that people who use it are more likely to develop hopelessness if they experience a negative life event.

The importance of biased cognitive processing in risk for depression has been demonstrated persuasively in many laboratory studies (Gotlib & Joormann, 2010). The cognitive problems that depressed people experience seem to reflect primarily problems in the control of attention to, and memory for, negative emotional material. If depressed people begin to think unpleasant thoughts, they have difficulty inhibiting or disengaging from them (Joormann, 2010). For most people, adaptive strategies for mood regulation include the ability to change the content of their working memory and shift their thoughts away from distressing ruminations. Depressed people experience

special problems in this regard. This perspective helps to explain why encounters with stressful life events may have a more lasting and detrimental impact on people who are vulnerable to depression.

Problems with the inhibition of negative thoughts have also been used to explain further the observation of gender differences in the prevalence of depression (Nolen-Hoeksema et al., 2008). The manner in which a person responds to the onset of a depressed mood can influence the duration and severity of the mood (Nolen-Hoeksema, 1994, 2000). Two different response styles have been emphasized in this work. Some people respond to feelings of depression by turning their attention inward, contemplating the causes and implications of their sadness. This is called a *ruminative style*. Writing in a diary or talking extensively with a friend about how one feels is an indication of a ruminative style. Other people employ a *distracting style* to divert themselves from their unpleasant mood. They work on hobbies, play sports, or otherwise become involved in activities that draw their attention away from symptoms of depression.

The first hypothesis of this model is that people who engage in ruminative responses have longer and more severe episodes of depression than do people who engage in distracting responses. The second hypothesis is that women are more likely to employ a ruminative style in response to depression, whereas men are more likely to employ a distracting style. Because the ruminative style leads to episodes of greater duration and intensity, women are more susceptible to depression than are men.

**Integration of Cognitive and Social Factors** The factors that we have considered in the preceding pages almost certainly work in combination rather than individually. We do not need to decide whether cognitive vulnerabilities are somehow more or less important than stressful life events because they undoubtedly work in combination. The development of depression must be understood in terms of several stages: vulnerability, onset, and maintenance. Life events and cognitive factors play an important role within each stage (Alloy et al., 2006; Gotlib & Hammen, 1992).

Vulnerability to depression is influenced by experiences during childhood, including events such as being repeatedly neglected or harshly criticized by parents. Negative ways of thinking about the world and dysfunctional interpersonal skills are presumably learned early in life (Ingram & Ritter, 2000). As the child grows up, the combination of biased cognitive schemas and deficits in interpersonal skills then affects his or her social environment in several ways: It increases the likelihood that the person will enter problematic relationships; it diminishes the person’s ability to resolve conflict after it occurs; and it minimizes the person’s ability to solicit support and assistance from other people (Hammen & Garber, 2001).

The onset of depression is most often triggered by life events and circumstances. The stressful life events that precipitate an episode frequently grow out of difficult personal and family relationships. The impact of these experiences depends on the meanings that people assign to them. People become depressed when they interpret events in a way that diminishes their sense of self-worth. Persistent interpersonal and cognitive problems also serve to maintain a depressed mood over an extended period of time and help it escalate to clinical proportions.





Separation from a spouse during a war can be extremely stressful. Whether the person becomes depressed is influenced by cognitive events as well as interpersonal skills that are used to cope with this difficult situation.

## BIOLOGICAL FACTORS

We have considered a number of social and psychological factors that contribute to the etiology of mood disorders. Biological factors are also influential in the regulation of mood. Various studies suggest that genetic factors are somehow involved in unipolar and bipolar disorders, that hormonal abnormalities are regularly associated with depression, and that depression is associated with abnormalities in the activation of specific regions of the brain.

**Genetics** Genetic factors are clearly involved in the transmission of mood disorders (Lau & Eley, 2010). Studies that support this conclusion also suggest that bipolar disorders are much more heritable than unipolar disorders.

**Twin Studies** The comparison of monozygotic (MZ) and dizygotic (DZ) twin pairs provides one test of the possible influence of genetic factors (see Chapter 2). Several twin studies of mood disorders have reported higher concordance rates among MZ than among DZ twins (Kendler & Prescott, 2006; McGuffin et al., 2003).

One classic study used national twin and psychiatric registers in Denmark to identify 110 pairs of same-sex twins in which at least one member was diagnosed as having a mood disorder (Bertelson, Harvald, & Hause, 1977). The concordance rates for bipolar disorders in MZ and DZ twins were .69 and .19, respectively. For unipolar disorders, concordance rates for MZ and DZ twins were .54 and .24, respectively. The fact that the concordance rates were significantly higher for MZ than for DZ twins indicates that genetic factors are involved in the transmission of both bipolar and unipolar mood disorders. The fact that the difference between the MZ and DZ rate was somewhat higher for bipolar than for unipolar disorders may suggest that genes play a more important role in bipolar disorders than in unipolar disorders. Similar patterns of MZ and DZ concordance rates have been reported subsequently from twin studies of mood disorders conducted in Sweden (Torgersen, 1986) and in England (McGuffin et al., 1996).

Twin studies also tell us that environmental factors influence the expression of a genetically determined vulnerability to

depression. The best evidence for the influence of nongenetic factors is the concordance rates in MZ twins, which consistently fall short of 100 percent. If genes told the whole story, MZ twins would always be concordant. Mathematical analyses have been used to estimate the relative contributions of genetic and environmental events to the etiology of mood disorders. The results of these analyses are expressed in terms of *heritability*, which can range from 0 percent (meaning that genetic factors are not involved) to 100 percent (meaning that genetic factors alone are responsible for the development of the trait in question) (see Research Methods in Chapter 17). These analyses indicate that genetic factors are particularly influential in bipolar mood disorders, for which the heritability estimate is 80 percent. Genes and environment contribute about equally to the etiology of major depressive disorder, in which the heritability estimate is close to 50 percent. The genetic contribution may be relatively minor for dysthymia or neurotic depression, where the heritability estimate is only 10 percent (Katz & McGuffin, 1993).

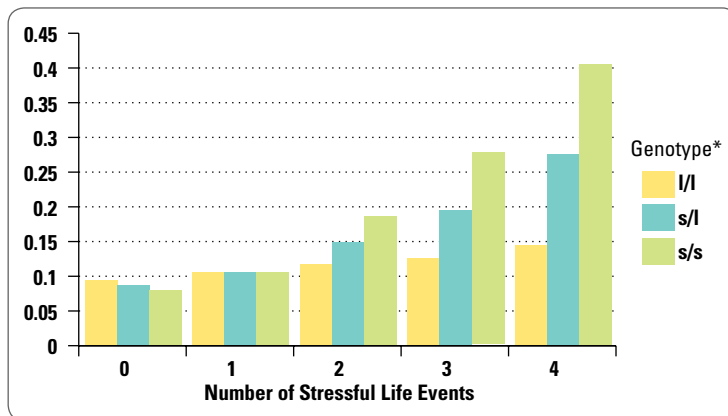
**Mode of Transmission and Linkage Studies** The family and twin studies indicate that genetic factors play an important role in the development of mood disorders. They have not, however, established the operation of a particular mode of inheritance. It is difficult to identify specific genes involved in complex behavioral disorders because there is no straightforward pattern of inheritance. Most investigators view mood disorders as being polygenic—that is, they are influenced by several different genes—and each of these genes on its own only changes risk for the disorder by a small amount.

Several groups of investigators have searched for evidence of chromosomal linkage between the locus of a known gene and the locus for a gene that is responsible for mood disorders. Two loci are said to be linked when they occupy positions that are close together on the same chromosome. Linkage is usually detected by examining the degree of association between two or more traits within specific families (see Research Methods in Chapter 14).

Linkage studies have been focused on both bipolar and unipolar mood disorders. With the introduction of new gene-mapping techniques, our knowledge in this area is expanding dramatically, but the results remain inconclusive. Many findings have been reported, but specific genes and genetic risk factors have not been confirmed (Kato, 2007). Preliminary reports of linkage to regions on various chromosomes have often failed to replicate when they were tested by investigators in different laboratories.

The possibility of detecting linkage to known traits is very exciting. This knowledge might eventually enable mental health professionals to identify people who are vulnerable to a disorder before the onset of overt symptoms. At the same time, however, two important cautions must be kept in mind regarding the complexity of the search for causes of mood disorders. One problem involves genetic heterogeneity. Within the general population, there may be more than one locus that contributes to the development of depression. Mood disorders may be linked to one marker within a certain extended family and to an entirely different marker in another family (Detera-Wadleigh & McMahon, 2004). Second, we also know that the environment plays an important role in the development of mood disorders. The onset of a mood disorder is determined by a combination of genetic and environmental risk factors that the individual experiences.





**FIGURE 5.4** Combined Effects of Stress and Genetic Vulnerability on Risk for Depression

Probability of onset of major depressive episode as a function of genotype for the serotonin transporter gene.

\*The short ("s") allele is associated with lower efficiency compared to the long ("l") allele.

Source: From "Influence of Life Stress on Depression: Moderation by a Polymorphism in the 5-HTT Gene," Avshalom Caspi, Karen Sugden, Terrie E. Moffitt, Alan Taylor, Ian W. Craig, HonaLee Harrington, Joseph McClay, Jonathan Mill, Judy Martin, Antony Braithwaite, and Richie Poulton, *Science* 18 July 2003: 301 (5631), 386–389. Reprinted with permission from AAAS.

**Genetic Risk and Sensitivity to Stress** How do genetic factors and stressful life events interact to bring about depression? One demonstration of this effect was based on new genetic techniques that allow investigators to identify specific genes (Caspi et al., 2003). This investigation focused on the serotonin transporter (5-HTT) gene, which has been studied because several drugs that are used to treat depression have a direct impact on this particular neurotransmitter (see page 125). There are two alleles (long and short) for one particular region of the 5-HTT gene: The short allele ("s") is associated with reduced efficiency of neural transmission in serotonin pathways. People who are homozygous for the "s" allele of the 5-HTT gene are at a particularly high risk for becoming clinically depressed if they

**How do genetic factors and stressful life events interact to cause depression?**

experience stressful life events (see Figure 5.4). In the absence of increased stress, the presence of this gene does not increase the person's risk for depression. Both factors seem to be necessary. The effects of the environment and genetic factors are not independent. Genetic factors apparently control the person's sensitivity to environmental events (Karg et al., 2011).

**The Neuroendocrine System** Various kinds of central nervous system events are associated with the connection between stressful life events and major depression. In the following sections, we will consider evidence regarding hormones and specific regions of the brain. These are the biological phenomena that are closely associated with the social and psychological factors that we have described thus far. Cognitive and emotional events are implemented in these events (Miller & Keller, 2000). They are part of the process by which the brain communicates with the rest of the body and mobilizes activities in response to changes in the external environment.

The endocrine system plays an important role in regulating a person's response to stress. Endocrine glands, such as the pituitary, thyroid, and adrenal glands, are located at various sites throughout the body (see Figure 2.4). In response to signals from the brain, these glands secrete hormones into the bloodstream. One important pathway in the endocrine system that may be closely related to the etiology of mood disorders is called the *hypothalamic-pituitary-adrenal (HPA) axis*. When the person detects a threat in the environment, the hypothalamus signals the pituitary gland to secrete a hormone called ACTH, which in turn modulates secretion of hormones, such as cortisol, from the adrenal glands into the

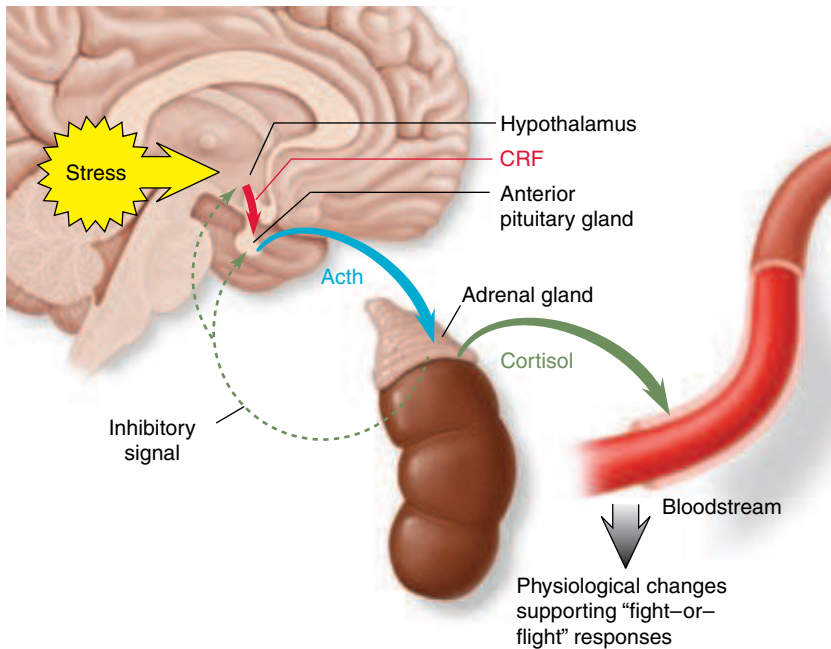
bloodstream. Increased levels of cortisol help the person to prepare to respond to the threat by increasing alertness and delivering more fuel to muscles while also decreasing interest in other activities that might interfere with self-protection (such as sleeping and eating). This system is illustrated in Figure 5.5.

An association between the HPA axis and depression is indicated by evidence regarding the *dexamethasone suppression test (DST)*, which has been used extensively to study endocrine dysfunction in patients with mood disorders (Nemeroff, 1998a). Dexamethasone is a potent synthetic hormone. People who have taken a test dose of dexamethasone normally show a suppression of cortisol secretion because the hypothalamus is fooled into thinking that there is already enough cortisol circulating in the system. Some depressed people show a different response: Approximately half of depressed patients show a failure of suppression in response to the DST. After their symptoms have improved, most of these patients exhibit a normal response on the DST. This pattern is consistent with the hypothesis that a dysfunction of the HPA axis may be involved in the development or maintenance of clinical depression, at least for some people (Stone, Lin, & Quarermain, 2008; Whybrow, 1997).

In what ways might endocrine problems be related to other etiological factors? Several possibilities exist. In terms of the specific link between the endocrine system and the central nervous system, overproduction of cortisol may lead to changes in brain structure and function. At a more general level, hormone regulation may provide a process through which stressful life events interact with a genetically determined predisposition to mood disorder. Stress causes the release of adrenal steroids, such as cortisol, and steroid hormones play an active role in regulating the expression of genes (Gotlib et al., 2008).

**Brain Imaging Studies** The newest tools in the search for biological underpinnings of mood disorders are those that allow scientists to create detailed images of brain structures and to monitor ongoing brain functions in living patients (see Chapter 4 for a description of these procedures). The brain circuits that are involved in the experience and control of emotion are complex, centering primarily on the limbic system and its connections to the prefrontal cortex and the anterior cingulate cortex. Brain imaging studies indicate that severe depression is often associated with abnormal patterns of activity as well as structural changes in various brain regions (Davidson et al., 2002; Gotlib & Hamilton, 2008). Some of these areas of the brain are illustrated in Figure 5.6. See Figure 2.3 for illustrations





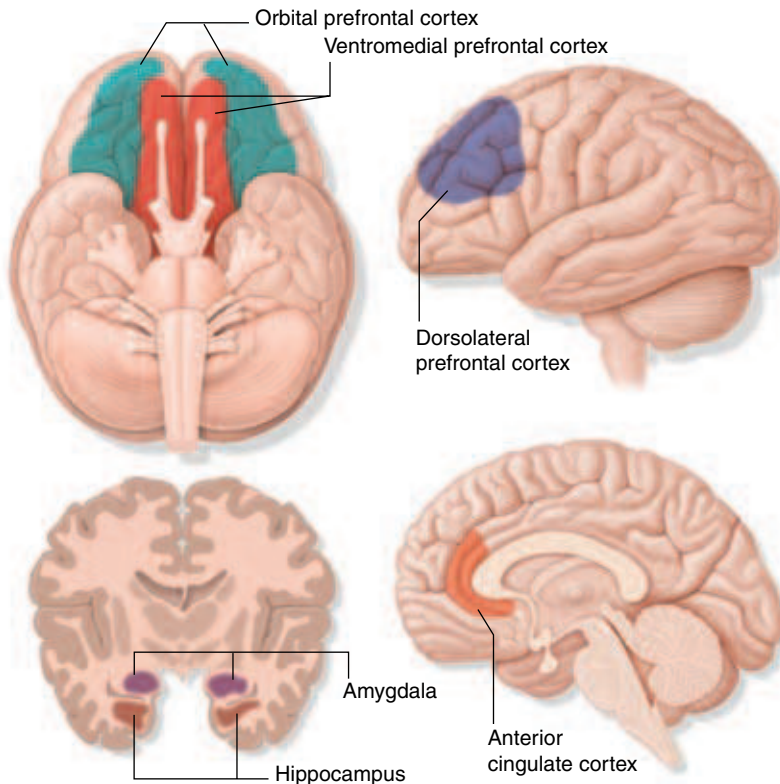
**Effects of CRF application to brain in animals**

Decreased	Increased
Eating Sleeping Reproductive activity	Restless activity in familiar environments Withdrawal in unfamiliar environments

### FIGURE 5.5 Hormonal System Known as the Hypothalamic-Pituitary-Adrenal (HPA) Axis

The hypothalamic-pituitary-adrenal axis is activated in response to stress.

Source: Adapted from Nemeroff, C. (1998), "The Neurobiology of Depression." *Scientific American* 278, 28–35. Illustration by Tomo Narashima. Reprinted by permission of the artist.



### FIGURE 5.6 Areas of the Brain Involved in Depression

Brain regions involved in emotion and mood disorders.

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of the amygdala, hippocampus, and other structures involved in the limbic system.

Abnormal patterns of activation in regions of the prefrontal cortex (PFC) are often found in association with depression. This evidence has been collected using functional brain imaging procedures, such as PET and fMRI. Some areas show *decreased activity*, especially the dorsolateral prefrontal cortex on the left side of the brain. This area of the PFC is involved in planning that is guided by the anticipation of emotion. A person who has a deficit of this type might have motivational problems, such as an inability to work toward a pleasurable goal. Other areas of the PFC have been found to show *abnormally elevated* levels of activity in depressed people. These include the orbital PFC and the ventromedial PFC, areas of the brain that are important for determining a person's responses to reward and punishment. More specifically, the orbital PFC inhibits inappropriate behaviors and helps the person ignore immediate rewards while working toward long-term goals. The ventromedial PFC is involved in the experience of emotion and the process of assigning meaning to perceptions. Overactivity in these regions of the brain might be associated with the prolonged experience of negative emotion.

The anterior cingulate cortex (ACC) provides a connection between the functions of attention and emotion. It allows us to focus on subjective feelings and to consider the relation between our emotions and our behavior. For example, the ACC is activated when a person has been frustrated in the pursuit of a goal, or when he or she experiences an emotion, such as sadness, in a situation where it was not expected. People suffering from major depressive disorder typically show decreased activation of the ACC (Davidson et al., 2002). A reduction in ACC activity might be reflected in a failure to appreciate the maladaptive nature of prolonged negative emotions and a reduced ability to engage in more adaptive behaviors that might help to resolve the person's problems.

The amygdala (see Figure 5.6), almond-sized nuclei near the tip of the hippocampus on each side of the brain, appear to be an important part of the neural circuit involved in emotion (Canli, 2009). They are extensively connected to the hypothalamus. This system is responsible for monitoring the emotional significance of information that is processed by the brain and regulating social interactions. Functional imaging studies have identified elevated levels of resting blood flow and glucose metabolism in the amygdala among patients with major depressive disorder and bipolar mood disorder (Drevets, 2002). Higher metabolism rates are associated with more severe levels of depression. Patients who respond positively to treatment show a normalization of amygdala metabolism.

It is tempting to infer from this pattern that the increased activity reflected in images of the amygdala represents, at the neurochemical level of analysis, a reflection of the distorted cognitive functions that have been described by clinical psychologists in association with depression (Gotlib & Hamilton, 2008). Of course, this kind of speculation will need to be tested using more detailed research strategies in which specific cognitive processes are measured while brain activities are recorded in depressed and nondepressed people.

**How could the amygdala be related to problems in mood regulation?**

**Neurotransmitters** Communication and coordination of information within and between areas of the brain depend on neurotransmitters, chemicals that bridge the gaps between individual neurons (see Chapter 2). Over the past several decades, scientists have gathered a great deal of information concerning the neurochemical underpinnings of depression and mania (Delgado & Moreno, 2006). Our knowledge in this area began with the accidental discovery, during the 1950s, of several drugs that have the ability to alter people's moods. The development of antidepressant drugs stimulated research on several specific neurotransmitters that have been shown to be responsible for their effects. Most notable among these are serotonin, norepinephrine, and dopamine. Each neurotransmitter works in a broad set of pathways connecting fairly specific brain locations.

Serotonin is the chemical messenger that is enhanced by medications such as Prozac. It has a profound effect on a person's mood, with higher levels being associated with feelings of serenity and optimism. Serotonin also plays an important role in areas of the brain that regulate sleep and appetite. Serotonin pathways include connections involving the amygdala, the hypothalamus, and areas of the cortex. The beneficial effects of drugs like Prozac (see the section on treatment of depression) provide the most convincing evidence for the argument that some type of malfunction in serotonin pathways is involved in the etiology of depression.

We know that the relation between neurotransmitters and depression is complex, and the specific mechanisms are not well understood. There may be more than 100 different neurotransmitters in the central nervous system, and each neurotransmitter is associated with several types of postsynaptic receptors. It seems unlikely that a heterogeneous disorder like depression, which involves a dysregulation of many cognitive and emotional functions, will be linked to only one type of chemical messenger or only one loop in the brain's circuitry. Current theories tend to emphasize the interactive effects of several neurotransmitter systems, including serotonin, norepinephrine, dopamine, and neuropeptides (short chains of amino acids that exist in the brain and appear to modulate the activity of the classic neurotransmitters) (Stockmeier, 2003; Thase, Ripu, & Howland, 2002).

## INTEGRATION OF SOCIAL, PSYCHOLOGICAL, AND BIOLOGICAL FACTORS

We have considered a variety of social, psychological, and biological factors that appear to be related to the causes of mood disorders. How can these factors be combined or integrated? One type of research that illustrates this point has employed an animal model of depression (see Research Methods). When laboratory animals are exposed to uncontrollable stress (such as a 15-minute forced swim in cold water from which they cannot escape), they frequently exhibit behavioral symptoms that are similar to (yet obviously not the same as) those seen in depressed humans (Lanfume, Mongeau, & Cohen-Salmon, 2008). The animals develop deficits in motor activity, sleep, and eating behaviors. This type of stress-induced depression in laboratory rats produces various temporary effects on neurotransmitters, including changes in the concentration



# RESEARCH METHODS

## ANALOGUE STUDIES: DO RATS GET DEPRESSED, AND WHY?

Many questions about the etiology of psychopathology cannot be addressed using highly controlled laboratory studies with human subjects. For example, does prolonged exposure to uncontrollable stress cause anxiety disorders? This kind of issue has been addressed using correlational studies with people who have the disorders in question, but experiments on these issues cannot be done with human subjects. For important ethical reasons, investigators cannot randomly assign people to endure conditions that are hypothesized to produce full-blown disorders like clinical depression. The best alternative is often to study a condition that is similar, or analogous, to the clinical disorder in question. Investigations of this type are called **analogue studies** because they focus on behaviors that resemble mental disorders—or isolated features of mental disorders—that appear in the natural environment.

Many analogue studies depend on the use of animal models of psychopathology, which have provided important insights regarding the etiology of conditions such as anxiety, depression, and schizophrenia (Fernando & Robbins, 2010). In the 1960s, Harry Harlow's research demonstrated that rhesus monkey infants develop despair responses after separation from their mothers. The somatic symptoms exhibited by these monkeys—facial and vocal displays of

sadness and dismay, social withdrawal, changes in appetite and sleep, and psychomotor retardation—were remarkably similar to many symptoms of clinical depression in humans.

This social separation model of depression has been used to explore several important variables that may be involved in mood disorders. For example, infant monkeys who have extensive experience with peers and other adults are less likely to become depressed following separation from their mothers. The skills that they learn through social exploration apparently allow them to cope more successfully with stress. The social separation model has also been used to explore neurochemical factors and mood disorders. Drug companies have used the model to evaluate the antidepressant effects of new drugs.

Some clinicians have argued that mental disorders like depression cannot be modeled in a laboratory setting, especially using animals as subjects. Cognitive symptoms—such as Beck's depressive triad—cannot be measured with animals. Do monkeys feel guilty? Can rats experience hopelessness or suicidal ideas? But these symptoms are not necessarily the most central features of the disorder. Cross-cultural studies have shown that in some

non-Western societies somatic symptoms are the most prominent symptoms of depression. Many of these aspects of mood disorder are seen in animals. The value of any analogue study hinges, in large part, on the extent to which the analogue condition is similar to the actual clinical disorder. Some models are more compelling than others.

Analogue studies have one important advantage over other types of research design in psychopathology: They can employ an experimental procedure. Therefore, the investigator can draw strong inferences about cause

### *Why do some investigators study "depression" in animals?*

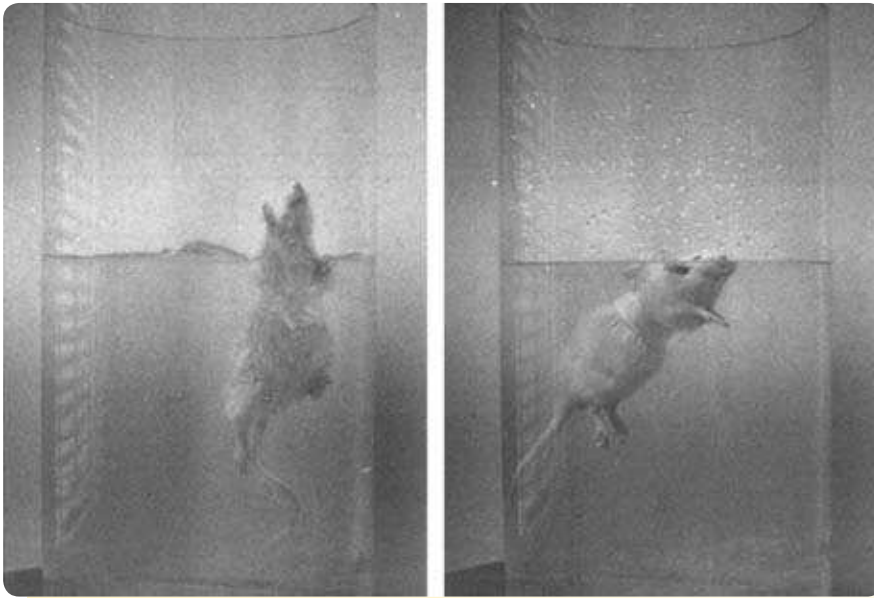
and effect. The main disadvantage of analogue studies involves the extent to which the results of a particular investigation can be generalized to situations outside the laboratory. If a particular set of circumstances produced a set of maladaptive behaviors in the laboratory, is it reasonable to assume that similar mechanisms produce the actual clinical disorder in the natural environment? In actual practice, questions about the etiology of disorders like depression will probably depend on converging evidence generated from the use of many different research designs.

of norepinephrine, serotonin, and dopamine in the specific regions of the limbic system and the frontal cortex. Rats that show these neurochemical consequences following exposure to stress exhibit signs of depression. If the neurotransmitters are not depleted, the rats do not appear to be depressed. Furthermore, administering antidepressant drugs to these animals has been shown to reverse or prevent the behavioral effects of uncontrollable stress. Selective breeding experiments have been able to produce subtypes of rats that differ in their response to behavioral challenges (such as the forced swim

test), as well as in their response to antidepressant medication (Ressler & Mayberg, 2007).

This animal model illustrates the need to consider the interaction between biological and psychological phenomena. The data on stress-induced depression in rats suggest that neurochemical processes may be reactions to environmental events, such as uncontrollable stress in rats or severe life events in people. Psychological and biological explanations of depression are complementary views of the same process, differing primarily in terms of their level of analysis.





Rats wearing “water wings” in a forced swim test. One (left) shows vigorous motor activity while the other (right) shows passive behavior (floating without limb movement) that is considered an analogue for depression.

## Treatment

Several procedures, both psychosocial and biological, have proved to be useful in the treatment of mood disorders. In the following pages we will examine some of the more prominent contemporary approaches to the treatment of unipolar and bipolar mood disorders, as well as the research evidence on their usefulness.

### UNIPOLAR DISORDERS

Most psychological approaches to the treatment of depression owe some debt to psychodynamic procedures and Freud’s emphasis on the importance of interpersonal relationships. According to Freud’s view, the primary goal of therapy should be to help the patient understand and express the hostility and frustration that are being directed against the self. These negative emotions are presumably rooted in dysfunctional relationships with other people. Freud also placed considerable emphasis on the apparently irrational beliefs that depressed people hold about themselves and their world. These cognitive factors are also emphasized by cognitive therapists.

**Cognitive Therapy** The cognitive model assumes that emotional dysfunction is influenced by the negative ways in which people interpret events in their environments and the things that they say to themselves about those experiences. Based on the assumption that depression will be relieved if these maladaptive schemas are changed, cognitive therapists focus on helping their patients replace self-defeating thoughts with more rational self-statements (Dobson, 2008; Garratt et al., 2007).

A specific example may help illustrate this process. Consider the case of Cathy, the depressed attorney whom we introduced at the beginning of the chapter. Cathy focused a great deal of attention on relatively minor negative events at work, blaming herself for anything other than a perfect performance. Her therapist helped her to recognize that she was engaging in a pattern of cognitive distortion that has been labeled “selective

abstraction.” Taking a detail out of context, she would invariably ignore those aspects of her performance that refuted the conclusion that she was professionally incompetent. Her therapist helped her overcome these tendencies by teaching her to question her conclusions and to develop more objective ways of evaluating her experiences.

Cathy also tended to think about herself in absolute and unvarying terms. During the course of therapy, she learned to recognize this pattern and to substitute more flexible self-statements. Instead of saying to herself, “I am a hopeless introvert and will never be able to change,” she learned to substitute, “I am less comfortable in social situations than some other people, but I can learn to be more confident.”

The cognitive approach to treatment shares many features with behavioral approaches to intervention. Cognitive therapists are active and directive in their interactions with clients, and they focus most of their attention on their clients’ current experience. They also assume that people have conscious access to cognitive events: Our thinking may not always be rational, but we can discuss private thoughts and feelings. Another important aspect of the cognitive approach to treatment, and a characteristic that it shares with the behavioral perspective, is a serious commitment to the empirical evaluation of the efficacy of treatment programs. Several studies have found that cognitive therapy is effective in the treatment of nonpsychotic, unipolar depression (Hollon, Stewart, & Strunk, 2006).

**Interpersonal Therapy** Interpersonal therapy is another contemporary approach to the psychological treatment of depression (Bleiberg & Markowitz, 2008; Weissman, Markowitz, & Klerman, 2000). It is focused primarily on current relationships, especially those involving family members. The therapist helps the patient develop a better understanding of the interpersonal problems that presumably give rise to depression and attempts to improve the patient’s relationships with other people by building communication and problem-solving skills. Therapy sessions often include nondirective discussions of social difficulties and unexpressed or unacknowledged negative emotions, as well as role-playing to practice specific social skills.



**Antidepressant Medications** The types of medications that are used most frequently in the treatment of unipolar mood disorders fall into four general categories: selective serotonin reuptake inhibitors (SSRIs), tricyclics (TCAs), monoamine oxidase inhibitors (MAOIs), and “other,” more recently developed drugs. Among patients who respond positively to antidepressant medication, improvement is typically evident within four to six weeks, and the current episode is often resolved within 12 weeks (DePaulo & Horvitz, 2002; Schulberg et al., 1999). Medication is usually continued for at least six to 12 months after the patient has entered remission in order to reduce the chance of relapse.

**Selective Serotonin Reuptake Inhibitors** The selective serotonin reuptake inhibitors (SSRIs) were developed in the early 1980s and are now the most frequently used form of antidepressant medication, accounting for more than 80 percent of all prescriptions written for that purpose (Hirschfeld, 2001). Unlike the original forms of antidepressant medication, which were discovered by accident, SSRIs were synthesized in the laboratories of pharmaceutical companies on the basis of theoretical speculation regarding the role of serotonin in the etiology of mood disorders. There are many specific types of SSRIs (see Table 5.5). Controlled outcome studies indicate that Prozac and other SSRIs are about as effective as traditional forms of antidepressant medication (Kroenke et al., 2001).

The SSRIs inhibit the reuptake of serotonin into the presynaptic nerve ending and thus promote neurotransmission in serotonin pathways by increasing the amount of serotonin in the synaptic cleft. They are called “selective” because they seem to have little if any effect on the uptake of norepinephrine and dopamine. Nevertheless, the SSRIs are not entirely selective, in the sense that some of them do block reuptake of other neurotransmitters. They also vary in the potency with which they block serotonin reuptake. Their effectiveness in treating

depression does not seem to be directly related to either the extent to which a particular SSRI is selective with regard to serotonin or its potency in blocking serotonin reuptake (Pallanti & Sandner, 2007).

The SSRIs are typically considered to be easier to use than other antidepressant drugs. They also have fewer side effects (such as constipation and drowsiness), and they are less dangerous in the event of an overdose. This does not mean, of course, that they are completely without side effects (see Critical Thinking Matters on page 127). Some patients experience nausea, headaches, and sleep disturbances, but these symptoms are usually mild and short term. The most troublesome side effects associated with SSRIs are sexual dysfunction and weight gain (Sussman & Ginsberg, 1998). The rate of decreased sexual desire and orgasmic dysfunction may be as high as 50 percent among both men and women taking SSRIs. Weight changes in response to SSRIs vary in relation to length of treatment. Many patients experience an initial weight loss, but most regain this weight after six months. Those who continue to take the medication may gain an average of 20 pounds.

**Tricyclics** The tricyclics (TCAs), such as imipramine (Tofranil) and amitriptyline (Elavil), have been in relatively widespread use since the 1950s, but their use has declined since the introduction of the SSRIs because they have more side effects. Common reactions include blurred vision, constipation, drowsiness, and a drop in blood pressure. The TCAs affect brain functions by blocking the uptake of neurotransmitters (especially norepinephrine) from the synapse. Several controlled double-blind studies indicate that TCAs benefit many depressed patients, although improvements might not be evident until two or three weeks after the beginning of treatment (Schatzberg, 1999; Thase, 2006). The several different kinds of tricyclic medication vary in potency and side effects, but they are generally equal in

**TABLE 5.5** Medications for Unipolar Mood Disorders

Drug Class	Generic Name (Trade Name)	Mode of Action
Selective serotonin reuptake inhibitors (SSRIs)	Fluoxetine (Prozac)	Block 5-HT reuptake
	Paroxetine (Paxil)	
	Sertraline (Zoloft)	
	Citalopram (Celexa)	
	Fluvoxamine (Luvox)	
Tricyclic antidepressants (TCAs)	Amitriptyline (Elavil)	Block reuptake of 5-HT and norepinephrine
	Clomipramine (Anafranil)	
	Imipramine (Tofranil)	
Monoamine oxidase inhibitors (MAOIs)	Phenelzine (Nardil)	Deactivate enzyme that breaks down monoamines
Other antidepressants	Trazodone (Desyrel)	Block 5-HT reuptake and block 5-HT receptors
	Bupropion (Wellbutrin)	Block norepinephrine and dopamine reuptake
	Venlafaxine (Effexor)	Block reuptake of 5-HT and norepinephrine
Note: 5-HT is serotonin.		





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terms of effectiveness. Comparisons of TCAs and SSRIs indicate that they are approximately equal in terms of success rates, with positive responses being shown by 50 to 60 percent of depressed patients (Schulberg et al., 1999).

**Monoamine Oxidase Inhibitors** The antidepressant effects of **monoamine oxidase inhibitors (MAOIs)**, such as phenelzine (Nardil), were discovered at about the same time as those of the tricyclic drugs. These drugs have not been used as extensively as tricyclics, however, primarily for two reasons. First, patients who use MAOIs and also consume foods containing large amounts of the compound tyramine, such as cheese and chocolate, often develop high blood pressure. Second, some early empirical evaluations of antidepressant medications suggest that MAOIs are not as effective as tricyclics.

More recent studies have shown that MAO inhibitors are indeed useful in the treatment of depressed patients (Thase, 2006). They can be used safely when the patient avoids foods such as cheese, beer, and red wine. In addition, MAOIs are now widely used in the treatment of certain anxiety disorders, especially agoraphobia and panic attacks (see Chapter 6).

### The Efficacy of Psychotherapy and Medication

Considerable time and energy have been devoted to the evaluation of psychological and pharmacological treatments for depression. The bottom line in this lengthy debate—based on extensive reviews of the research literature—is that cognitive therapy and antidepressant medication are both effective forms of treatment for people who suffer from unipolar depression (Hollon, Thase, & Markowitz, 2002). This is true for people with major depressive disorder as well as dysthymia. In actual practice, many experts recommend treatment with a combination of psychotherapy and medication (Kupfer & Frank, 2001; Simon et al., 2006).

Carefully controlled treatment outcome studies indicate that medication and psychotherapy are approximately equivalent in the treatment of people who are chronically depressed. Either form of treatment is a reasonable choice for people suffering from unipolar depression. Recent evidence indicates

that the combination of psychotherapy and antidepressant medication often leads more quickly to a remission of symptoms than either form of treatment alone (Manber et al., 2008).

## BIPOLAR DISORDERS

Treatment of bipolar mood disorders has also focused on the combined use of medication and psychotherapy. A variety of mood-stabilizing drugs are employed with bipolar patients. They are used to help people recover from episodes of mania and depression and also on a long-term maintenance basis to reduce the frequency of future episodes (Geddes et al., 2004). Antidepressant medications are sometimes used, usually in combination with a mood stabilizer, for the treatment of bipolar patients (Fountoulakis et al., 2008). Clinicians must be cautious, however, because antidepressants can sometimes trigger a switch from depression into a hypomanic or manic episode.

**Lithium** An extensive literature indicates that the salt *lithium carbonate* is an effective form of treatment in the alleviation of manic episodes, and it remains the first choice for treating bipolar disorders. It is also useful in the treatment of bipolar patients who are experiencing a depressive episode. Perhaps most importantly, bipolar patients who continue to take lithium between episodes are significantly less likely to experience a relapse (Bauer & Mitchner, 2004).

Unfortunately, there are also some limitations associated with the use of lithium. Many bipolar patients, perhaps 40 percent, do not improve when they take lithium (Mendlewicz, Souery, & Rivelli, 1999). Nonresponse is particularly common among rapid cycling patients, those who exhibit a mixture of manic and depressed symptoms, and those with comorbid alcohol abuse. Compliance with medication is also a frequent problem; at least half the people for whom lithium is prescribed either fail to take it regularly or stop taking it against their psychiatrist's advice. The main reasons that patients give for discontinuing lithium involve its negative side effects, including nausea, memory problems, weight gain, and impaired coordination.

**Anticonvulsant Medications** Often, bipolar patients who do not respond to lithium are prescribed anticonvulsant drugs, particularly carbamazepine (Tegretol) or valproic acid (Depakene) (Walden et al., 1998). Outcome data suggest that slightly more than 50 percent of bipolar patients respond positively to these drugs. Like lithium, carbamazepine and valproic acid can be useful in reducing the frequency and severity of relapse, and they can be used to treat acute manic episodes. Valproic acid may be more effective than lithium for the treatment of rapid cycling bipolar patients and those with mixed symptoms of mania and depression in a single episode (Gadde & Krishnan, 1997). Common side effects include gastrointestinal distress (nausea, vomiting, and diarrhea) and sedation.

**Psychotherapy** Although medication is the most important method of treatment for bipolar disorders, psychotherapy can be an effective supplement to biological intervention. Both cognitive therapy and interpersonal therapy have been adapted for use with bipolar disorders. Cognitive therapy can address the patient's reactions to stressful life events as well as his or her reservations about taking medication (Craighead & Miklowitz, 2000).



# Critical Thinking Matters

## DO ANTIDEPRESSANT DRUGS CAUSE VIOLENT BEHAVIOR?

Extensive media attention has been devoted to the suggestion that some of the SSRIs can increase the risk of violent and suicidal behavior. Several dramatic cases have been discussed at great length. One example is Chris Pittman, who was found guilty in 2005 of killing his paternal grandparents with a shotgun when he was 12 years old. No one questioned the basic facts of the case. Pittman admitted that he blasted his grandparents with a shotgun while they were sleeping. He then set their house on fire and fled the area. After he was caught, his defense team mounted what some court observers called the *Zoloft defense*, claiming that the murders were triggered by the boy's reaction to antidepressant medication that he had been taking for several days before the murders (see Chapter 18 for a discussion of the insanity defense). Prosecutors argued, on the other hand, that he killed his grandparents because he was angry after they disciplined him for fighting with a younger student on the school bus earlier that day. In other words, his motivation did not involve a mental disorder or a reaction to medication. Pittman was tried as an adult, convicted by a jury, and sentenced to 30 years in prison.

Tragic public cases such as this one generate strong opinions on both sides. Magazines and websites are filled with warnings about the dangers of treating children and adolescents with SSRIs, some more extreme than others. Many psychiatrists have responded by noting the beneficial effects

that antidepressant medication can have for young people. Clearly, parents should be warned about negative side effects that are sometimes associated with drugs like Zoloft, but should they be frightened to the point that they avoid using one of the most effective forms of treatment for mood disorders? Critical thinking must prevail.

One important issue in this ongoing debate is the need for empirical evidence. Do SSRIs cause a significant increase in the risk of violence and suicide? Millions of people take antidepressant medication. Many depressed people commit suicide, in spite of the best efforts to treat their condition. The fact that one person committed suicide or any other violent crime while taking a specific drug does not provide convincing evidence that the drug *caused* the person to engage in that behavior. The question is whether people taking Zoloft are more likely to be suicidal or violent than other (similarly) depressed people who are being given another form of treatment. The data suggest that SSRI treatment does not increase risk of suicidal behavior, but the issue has not been closed entirely (Breggin, 2004; Gibbons et al., 2007). In the absence of better evidence, the U.S. Food and Drug Administration (FDA) requires that a warning be printed on the label when Zoloft (and some other SSRIs) is prescribed for children, including the following statement:

Families and caregivers of pediatric patients being treated with antidepressants . . . should be alerted

about the need to monitor patients for the emergence of agitation, irritability, unusual changes in behavior, and the other symptoms described above, as well as the emergence of suicidality.

The legal implications of these findings remain ambiguous. Most forms of antidepressant medication are capable of triggering manic episodes in

### ***Are people taking Zoloft more likely to be violent than other people suffering from mood disorders?***

people who are depressed (Goldberg & Truman, 2003), and the symptoms of mania sometimes include hostility and aggression. Does that mean that SSRIs can *cause* someone to become homicidal or suicidal? When people come out of a period of depression and their mood is lifting, they also experience an increase in energy. For many years, experts have recognized that this period of time can be especially dangerous for people who have harbored serious thoughts of violence. If they decide to act on those impulses, is it the pill's fault? Is the person no longer responsible for his or her behavior?

While the public does need to be warned about side effects that can be associated with medication, it is also irresponsible to exaggerate or distort that evidence. People who are frightened do not make well-informed decisions. In fact, the risks of medication side effects must be balanced against the risks associated with failing to treat a potentially lethal condition such as depression (Brent, 2004).

A variation on interpersonal therapy, known as interpersonal and social rhythm therapy has been developed for use with bipolar patients (Frank, 2005). It is based on the recognition that a repeated episode of either mania or depression is often precipitated by one of the following factors: stressful life events, disruptions in social rhythms (the times of day in which the person works, sleeps, and so on), and failure to take medication. Special emphasis is placed on monitoring the interaction between symptoms (especially the onset of hypomanic or

manic episodes) and social interactions. Therapists help patients learn to lead more orderly lives, especially with regard to sleep-wake cycles, and to resolve interpersonal problems effectively. Regulation of sleep and work patterns is also important. This therapy program is employed in combination with the long-term use of mood stabilizing medication.

Current evidence indicates that the combination of psychotherapy and medication for the treatment of bipolar disorder is more beneficial than medication alone (Miklowitz et al.,



2007). There is an obvious need for more extensive research on the effectiveness of various types of psychosocial treatment for bipolar mood disorders.

## ELECTROCONVULSIVE THERAPY

The procedure known as electroconvulsive therapy (or ECT) has proved beneficial for many patients suffering from unipolar or bipolar mood disorders (see Chapter 3 for a review of the background of ECT). Electroconvulsive therapy is typically administered in an inpatient setting and consists of a series of treatments given three times a week for two to seven weeks (Abrams, 2002). Many patients show a dramatic improvement after six to eight sessions, but some require more. In current clinical practice, muscle relaxants are always administered before a patient receives ECT. This procedure has eliminated bone fractures and dislocations that were unfortunate side effects of techniques used many years ago. The electrodes can be placed either bilaterally (on both sides of the head) or unilaterally (at the front and back of the skull on one side of the patient's head). Unilateral placement on the nondominant hemisphere (the right side of the head for right-handed people) may minimize the amount of post-seizure memory impairment, but it may also be less effective.

Although how ECT works remains largely a mystery, empirical studies have demonstrated that it is an effective form of treatment for severely depressed patients (Khalid et al., 2008). Reservations regarding the use of ECT center around widely publicized, although infrequent, cases of pervasive and persistent memory loss. Reviews of the research evidence indicate that ECT-induced changes in memory and other cognitive functions are almost always short-lived, and ECT does not induce loss of neurons or other changes in brain structure (Lisanby, 2007).

No one denies that ECT is an invasive procedure that should usually be reserved for patients who have been resistant to other forms of intervention, such as medication and cognitive therapy. Nevertheless, it remains a viable and legitimate alternative for some severely depressed patients, especially those

who are so suicidal that they require constant supervision to prevent them from harming themselves. As always, the risks of treatment must be carefully weighed against those associated with allowing the disorder to follow its natural course.

## SEASONAL MOOD DISORDERS

The observation that changes in seasons can help bring on episodes of mood disorder leads to the relatively obvious implication that some patients might respond to manipulations of the natural environment. For centuries, physicians have prescribed changes in climate for their depressed clients (Wehr, 1989). The prominent French psychiatrist Jean Esquirol (1772–1840) reportedly advised a patient whose depression appeared when the days grew shorter to move from Belgium to Italy during the winter.

Modern light therapy was introduced in the 1980s (Rosenthal, 1998). Typical treatment involves exposure to bright (2,500 lux), broad-spectrum light for one to two hours every day. Some patients also respond positively to shorter periods (30 minutes) of high-intensity (10,000 lux) light (Hill, 1992). This high-intensity light is roughly equivalent to the amount of light that would be generated by a 750-watt spotlight focused on a surface 1 square meter in area. The light source—most often a rectangular box containing fluorescent ceiling fixtures—must be placed close to the patient at eye level. Improvement in the person's mood is often seen within two to five days.

Outcome studies have found that light therapy is an effective form of treatment for seasonal affective disorder, with outcome being roughly equivalent to the use of standard antidepressant medication (Lam et al., 2006). The combination of light therapy with cognitive therapy may be more effective than either form of treatment alone (Rohan et al., 2007). Many patients with seasonal affective disorders do respond well to light therapy, and it is considered by many clinicians to be a useful approach to this disorder. It is not exactly clear why or how light therapy works, but the process may help the body to normalize circadian rhythms, which regulate processes such as hormone secretion (Whybrow, 1997).



Electroconvulsive therapy is an effective form of treatment for severely depressed patients. It should be considered for people who do not improve with psychotherapy or antidepressant medication.





This man is receiving light therapy for the treatment of seasonal affective disorder.

## Suicide

### BRIEF CASE STUDY

#### An Admiral's Suicide

Admiral Jeremy (Mike) Boorda was the highest ranking officer in the U.S. Navy when, at the age of 56, he committed suicide (Thomas, 1996). He was married and the father of four children. Boorda was the first person in the history of the Navy to rise from the enlisted ranks to become chief of naval operations. Although his record of leadership was widely admired by both fellow officers and prominent politicians, he had recently been the subject of journalistic scrutiny. Questions had been raised about whether Boorda had legitimately earned two medals that he displayed on his uniform for several years (small Vs that are awarded to people who have shown valor in combat). These public symbols of heroism are a source of considerable status, especially among professional military people. Boorda had stopped wearing the medals after the issue was initially raised, but some members of the media had decided to pursue the issue further. On the morning of his death, Boorda was told that reporters from *Newsweek* magazine wanted to ask him some more questions about his justification for wearing these medals. He never met with them. Telling other officers that he was going home for lunch, Boorda went home and shot himself in the chest with a .38 revolver.

Why would such a successful person choose to end his own life? Suicide is an extremely personal, private, and complicated act. We will never know exactly why Admiral Boorda killed himself, but the circumstances surrounding his death are consistent with a number of facts about suicide. The highest rate of suicide in the United States is found among white males over the age of 50. Within this group, men who have been occupationally successful are more likely to commit suicide, especially if that success is threatened or lost. Notes that the admiral left for his wife and

for Navy personnel indicated that he could no longer face the public dishonor that might result from *Newsweek's* investigation. Escape from psychological suffering is often a significant motive in suicide. Did Boorda commit suicide primarily to end his own subjective distress? Or was his death intended to avoid bringing disgrace to the Navy, which had been plagued by other scandals in recent years? When he was appointed chief of naval operations, several months before his death, it had been hoped that he would restore morale and improve public confidence in the Navy. The *Newsweek* probe threatened to negate all of those efforts. Did his death represent a personal sacrifice for the military service that he loved and to which he had devoted 40 years of his life? These difficult questions illustrate the challenges faced by clinicians, who must try to understand suicide so that they can more effectively prevent it.

Aides said that Admiral Boorda did not show any signs of being depressed, even on the morning that he died. Nor were there any indications of substance abuse or other mental disorders. In this respect, Boorda's situation was unusual. Although many people who commit suicide do not appear to be depressed, and psychopathology doesn't explain all suicidal behavior, there is undoubtedly a strong relationship between depression and self-destructive acts. The available evidence suggests that at least 50 percent of all suicides occur as a result of, or in the context of, a primary mood disorder (Jamison, 1999). Moreover, the risk of completed suicide is much higher among people who are clinically depressed than it is among people in the general population. Follow-up studies consistently indicate that 15 to 20 percent of all patients with mood disorders will eventually kill themselves (Clark & Goebel-Fabbri, 1999). Thus, it seems reasonable to conclude that there is a relatively close link between suicide and depression.

### CLASSIFICATION OF SUICIDE

Common sense tells us that suicide takes many forms. DSM-IV-TR does not address this issue; rather, it lists *suicidal ideation* (thoughts of suicide) only as a symptom of mood disorders. Clinicians and social scientists have proposed a number of systems for classifying subtypes of suicide, based on speculation regarding different motives for ending one's own life. Therefore, in contrast to the principles that were followed in creating DSM-IV-TR, classification systems for suicide are based on causal theories rather than descriptive factors.

The most influential system for classifying suicide was originally proposed in 1897 by Émile Durkheim (1858–1917), a French sociologist who is one of the most important figures in the history of sociology (Coser, 1977). In order to appreciate the nature of this system, you must understand Durkheim's approach to studying social problems. Durkheim was interested in "social facts," such as religious groups and political parties, rather than the psychological or biological features of particular individuals. His scientific studies were aimed at clarifying the social context in which human problems appear, and they were based on the assumption that human passions and ambition are controlled by the moral and social structures of society. One of his most important scientific endeavors was a comparison of suicide rates among various religious and occupational groups.

In his book *Suicide*, Durkheim (1897/1951) argued that the rate of suicide within a group or a society would increase if



levels of social integration and regulation are either excessively low or excessively high. He identified four different types of suicide, which are distinguished by the social circumstances in which the person is living:

- *Egoistic suicide* (diminished integration) occurs when people become relatively detached from society and when they feel that their existence is meaningless. Egoistic suicide is presumably more common among groups such as people who have been divorced and people who are suffering from mental disorders. The predominant emotions associated with egoistic suicide are depression and apathy.
- *Altruistic suicide* (excessive integration) occurs when the rules of the social group dictate that the person must sacrifice his or her own life for the sake of others. One example is the former practice in some Native American tribes of elderly persons voluntarily going off by themselves to die after they felt they had become a burden to others.
- *Anomic suicide* (diminished regulation) occurs following a sudden breakdown in social order or a disruption of the norms that govern people's behavior. Anomic suicide explains increased suicide rates that occur following an economic or political crisis or among people who are adjusting to the unexpected loss of a social or occupational role. The typical feelings associated with *anomie* (a term coined by Durkheim, which literally means "without a name") are anger, disappointment, and exasperation.
- *Fatalistic suicide* (excessive regulation) occurs when the circumstances under which a person lives become unbearable. A slave, for example, might choose to commit suicide in order to escape from the horrible nature of his or her existence. This type of suicide was mentioned only briefly by Durkheim, who thought that it was extremely uncommon.

Durkheim believed that egoistic and anomic suicide were the most common types of suicide in Western industrial societies. Although he distinguished between these two dominant forms, he recognized that they were interconnected and could

operate together. Some people may become victims of both diminished integration and ineffective regulation.

Durkheim's system for classifying types of suicide has remained influential, but it does have some limitations (Leenaars, 2004; Stack, 2004). For example, it does not explain why one person commits suicide while other members of the same group do not. All the people in the group are subject to the same social structures. Another problem with Durkheim's system is that the different types of suicide overlap and may, in some cases, be difficult to distinguish. If the system is used to describe individual cases of suicide, such as that of Admiral Boorda, would clinicians be likely to agree on these subtypes? We are not aware of any attempts to evaluate the reliability of such judgments, but it might be quite low.

**Nonsuicidal Self-Injury** Some people deliberately harm themselves without trying to end their own lives. The most frequent forms of nonsuicidal self-injurious behaviors involve cutting, burning, or scratching the skin, usually in a place where the wounds and resulting scars can easily be concealed from others (Levenkron, 2006). Nonsuicidal self-injury must be distinguished from fashion trends, such as piercing and tattooing. People get tattoos and pierce various parts of their bodies with ornaments and jewelry because the effect on their appearance is considered stylish or distinctive. These activities are accomplished in spite of the initial pain that the person must endure. In contrast, people who engage in nonsuicidal self-injury do it because the pain serves a useful purpose for them regardless of its impact on their appearance.

This problem can take many different forms and be associated with various kinds of mental disorders. Deliberate self-harm is listed in DSM-IV-TR as one of the symptoms of borderline personality disorder (see Chapter 9), but it also occurs among people suffering from other disorders, especially substance use disorders, eating disorders, depression, and post-traumatic stress disorder. Approximately 4 percent of people in the general population report that they have engaged in nonsuicidal self-injurious behaviors, and many of them would



Distinctions among Durkheim's types of suicide can be difficult to make. Do the motives of suicide bombers reflect a breakdown of social order? Or does their violent behavior represent a personal sacrifice for the sake of their society?





Self-injury is often a maladaptive way to regulate intense, negative emotions.

not qualify for the diagnosis of any specific disorder (Klonsky, Oltmanns, & Turkheimer, 2003; Nock & Kessler, 2006). Sometimes, deliberate self-harm is itself the primary problem.

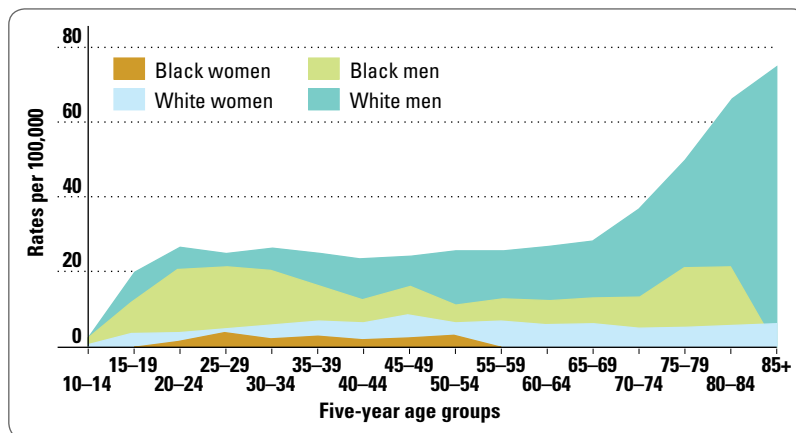
Why do some people deliberately hurt themselves, often disfiguring their own bodies? Several different explanations have been reported (Klonsky, 2007). For some people, cutting is a way to punish the self and is a reflection of frustration and anger. In other cases, the person uses self-inflicted pain in an effort to combat extended periods of dissociation and feelings of emptiness that accompany the absence of family members and friends. But the most commonly reported mechanism suggests that self-injury becomes a maladaptive way to regulate intense, negative emotional states. Episodes of self-injurious behavior are typically preceded by strong feelings of anxiety, anger, frustration, or sadness. These emotions are quickly diminished once the cutting has begun, and the person experiences relief. The final phase of the sequence involves the experience of shame or guilt when the episode is completed and the person reflects on what they have done.

## FREQUENCY OF SUICIDE

In the United States and Canada, the annual rate of completed suicide across all age groups has averaged between 10 and 12 people per 100,000 population for several years (Goldsmith, 2001). More than 30,000 people in the United States kill themselves every year. Suicide rates vary as a function of many factors, including age, gender, and socioeconomic status (see Figure 5.7). The suicide rate increased among adolescents from the 1970s through the mid 1990s, corresponding to an increase in the prevalence of depression and a decrease in the average age of onset for depression. Rates among other age groups either fell or remained steady. Suicide has become the third leading cause of death for people between the ages of 15 and 24, and it is the eighth leading cause of death in the general population (Kochanek et al., 2004).

Suicide attempts are much more common than are completed suicides. The ratio of attempts to completed suicides in the general population is approximately 10 to 1; among adolescents, the ratio is closer to 100 to 1 (Hendin, 1995). There are important gender differences in rates of attempted suicide versus rates of completed suicide. Females aged 15 to 19 years make three times as many suicide attempts as males. Completion rates, however, are four times higher among males (Spirito & Esposito-Smythers, 2006). The difference in fatalities may be due, in part, to the methods employed. Men and boys are more likely to use violent and lethal methods such as firearms and hanging, whereas women and girls are more likely to take an overdose of drugs, which may allow time for discovery and interventions by other people.

The risk of successful suicide is highest among older people. Suicide rates have increased among young adults in recent years, but the highest rates are still found among older people, especially older white men. Although suicide attempts are most common among younger people, with most being made by those younger than 30, the proportion of suicide attempts that end in death is particularly high among the elderly. It is not clear whether this pattern should be attributed to a difference in method or to decreased physical resilience. Rates of suicide in the United States—broken down by age, race, and gender—are illustrated in Figure 5.7. In 1991, more than 70 percent of all suicides were committed by white men, with the highest rate being among those over the age of 80. The pattern for women is somewhat different. Their risk for suicide increases steadily with age until midlife and then tends to level off.



**FIGURE 5.7** Suicide Rates Across the Lifespan

Suicide rates per 100,000 population by five-year group, race, and gender, United States, 1991.

Source: Moscicki, E. K. (1995), "Epidemiology of Suicidal Behavior." *Suicide and Life-Threatening Behavior*, 25: 22-35. Copyright © 1995 The American Association for Suicidology. Reprinted by permission of John Wiley & Sons, Inc.



## CAUSES OF SUICIDE

Many factors contribute to suicidal behavior. In the following discussion, we consider some of the variables that operate at the level of the individual person—psychological and biological considerations—and are associated with suicidal behavior. We also summarize some contemporary research on social factors that are related to suicide.

**Psychological Factors** Many experts have argued that psychological events lie at the core of suicidal behavior (Joiner, 2005). Social factors may set the stage for self-destructive acts,

but events taking place within the person's mind are most immediately responsible for determining whether a particular individual will attempt to end his or her own life. Prominent among these events are intense emotional distress and hopelessness. An outline of several psychological variables that are commonly associated with suicide is presented in Common Elements of Suicide.

The interpersonal-psychological theory of suicidal behavior maintains that suicidal behavior represents an attempt to escape from unbearable psychological pain (Joiner, 2005; Schneidman, 1996). According to this perspective, psychological pain is produced by prolonged frustration

## COMMON ELEMENTS OF SUICIDE

Most people who kill themselves are suffering from some form of mental disorder, such as depression, substance dependence, or schizophrenia (Jamison, 1999). No single explanation can account for all self-destructive behavior, but the following list includes features that are frequently associated with completed suicide (Schneidman, 1996).

1. The common purpose of suicide is to seek a solution. Suicide is not a point-less or random act. To people who think about ending their own lives, suicide represents an answer to an otherwise insoluble problem or a way out of some unbearable dilemma. It is a choice that is somehow preferable to another set of dreaded circumstances, emotional distress, or disability, which the person fears more than death. Attraction to suicide as a potential solution may be increased by a family history of similar behavior. If someone else whom the person admired or cared for has committed suicide, then the person is more likely to do so.
2. The common goal of suicide is cessation of consciousness. People who commit suicide seek the end of conscious experience, which to them has become an endless stream of distressing thoughts with which they are preoccupied.
3. The common stimulus (or information input) in suicide is unbearable psychological pain. Excruciating negative emotions—including shame, guilt, anger, fear, and sadness—frequently

serve as the foundation for self-destructive behavior.

4. The common stressor in suicide is frustrated psychological needs. People with high standards and expectations are especially vulnerable to ideas of suicide when progress toward these goals is suddenly frustrated. People who attribute failure or disappointment to their own shortcomings may come to view themselves as worthless, incompetent, or unlovable. Family turmoil is an especially important source of frustration to adolescents. Occupational and interpersonal difficulties frequently precipitate suicide among adults.
5. The common emotion in suicide is hopelessness—helplessness. A pervasive sense of hopelessness, defined in terms of pessimistic expectations about the future, is even more important than other forms of negative emotion, such as anger and depression, in predicting suicidal behavior. The suicidal person is convinced that absolutely nothing can be done to improve his or her situation; no one can help.
6. The common cognitive state in suicide is ambivalence. Most people who contemplate suicide, including those who eventually kill themselves, have ambivalent feelings about this decision. They are sincere in their desire to die, but they simultaneously wish that they could find another way out of their dilemma.

7. The common perceptual state in suicide is constriction. Suicidal thoughts and plans are frequently associated with a rigid and narrow pattern of cognitive activity that is analogous to tunnel vision. The suicidal person is temporarily unable or unwilling to engage in effective problem-solving behaviors and may see his or her options in extreme, all-or-nothing terms.

### *Why is it difficult for a suicidal person to consider different solutions to his or her problems?*

8. The common action in suicide is escape. Suicide provides a definitive way to escape from intolerable circumstances, which include painful self-awareness (Baumeister, 1990).
9. The common interpersonal act in suicide is communication of intention. One of the most harmful myths about suicide is the notion that people who really want to kill themselves don't talk about it. Most people who commit suicide have told other people about their plans. Many have made previous suicidal gestures.
10. The common pattern in suicide is consistency of lifelong styles. During crises that precipitate suicidal thoughts, people generally employ the same coping responses that they have used throughout their lives. For example, people who have refused to ask for help in the past are likely to persist in that pattern, increasing their sense of isolation.



of psychological needs. Most important are the needs for affiliation and competence. People who view themselves as having failed in these domains—those who are low in belongingness or high in burdensomeness—will experience intense negative emotional states, such as shame, guilt, anger, and grief. For some people, suicide appears to offer a solution or a way to end their intolerable distress.

The desire to die is linked closely to social isolation and the belief that one has become a burden to others. But most people who experience these problems do not go on to attempt suicide. That action requires that the desire to end one's own life must be accompanied by the ability to enact lethal self-injury. Fear of death is one of our strongest emotions, and self-preservation is a very powerful motive. Fortunately, these instincts protect most people in their worst emotional moments. The second component of the interpersonal-psychological theory holds that people who make lethal suicide attempts often work their way up to the act gradually (Joiner, 2005). This process may involve repeated nonsuicidal self-injurious behaviors, which allow the person to habituate to pain and fear of death. Previous suicide attempts, those that do not result in death, may also set the stage for a final lethal attempt. The interpersonal-psychological theory holds that death by suicide requires a combination of both the desire to die and the ability to inflict lethal harm to the self, which is frequently acquired through previous experience. Research evidence provides considerable support for this proposal (Van Orden et al., 2008).

**Biological Factors** Studies of the connection between neurotransmitters and suicide have focused primarily on reduced levels of serotonin, which might be related to poor impulse control as well as increased levels of violent and aggressive behavior (Currier & Mann, 2008; Joiner, Brown, & Wingate, 2005). Analogue studies with animals have found that lesions resulting in serotonin dysfunction lead to increases in aggression and failure to inhibit responses that were previously punished. Difficulty in regulating serotonin systems has been found among people who attempted suicide, and it has also been found among people who have shown other types of violent and aggressive behavior.

Twin studies and adoption studies have found that genetic factors are involved in the transmission of major mood disorders. Do genes contribute to the risk for suicide indirectly by increasing the risk for mental disorders, such as depression, schizophrenia, and substance abuse? Or is there a more direct contribution of genetic factors to self-destructive behavior? The answer appears to be yes. Genes associated with various neurotransmitter systems, especially serotonin, influence the development of impulsive personality characteristics, and suicide appears to be an especially likely outcome when a person inherits a predisposition to both psychopathology and impulsive or violent behavior. Genetic factors moderate the impact of environmental factors, such as stressful life events and childhood abuse, on suicidal behavior (Brezo, Klempan, & Turecki, 2008).

**Social Factors** Durkheim (1897/1951) believed that suicide rates had increased during the nineteenth century because of an erosion of the influence of traditional sources of social integration and regulation, such as the church and the family. Social structures do represent one important consideration with

regard to suicide (Stockard & O'Brien, 2002). For example, religious affiliation is significantly related to suicide rates. The active social networks encouraged by some church communities can become an important source of emotional support during difficult times, protecting the person from the potential influence of self-destructive impulses.

Social policies regulating access to firearms, especially handguns, also have an effect on suicide rates. Guns are a particularly lethal method of suicide, accounting for more than 60 percent of the 30,000 deaths that occur in the United States each year (Hendin, 1995). In states and countries with restrictive gun laws, the suicide rate usually drops, particularly among adolescents (Brent & Bridge, 2003; Kapusta et al., 2007). Of course, people who have definitely decided to end their own lives inevitably find a way to accomplish that goal, but many people who attempt suicide are ambivalent in their intent. Many attempts are made impulsively. Ready access to guns increases the chance that a person who does engage in an impulsive suicide attempt will die, because gunshot wounds are very likely to be fatal.

Prominent television and newspaper coverage of suicidal deaths, especially those of well-known celebrities, can have disastrous consequences by unintentionally encouraging other people to kill themselves (Cheng et al., 2007). Young people are especially vulnerable to this effect, which is sometimes called contagious suicide or a suicide cluster. There was, for example, an increase in rates of suicide in both the United States and England in the months immediately after Marilyn Monroe committed suicide. Imitation of this sort may represent a misdirected attempt to lend meaning to a person's life through association with the death of a celebrity. It might also be inspired by the attention that results with increased media coverage that invariably follows in the wake of multiple or sequential suicides. Descriptions of someone else's death may simply reduce some people's resistance to impulsive action.

*Why do some people decide to end their own lives?*

## TREATMENT OF SUICIDAL PEOPLE

Efforts to avoid the tragic consequences of suicidal behavior can be organized at several levels. One approach would focus on social structures that affect an entire society. Durkheim's theory of suicide, for example, indicates that the social structure of a society influences suicide rates. The social factors that we have just considered suggest some changes that could be made in contemporary Western societies in an effort to reduce the frequency of suicide. For example, more restrictive gun control laws might minimize access to the most lethal method of self-destruction. More cautious reporting by the media of suicidal deaths might reduce the probability of cluster suicides. These are, of course, controversial decisions, in which many other considerations play an important role. The media, for example, are motivated to report stories in a way that will maximize their popularity with the public. And many people oppose gun control legislation for reasons that have nothing to do with suicide rates. Therefore, it may be unrealistic to hope that these measures, aimed broadly at the level of an entire population, would be implemented widely. Most treatment programs that are concerned with suicidal



behavior have been directed toward individual persons and their families.

### Crisis Centers and Hotlines

Many communities have established crisis centers and telephone hotlines to provide support for people who are distraught and contemplating suicide. The purpose of these programs is typically viewed in terms of suicide prevention. Sponsored by various agencies, including community mental health centers, hospitals, and religious groups, these services are often staffed by nonprofessionals, frequently volunteers. They offer 24-hour-a-day access to people who have been trained to provide verbal support for those who are in the midst of a crisis and who may have nowhere else to turn. Rather than provide ongoing treatment, most crisis centers and hotlines help the person through the immediate crisis and then refer him or her to mental health professionals.

Public and professional enthusiasm for suicide prevention centers peaked during the 1960s and 1970s. Unfortunately, data that were reported in the 1970s and 1980s did not support optimistic claims that these centers were “saving lives.”

Empirical studies showed that suicide rates do not differ in comparisons of similar communities that either have or do not have suicide prevention programs. Availability of crisis centers and hotlines does not seem to reduce suicide rates in communities (Brown et al., 2007; Lester, 2002).

Why don't hotlines reduce suicide rates? The challenges faced by these programs are enormous. Think about the characteristics of people who are driven to contemplate suicide. They are often socially isolated, feeling hopeless, and unable to consider alternative solutions. Many people with the most lethal suicidal ideation will not call a hotline or visit a drop-in crisis center. In fact, most clients of suicide prevention centers are young women; most suicides are committed by elderly men. The primary problem faced by suicide prevention programs is this: The people who they are trying to serve are, by definition, very difficult to reach.

It might be hard to justify the continued existence of crisis centers and hotlines if they are viewed solely in terms of suicide prevention. Only a small proportion of people who call hotlines are seriously suicidal. Most are people who are experiencing serious difficulties and who need to talk to someone about those problems. The value of contact with these individuals should not be underestimated. Crisis centers and hotlines provide support and assistance to very large numbers of people in distress. These services are undoubtedly valuable in their own right, even if serious questions remain about their impact on suicide rates.



Elizabeth Shin was a 19-year-old student at MIT when she committed suicide. Her parents filed a lawsuit against the university, claiming that school officials could have prevented her death. This case involves several very difficult issues, including confidentiality (whether therapists can tell parents about such problems).

**Psychotherapy** Psychological interventions with people who are suicidal can take many forms. These include all the standard approaches to psychotherapy, such as cognitive, behavioral, psychoanalytic, and family therapy. The research evidence indicates that cognitive behavior therapy does lead to a significant reduction in suicidal behavior, at least over short- and medium-term follow-up periods (Tarrier, Taylor, & Gooding, 2008). Psychological treatments can address underlying problems that set the stage for the person's current problems. Additional treatment guidelines are also dictated by the threat of suicide. The following recommendations cover special considerations that are particularly important when clients have expressed a serious intent to harm themselves (adapted from Berman & Jobes, 1994):

1. *Reduce lethality.* The most important task is to reduce the person's experience of psychological pain from which the person is seeking escape. At a more concrete level, this also involves reducing access to means that could be used to commit suicide, such as guns and pills.
2. *Negotiate agreements.* Therapists frequently ask clients who have threatened to kill themselves to sign a contract, in which the client agrees to postpone self-destructive behavior

for at least a short period of time. This kind of written agreement typically includes the client's consent to contact the therapist directly before engaging in any lethal actions. Of course, these agreements can be broken, but they may provide brakes to inhibit impulsive actions. The process of negotiating the agreement can also help the clinician to determine the severity of the client's suicidal intentions.

3. *Provide support.* It is often useful to make concrete arrangements for social support during a suicidal crisis. Friends and family members are alerted and asked to be available so that the person is not alone. The presence of others allows the person to discuss his or her problems (if he or she chooses to do so) and also provides supervision that may inhibit dangerous behaviors.
4. *Replace tunnel vision with a broader perspective.* People who are seriously contemplating suicide are typically unable to consider alternative solutions to their problems. Death may strike others as an irrational choice, but to people contemplating suicide, in the midst of the crisis, it seems perfectly logical. The therapist must help potential suicide victims develop or recover a more flexible and adaptive pattern of problem solving.

**Medication** Treatment of mental disorders, especially depression and schizophrenia, is usually the most important



element of intervention with suicidal clients. The use of various types of medication is often an important part of these treatment efforts. Antidepressant drugs are frequently given to patients who are clinically depressed, and antipsychotic medication is useful with those who meet the diagnostic criteria for schizophrenia (see Chapter 13).

Considerable attention has been devoted recently to the use of selective serotonin reuptake inhibitors (SSRIs), such as fluvoxamine (Luvox) and fluoxetine (Prozac), because of the link between suicide and serotonin dysregulation. Extensive clinical reports suggest that the use of SSRIs in treating depression actually lowers suicide rates (Gibbons et al., 2007). It should also be noted, however, that placebo-controlled outcome studies have not addressed this specific question. Furthermore, cases have been reported in which treatment with SSRIs has been followed by the development of new suicidal ideation (King, Segman, &

Anderson, 1994). This pattern suggests that the relation between serotonin and suicide is neither direct nor simple and that caution is warranted in the use of SSRIs in treating suicidal clients (see Critical Thinking Matters on page 127).

**Involuntary Hospitalization** People who appear to be on the brink of committing suicide are often hospitalized, either with their permission or involuntarily (see Chapter 18 for a discussion of the legal issues involved in this process). The primary consideration in such cases is safety. In many cases, commitment to a hospital may be the best way to prevent people from harming themselves. The person's behavior can be monitored continuously, access to methods of harming oneself can be minimized (although perhaps not entirely eliminated), and various types of treatment can be provided by the hospital's professional staff.

## Getting Help

The distinction between severe depression and the ups and downs of everyday life provides an important guide to the need for treatment. If you have been seriously depressed for several weeks and if depression is interfering with your ability to function, you should seek professional help. Fortunately, you have already taken the first step toward improvement. By reading this chapter, you can learn to recognize the symptoms of mood disorders.

Several effective forms of treatment are available for mood disorders. The first step in getting help is to find someone with whom you can talk. This might be your family physician, someone at your school's counseling center, or a therapist in private practice. It is important that you feel comfortable with the person you choose and with the form of treatment that she or he will provide.

Depression is not uncommon, but people who are depressed often feel lonely and alienated. A number of good books may help make it easier for you to find the right treatment for yourself. Various forms of treatment, including antidepressant medication, are described in *Understanding Depression: What We Know and What You Can Do About It*, by Raymond DePaulo. Self-help books may be useful to people whose depression has not reached severe proportions. The cognitive approach to therapy is described with exceptional clarity in *Feeling Good: The New Mood Therapy*, by David Burns, a psychiatrist who has worked extensively with Aaron Beck. Helpful information regarding bipolar mood disorder can be found in *The Bipolar Disorder Survival Guide*, by David Miklowitz.

People who are depressed need support and encouragement to seek

treatment. Families and friends of depressed people find themselves in a very difficult and challenging situation. Mood disorders interfere with the person's ability to get along with other people and deplete his or her energy and motivation for seeking treatment. If the person doesn't follow through with therapy or make noticeable improvements after several sessions, friends can easily become discouraged or frustrated. Don't feel guilty if your efforts appear to go unrewarded. And don't blame the depressed person if he or she doesn't get better right away. Mood disorders are serious problems that require professional help. More detailed advice for families and friends can be found in a useful book entitled *How You Can Survive When They're Depressed: Living and Coping with Depression Fallout*, by Anne Sheffield.



## SUMMARY

- **Mood disorders** are defined in terms of emotional, cognitive, behavioral, and **somatic symptoms**. In addition to a feeling of pervasive despair or gloom, people experiencing an episode of major **depression** are likely to show a variety of symptoms, such as diminished interest in normal activities, changes in appetite and sleep, fatigue, and problems in concentration.
- A person in a manic episode feels elated and energetic. Manic patients also exhibit related symptoms, such as inflated self-esteem, rapid speech, and poor judgment.
- DSM-IV-TR lists two major categories of mood disorders. People with **unipolar mood disorders** experience only episodes of depression. People with **bipolar mood disorders** experience episodes of **mania**, which are most often interspersed with episodes of depression. There are two specific types of unipolar mood disorders in DSM-IV-TR. Major depressive disorder is diagnosed if the person has experienced at least one episode of major depression without any periods of mania. **Dysthymia** is a less severe, chronic form of depression in which the person has been depressed for at least two years without a major depressive episode.
- A person who has experienced at least one manic episode would receive a diagnosis of bipolar I disorder, regardless of whether he or she has ever had an episode of depression. One episode of major depression combined with evidence of at least one period of **hypomania** would qualify for a diagnosis of bipolar II disorder. **Cyclothymia** is a less severe, chronic form of bipolar mood disorder in which the person has experienced numerous periods of hypomania interspersed with periods of depressed mood.
- Mood disorders are among the most common forms of psychopathology. Epidemiological studies have found that the lifetime risk for major depressive disorder is approximately 16 percent and the lifetime risk for dysthymic disorder is approximately 3 percent. Rates for both of these disorders are two or three times higher among women than among men. The lifetime risk for bipolar I and II disorders combined is close to 4 percent.
- The causes of mood disorders can be traced to the combined effects of social, psychological, and biological factors. Social factors include primarily the influence of stressful life events, especially severe losses that are associated with significant people or significant roles.
- Cognitive theories are primarily concerned with the way in which depressed people experience a severe event.
- Interpersonal theories focus on the ways in which individuals respond to people and events in their environments. Depressed people behave in ways that have a negative impact on other people. In this way they contribute to the stressful nature of their social environment.
- Twin studies indicate that genetic factors play an important role in the etiology of both unipolar and bipolar mood disorders. They also indicate that genetic factors may play a stronger role in the development of bipolar than unipolar disorders. Genes may contribute to the development of depression directly through an effect on the central nervous system and indirectly by influencing the person's sensitivity to environmental events, such as severe stress.
- Neurochemical messengers in the brain also play a role in the regulation of mood and the development of mood disorders. Current thinking is focused on serotonin, norepinephrine, and dopamine, although many other neurotransmitter substances may also be involved in depression.
- Several types of psychological and biological treatments have been shown to be effective for mood disorders. Two types of psychotherapy, cognitive therapy and interpersonal therapy, are beneficial for unipolar and dysthymic patients. Three types of antidepressant medications are also useful in the treatment of major depressive disorder: **selective serotonin reuptake inhibitors**, **tricyclic antidepressants**, and **monoamine oxidase inhibitors**. Medication and psychotherapy are frequently used together. Outcome studies do not consistently favor either psychological or psychopharmacologic treatment.
- Three other types of biological treatments are beneficial for specific types of mood disorders. Lithium carbonate and certain anticonvulsant drugs are useful for patients with bipolar mood disorders. Electroconvulsive therapy has been shown to be effective in the treatment of certain depressed patients, and it may be especially useful for patients who are severely suicidal or have failed to respond to other types of treatments. Light therapy seems to be effective for managing seasonal affective disorders.
- People commit suicide for many different reasons. Most people who kill themselves are suffering some form of mental disorder, such as depression, substance abuse, or schizophrenia. For some people, suicide represents an escape from unbearable negative emotions, which are often the associated with social isolation and the perception of being a burden to others.



# The Big Picture

## CRITICAL THINKING REVIEW

- **What is the difference between clinical depression and a low mood?**  
There is not an obvious marker to identify when sadness crosses over to serious depression, but several considerations help clinicians identify the disorder. These include duration of the depressed mood, presence of associated symptoms, and an inability to occasionally enjoy activities that would otherwise provide some relief from feeling down or blue . . . (see pp. 104–106)
- **Are there different kinds of depression?**  
The easy (and short) answer is “yes.” Many systems have been proposed to identify meaningful subtypes of mood disorders. The most obvious distinction is between unipolar and bipolar mood disorders . . . (see pp. 109–110)
- **How do unipolar and bipolar disorders differ with regard to age of onset and sequence over time?**  
The age of onset and course of these disorders vary from one person to the next, but—on average—bipolar disorders have an earlier age of onset and bipolar patients typically experience more episodes over their lifetime . . . (see p. 112)
- **Are we more likely to experience depression as we get older?**  
Although many people mistakenly identify depression with the elderly, epidemiological studies have shown that mood disorders actually are most frequent among young and middle-aged adults . . . (see p. 113)
- **Do negative life events cause depression? Or does depression lead to negative events?**  
It works both ways. Major life events increase the probability that a person will become depressed, and people who are depressed can also generate higher levels of stress in their own lives . . . (see pp. 115–117)
- **Why do some people become depressed after stressful life events while others do not?**  
Part of the answer depends on how a person interprets the event. Does he or she exaggerate the importance of the negative event, blowing it out of proportion? . . . (see pp. 117–118)
- **How do genetic factors and stressful life events interact to cause depression?**  
People who inherit certain genetic risk factors (such as having two short alleles for the serotonin transporter gene) are more likely than other people to become depressed following severe stress . . . (see p. 120)
- **How could the amygdala be related to problems in mood regulation?**  
The amygdala is involved in monitoring the emotional significance of events in the environment. High levels of amygdala activation in depressed people may reflect maladaptive cognitive factors . . . (see pp. 120–122)
- **Why do some people want to end their own lives?**  
The desire to die is linked closely to social isolation and the belief that one has become a burden to others . . . (see pp. 132–133)

## KEY TERMS

affect  
analogue study  
bipolar mood disorder  
clinical depression  
cyclothymia  
depressed mood

depression  
dysphoric  
dysthymia  
euphoria  
hypomania  
mania  
melancholia

monoamine oxidase inhibitors (MAOIs)  
mood  
mood disorders  
psychomotor retardation  
relapse  
remission

seasonal affective disorder  
selective serotonin reuptake inhibitors (SSRIs)  
somatic symptoms  
tricyclics (TCAs)

unipolar mood disorder



# Anxiety Disorders



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◀ *Matchstick Men* provides an intriguing perspective on the phobias and compulsive behaviors of Roy Waller, a professional con artist who operates a fake lottery and also suffers from a variety of anxiety disorders.

**F**ear and anxiety play important roles in all of our lives. Fear helps us avoid danger in our immediate environment. Have you ever jumped out of the street to avoid a car that was unexpectedly rushing toward you? Or run away from an animal with a menacing growl? The sudden burst of fear that you experienced allowed you to react immediately. Anxiety is focused on the future rather than the immediate present. It helps us anticipate and

prepare for important events. Remember when you called someone for the first time, performed at a musical recital, or spoke up in class? If you felt anxious in the time leading up to this event, you may have also noticed that your heart was pounding, your mouth was dry, and you were breathing faster. These are some of the physical signs of anxiety. Anxiety may be unpleasant, but it is often adaptive; we would have trouble organizing



our lives if it were eliminated completely. Unfortunately, anxiety can also disrupt our lives. There are many ways in which anxiety can become maladaptive. It is often a question of degree rather than kind. We can worry too much, feel anxious too often, or be afraid at inappropriate times. In this chapter we will explore many of the important dis-

tinctions that psychologists make among phenomena such as fear, anxiety, worry, and panic. We will discuss the ways in which these experiences can become maladaptive and the ways in which the problems can be treated. In the next chapter, we will consider one other specific form of anxiety, known as posttraumatic stress disorder.

## The Big Picture

- What is the difference between being afraid and being anxious?
- How are obsessions and compulsions connected to each other?
- Isn't it useful to be anxious about some things?
- Which kinds of anxiety disorder are most common?
- Why do some people become anxious while other people become depressed after a stressful life event?
- What kinds of treatment work best for anxiety disorders?

## OVERVIEW

Taken together, the various forms of anxiety disorders—including phobias, obsessions, compulsions, and extreme worry—represent the most common type of abnormal behavior. The National Comorbidity Survey Replication (NCS-R) found that 18 percent of adults in the U.S. population have at least one type of anxiety disorder in any given year (Kessler et al., 2009). This figure was higher than the one-year prevalence rates that were observed for mood disorders (10 percent) and substance use disorders (4 percent). Anxiety disorders lead to significant social and occupational impairment and a reduced quality of life (Tolin et al., 2010).

Anxiety disorders share several important similarities with mood disorders. From a descriptive point of view, both categories are defined in terms of negative emotional responses. Feelings such as guilt, worry, and anger frequently accompany anxiety and depression. Many patients who are anxious are also depressed, and, similarly, many patients who are depressed are also anxious (Kessler et al., 2008; Shankman & Klein, 2003). The order in which these problems emerge

in the person's life can vary, but usually anxiety precedes the onset of depression.

The close relationship between symptoms of anxiety and those for depression suggests that these disorders may share common causal features. In fact, stressful life events seem to play a role in the onset of both depression and anxiety. Cognitive factors are also important in both types of problems. From a biological point of view, certain brain regions and a number of neurotransmitters are involved in the etiology of anxiety disorders as well as mood disorders (Ressler & Mayberg, 2007).

The following case study illustrates the kinds of symptoms that are included under the heading of anxiety disorders. You should notice the overlap among different features of anxiety disorders, including panic, worry, avoidance, and a variety of alarming physical sensations. This narrative was written by Johanna Schneller (1988), a freelance writer who has been treated for panic disorder. *Agoraphobia* refers to an exaggerated fear of being in situations from which escape might be difficult, such as being caught in a traffic jam on a bridge or in a tunnel.

## CASE STUDY

### A Writer's Panic Disorder with Agoraphobia

Three years have passed since my first panic attack struck, but even now I can close my eyes and see the small supermarket where it happened. I can feel the shoppers in their heavy coats jostling me with their plastic baskets, and once again my stomach starts to drop away.

"It was November. I had just moved to New York City and completed a long search for a job and an apartment. The air felt close in that checkout line, and black fuzz crept into the corners of my vision. Afraid of fainting, I began to count the number of shoppers ahead of me, then

the number of purchases they had. The overhead lights seemed to grow brighter. The cash register made pinging sounds that hurt my ears. Even the edges of the checkout counter looked cold and sharp. Suddenly I became nauseated, dizzy. My vertigo intensified, separating me from



everyone else in the store, as if I were looking up from underwater. And then I got hot, the kind of hot you feel when the blood seems to rush to your cheeks and drain from your head at the same time.

"My heart was really pounding now, and I felt short of breath, as if wheels were rolling across my chest. I was terrified of what was happening to me. Would I be able to get home? I tried to talk myself down, to convince myself that if I could just stay in line and act as if nothing was happening, these symptoms would go away. Then I decided I wasn't going to faint—I was going to start screaming. The distance to the door looked vast and the seconds were crawling by, but somehow I managed to stay in the checkout line, pay for my bag of groceries and get outside, where I sat on a bench, gulping air. The whole episode had taken ten minutes. I was exhausted.

"At home, I tried to analyze what had happened to me. The experience had been terrifying, but because I felt safe in my kitchen, I tried to laugh the whole thing off—really, it seemed ridiculous, freaking out in a supermarket. I decided it was an isolated incident; I was all right, and I was going to forget it ever happened.

"Two weeks later, as I sat in a movie theater, the uncomfortable buzz began to envelop me again. But the symptoms set in faster this time. I mumbled something

to my friends about feeling sick as I clambered over them. It was minutes before I caught my breath, hours before I calmed down completely.

"A month full of scattered attacks passed before they started rolling in like Sunday evenings, at least once a week. I tried to find a pattern: They always hit in crowded places, places difficult to escape. My whole body felt threatened, primed to run during an attack. Ironically, my attacks were invisible to anyone near me unless they knew what to look for—clenched neck muscles, restless eyes, a shifting from foot to foot—and I was afraid to talk to anyone about them, to perhaps hear something I wouldn't want to hear. What if I had a brain tumor? And I was embarrassed, as if it were my fault that I felt out of control. But then one night I had an attack alone in my bed—the only place I had felt safe. I gave in and called a doctor.

"As the weeks passed and the attacks wore on, I began to think maybe I was crazy. I was having attacks in public so often I became afraid to leave my house. I had one on the subway while traveling to work almost every morning but, luckily, never panicked on the job. Instead, I usually lost control in situations where I most wanted to relax: on weekend trips,

or while visiting friends. I felt responsible for ruining other people's good time. One attack occurred while I was in a tiny boat deep sea fishing with my family; another hit when I was on a weekend canoe trip with my boyfriend. I also suffered a terrify-

***My heart was really pounding now, and I felt short of breath, as if wheels were rolling across my chest. I was terrified of what was happening to me. Would I be able to get home?***

ing attack while on my way to see friends, stuck in traffic, merging into a tunnel near Boston's Logan Airport, with no exit ramp or emergency lane in sight.

"I began declining offers I wanted to accept: All I could think was, 'What if I panic in the middle of nowhere?' The times I did force myself to go out, I sat near the doors of restaurants, in aisle seats at movie theaters, near the bathroom at parties. For some reason, I always felt safe in bathrooms, as if whatever happened to me there would at least be easy to clean up.

"On days when I didn't have an actual attack, I could feel one looming like a shadow over my shoulder; this impending panic was almost worse than the real thing. By remembering old episodes, I brought on new ones, and each seemed to pull me closer to a vision I had of my mind snapping cleanly in half, like a stalk of celery."

Johanna's description of her problems raises a number of interesting questions, to which we will return later in the chapter. Was it just a coincidence that her first attack occurred shortly after the difficult experience of moving to a new city, starting a new job, and finding a new apartment? Could the stress of those experiences have contributed to the onset of her disorder? Was there a pattern to her attacks? Why did she feel safe in some situations and not in others? She mentions feeling out of control, as if she were responsible for her attacks. Could she really bring on another attack by remembering one from the past?

and its associated problems constrained both her ability to work and her social relationships. Most people who knew Johanna probably did not know that she suffered from a mental disorder. In spite of the private terrors that she endured, she was able to carry on most aspects of her life.

In addition to these general considerations, the diagnosis of anxiety disorders depends on several specific types of symptoms, which we discuss in the following sections. We begin with the nature of anxiety, which should be distinguished from more discrete emotional responses, like fear and panic.

## ANXIETY

Like depression, the term *anxiety* can refer to either a mood or a syndrome. Here, we use the term to refer to a mood. Specific syndromes associated with anxiety disorders are discussed later in the chapter.

Anxious mood is often defined in contrast to the specific emotion of fear, which is more easily understood. **Fear** is

## Symptoms

People with anxiety disorders share a preoccupation with, or persistent avoidance of, thoughts or situations that provoke fear or anxiety. Anxiety disorders frequently have a negative impact on various aspects of a person's life. Johanna found that anxiety



experienced in the face of real, immediate danger. It usually builds quickly in intensity and helps organize the person's behavioral responses to threats from the environment (escaping or fighting back). Classic studies of fear among normal adults have often focused on people in combat situations, such as airplane crews during bombing missions over Germany in World War II (Rachman, 1991). In contrast to fear, **anxiety** involves a more general or diffuse emotional reaction—beyond simple fear—that is out of proportion to threats from the environment (Barlow, 2004). Rather than being directed toward the person's present circumstances, anxiety is associated with the anticipation of future problems.

Anxiety can be adaptive at low levels, because it serves as a signal that the person must prepare for an upcoming event. When you think about final exams, for example, you may become somewhat anxious. That emotional response may help to initiate and sustain your efforts to study. In contrast, high levels of anxiety become incapacitating by disrupting concentration and performance.

A pervasively anxious mood is often associated with pessimistic thoughts and feelings ("If something bad happens, I probably won't be able to control it"). The person's attention turns inward, focusing on negative emotions and self-evaluation ("Now I'm so upset that I'll never be able to concentrate during the exam!") rather than on the organization or rehearsal of adaptive responses that might be useful in coping with negative events. Taken together, these factors can be used to define *anxious apprehension*, which consists of (1) high levels of diffuse negative emotion, (2) a sense of uncontrollability, and (3) a shift in attention to a primary self-focus or a state of self-preoccupation (Barlow, 2004).

## EXCESSIVE WORRY

Worrying is a cognitive activity that is associated with anxiety. In recent years psychologists have studied this phenomenon carefully because they consider it to be critical in the subclassification of anxiety disorders (DSM-IV-TR). **Worry**

### MyPsychLab

#### VIDEO CASE

#### Generalized Anxiety Disorder



##### PHILIP

"I worry a lot, I just analyze, analyze, until I'm paralyzed."

#### Generalized Anxiety Disorder



##### CHRISTY

"It's impacted a lot of my close relationships, or potential to bond with others."

Watch both interviews and ask yourself what symptoms these two people have in common. Then ask yourself

how they are different. People with GAD share some important similarities, but they are not identical.



Japanese women react with fear as rescue workers check for radiation contamination following a massive earthquake that damaged a nuclear reactor. Fear is a response to immediate danger, while anxiety is concerned with events that might happen in the future.

can be defined as a relatively uncontrollable sequence of negative, emotional thoughts that are concerned with possible future threats or danger. This sequence of worrisome thoughts is usually self-initiated or provoked by a specific experience or ongoing difficulties in the person's daily life. When excessive worriers are asked to describe their thoughts, they emphasize the predominance of verbal, linguistic material rather than images (Borkovec, Alcaine, & Behar, 2004). In other words, worriers are preoccupied with "self-talk" rather than unpleasant visual images.

Because everyone worries at least a little, you might wonder whether it is possible to distinguish between pathological and normal worry. The answer is yes, but there is not a clear line that divides the two kinds of experiences. The distinction hinges on quantity—how often the person worries and about how many different topics the person worries. It also depends on the quality of worrisome thought. Excessive worriers are more likely than other people to report that the content of their thoughts is negative, that they have less control over the content and direction of their thoughts, and that in comparison to other adults, their worries are less realistic (Zebb & Beck, 1998).

## PANIC ATTACKS

A **panic attack** is a sudden, overwhelming experience of terror or fright, like the attack that was experienced by Johanna as she waited in the checkout line. Whereas anxiety involves a blend of several negative emotions, panic is more focused. Some clinicians think of panic as a normal fear response that is triggered at an inappropriate time (Barlow, Brown, & Craske, 1994). In that sense, panic is a "false alarm." Descriptively, panic can be distinguished from anxiety in two other respects: It is more intense, and it has a sudden onset.

**Why is a panic attack sometimes called a "false alarm"?**



**TABLE 6.1 Diagnostic Criteria for Panic Attack in DSM-IV-TR**

**A discrete period of intense fear or discomfort, in which four (or more) of the following symptoms developed abruptly and reached a peak within 10 minutes:**

1. Palpitations, pounding heart, or accelerated heart rate
2. Sweating
3. Trembling or shaking
4. Sensations of shortness of breath or smothering
5. Feeling of choking
6. Chest pain or discomfort
7. Nausea or abdominal distress
8. Feeling dizzy, unsteady, lightheaded, or faint
9. Derealization (feelings of unreality) or depersonalization (being detached from oneself)
10. Fear of losing control or going crazy
11. Fear of dying
12. Paresthesias (numbness or tingling sensations)
13. Chills or hot flushes

Source: Reprinted with permission from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*, (Copyright © 2000). American Psychiatric Association.

Panic attacks are defined largely in terms of a list of somatic or physical sensations, ranging from heart palpitations, sweating, and trembling to nausea, dizziness, and chills. Table 6.1 lists the DSM-IV-TR criteria for a panic attack. A person must experience at least four of these 13 symptoms in order for the experience to qualify as a full-blown panic attack. The symptoms must develop suddenly and reach a peak intensity within 10 minutes. The actual numbers and combinations of panic symptoms vary from one person to the next, and they may also change over time within the same person.

People undergoing a panic attack also report a number of cognitive symptoms. They may feel as though they are about to die, lose control, or go crazy. Some clinicians believe that the misinterpretation of bodily sensations lies at the core of panic disorder. Patients may interpret heart palpitations as evidence of an impending heart attack or racing thoughts as evidence that they are about to lose their minds.

Panic attacks are further described in terms of the situations in which they occur, as well as the person's expectations about their occurrence. An attack is said to be expected, or *cued*, if it occurs only in the presence of a particular stimulus. For example, someone who is afraid of public speaking might have a cued panic attack if forced to give a speech in front of a large group of people. Unexpected panic attacks, like Johanna's experience in the grocery checkout line, appear without warning or expectation, as if "out of the blue."

## PHOBIAS

In contrast to both diffuse anxiety, which represents a blend of negative emotions, and panic attacks, which are frequently unexpected, **phobias** are persistent, irrational, narrowly defined fears that are associated with a specific object or situation. Avoidance is an important component of the definition of phobias. A fear is not considered phobic unless the person avoids contact with the source of the fear or experiences intense anxiety in the presence of the stimulus. Phobias are also irrational or unreasonable. Avoiding only snakes that are poisonous or only guns that are loaded would not be considered phobic.

The most straightforward type of phobia involves fear of specific objects or situations. Different types of specific phobias have traditionally been named according to the Greek words for these objects. Examples of typical specific phobias include fear of heights (acrophobia), fear of enclosed spaces (claustrophobia), fear of small animals (zoophobia), fear of blood (hemophobia), fear of flying on airplanes (aerophobia), and fear of being in places from which escape might be difficult (agoraphobia).

## OBSESSIONS AND COMPULSIONS

**Obsessions** are repetitive, unwanted, intrusive cognitive events that may take the form of thoughts or images or urges. They intrude suddenly into consciousness and lead to an increase in subjective anxiety. Obsessive thinking can be distinguished from worry in two primary ways: (1) Obsessions are usually



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experienced by the person as being nonsensical, whereas worries are often triggered by problems in everyday living; and (2) the content of obsessions most often involves themes that are perceived as being socially unacceptable or horrific, such as sex, violence, and disease/contamination, whereas the content of worries tends to center around more acceptable, commonplace concerns, such as money and work (de Silva & Rachman, 2004).

**Compulsions** are repetitive behaviors or mental acts that are used to reduce anxiety. Examples include checking many times to be sure that a door is locked or repeating a silent prayer over and over again. These actions are typically considered by the person who performs them to be senseless or irrational. The person attempts to resist performing the compulsion but cannot. The following case study illustrates many of the most common features of obsessions and compulsions.

## CASE STUDY

### Ed's Obsessive–Compulsive Disorder

Ed, a 38-year-old lawyer, lived with his wife, Phyllis. Most aspects of Ed's life were going well, except for the anxiety-provoking thoughts that lurked beneath his relatively easygoing exterior. One focus of Ed's anxiety was handwriting. He became so tense that his eyes hurt whenever he was forced to write. Feeling exhausted and overwhelmed, Ed avoided writing whenever possible. The problem seemed utterly ridiculous to him, but he couldn't rid himself of his obsessive thoughts.

Sinister meanings had somehow become linked in Ed's imagination to the way in which letters and numbers were formed. The worst letters were P and T (the first letters in "Phyllis" and in "Tim," his younger brother's name). "Improperly" formed letters reminded Ed of violent acts, especially decapitation and strangulation. If the parts of a letter, such as the two lines in the letter T, were not connected, an image of a head that was not attached to its body might pop into his mind.

Closed loops reminded him of suffocation, like a person whose throat had been clamped shut. These images were associated with people whose names began with the malformed letter. As a result of these concerns, Ed's handwriting had become extremely awkward and difficult to read.

These writing problems made it very difficult for Ed to complete his work, especially when he was under time pressure. In one particularly upsetting incident, Ed was responsible for completing an important official form that had to be mailed that day. He came to a section in which he needed to write a capital P and became concerned that he hadn't done it properly. The loop seemed to be closed, which meant that Phyllis might be strangled! He tore up the first copy and filled it out again. When it was finally done to his satisfaction, Ed sealed the form in an envelope and put it in the box for outgoing mail. After returning to his desk, he was suddenly overwhelmed

by the feeling that he had indeed made a mistake with that P. If he allowed the form to be mailed, the evil image would be associated forever with his wife. Consumed by fear, Ed rushed back to the mailbox, tore up the envelope, and started a new form. Twenty minutes later, he had the form filled out and back in the mailbox. Then the cycle repeated itself. Each time, Ed became more distraught and frustrated, until he eventually felt that he was going to lose his mind.

In addition to his problems with writing, Ed was also afraid of axes. He would not touch an ax, or even get close to one. Any situation in which he could possibly encounter an ax made him extremely uncomfortable. He refused to shop in hardware stores because they sell axes, and he would not visit museums because their exhibits often contain artifacts such as medieval armor. His fear of axes was quite specific. Ed wasn't afraid of knives, guns, or swords.

One frightening experience seemed to trigger the pervasive anxiety that had plagued Ed for 20 years. When he was 17 years old, some friends persuaded Ed to try smoking marijuana. They told him that it would make him feel high—relaxed, sociable, and perhaps a bit giddy. Unfortunately, Ed didn't react to the drug in the same way that the others had. The physical effects seemed to be the same, but his psychological reaction was entirely different. After sharing two joints with his friends, Ed began to feel lightheaded. Then things around him began to seem unreal, as though he were watching himself and his friends in a movie. The intensity of these feelings escalated rapidly, and panic took over. Frightening thoughts raced through his head. Was he losing his mind? When would it stop? This experience lasted about two hours.

The marijuana incident had an immediate and lasting impact. Ed became

preoccupied with a fear of accidentally ingesting any kind of mind-altering drug, especially LSD. Every spot on his skin or clothing seemed as though it might be a microscopic quantity of this hallucinogen. He felt compelled to clean his hands and clothes repeatedly to avoid contamination. Intellectually, Ed knew that these concerns were silly. How could a tiny spot on his hand be LSD? It didn't make any sense, but he couldn't keep the thought out of his mind.

The most horrifying aspect of the drug experience was the sensation of being totally out of control of his actions and emotions. The fear of returning to that state haunted Ed. He struggled to resist urges that he had never noticed before,

***If the parts of a letter, such as the two lines in the letter T, were not connected, an image of a head that was not attached to its body might pop into his mind.***

such as the temptation to shout obscenities aloud in church. He also began to worry that he might hurt his younger brother. He resisted these urges with all his might. He never acted on them, but they pervaded his consciousness and absorbed his mental energy.

The thoughts were so persistent and unshakable that Ed began to wonder if he might, in fact, be a pathological killer. Could he be as deranged and evil as Richard Speck, who had brutally murdered eight nurses in a Chicago apartment building in 1966? Ed spent many hours reading articles about Speck and other mass murderers. The number 8 came to have special meaning to him because of the number of Speck's victims. Over time, Ed's fears and worries became focused on numbers and letters. The violent images and impulses became a less prominent part of his everyday life, but the writing difficulties escalated proportionately.



Ed's thoughts about violence and death illustrate the anxiety-provoking nature of obsessions. It is not just the intrusive quality of the thought, but also the unwanted nature of the thought that makes it an obsession. Some scientists and artists, for example, have reported experiencing intrusive thoughts or inspirational ideas that appear in an unexpected, involuntary way, but these thoughts are not unwanted. Obsessions are unwelcome, anxiety-provoking thoughts. They are also nonsensical; they may seem silly or "crazy." In spite of the recognition that these thoughts do not make sense, the person with full-blown obsessions is unable to ignore or dismiss them.

Examples of typical obsessive thoughts include the following: "Did I kill the old lady?" "Christ was a bastard!" "Am I a sexual pervert?" Examples of obsessive urges include "I might expose my genitals in public," "I am about to shout obscenities in public," "I feel I might strangle a child." Obsessional images might include mutilated corpses, decomposing fetuses, or a family member being involved in a serious car accident. Although obsessive urges are accompanied by a compelling sense of reality, obsessive people seldom act upon these urges.

Most normal people have mental experiences that are similar to obsessions in one form or another. Between 80 and 90 percent of normal subjects report having had intrusive, unacceptable thoughts or urges that are similar in many ways to those experienced by patients being treated for obsessive-compulsive disorder (Rachman & de Silva, 1978; Salkovskis & Harrison, 1984). These include urges to hurt other people, urges to do something dangerous, and thoughts of accidents or disease. In contrast to these normal experiences, obsessions described by clinical patients occur more frequently, last longer, and are associated with higher levels of discomfort. Clinical obsessions are also resisted more strongly, and patients report more difficulty dismissing their unwanted thoughts and urges. Someone who experiences clinical obsessions is also prone to interpret them as meaning that he is a terrible person, someone who might actually act on the urge to harm another person. Research evidence suggests that intrusive thoughts are relatively common, and clinical obsessions differ from them in degree rather than in nature.

Ed's constricted style of forming letters and his habitual pattern of going back to check and correct his writing illustrate the way in which compulsions are used to reduce anxiety.

### **What is the difference between obsessions and normal intrusive thoughts?**

If he did not engage in these ritualistic behaviors, he would become extremely uncomfortable. His concern about someone being strangled or decapitated if the letters were not properly formed was not delusional, because he readily acknowledged that this was a "silly" idea. Nevertheless, he couldn't shake the obsessive idea that some dreadful event would occur if he was not excruciatingly careful about his writing. He felt as though he had to act, even though he knew that his obsessive thought was irrational. This paradox is extremely frustrating to obsessive-compulsive patients, and it is one of the most common and interesting aspects of the disorder.

Compulsions reduce anxiety, but they do not produce pleasure. Thus, some behaviors, such as gambling and drug use, that people describe as being "compulsive" are not considered true compulsions according to this definition.

Although some clinicians have argued that compulsive rituals are associated with a complete loss of voluntary control, it is more accurate to view the problem in terms of *diminished*

control. For example, Ed could occasionally manage to resist the urge to write in his compulsive style; the behavior was not totally automatic. But whenever he did not engage in this ritualistic behavior, his subjective level of distress increased dramatically, and within a short period of time he returned to the compulsive writing style.

The two most common forms of compulsive behavior are cleaning and checking. The case of Michael, presented in Chapter 4, provides an example of a person with compulsive cleaning rituals. Compulsive cleaning is often associated with an irrational fear of contamination, and in that respect it bears a strong resemblance to certain phobias. There are passive as well as active features of compulsive cleaning. Compulsive cleaners, like Michael, go out of their way to avoid contact with dirt, germs, and other sources of contamination. Then, when they believe that they have come into contact with a source of contamination, they engage in ritualistic cleaning behavior, such as washing their hands, taking showers, cleaning kitchen counters, and so on. These rituals typically involve a large number of repetitions. Some people may wash their hands 50 times a day, taking several minutes to scrub their hands up to the elbow with industrial-strength cleanser. Others take showers that last two or three hours in which they wash each part of their body in a fixed order, needing to repeat the scrubbing motion an exact number of times.

Compulsive checking frequently represents an attempt to ensure the person's safety or the safety and health of a friend or family member. The person checks things, such as the stove or the lock on a door, over and over in an attempt to prevent the occurrence of an imagined unpleasant or disastrous event (for example, an accident, a burglary, or an assault).

## **Diagnosis**

To understand the way in which anxiety disorders are currently classified, we must briefly consider the ways in which they have been described in previous classification systems. This general set of emotional problems was the topic of considerable diagnostic controversy throughout the twentieth century and continues into the twenty-first.

### **BRIEF HISTORICAL PERSPECTIVE**

Anxiety and abnormal fears did not play a prominent role in the psychiatric classification systems that began to emerge in Europe during the second half of the nineteenth century (see Chapter 4). Anxiety disorders were probably left out of these descriptions because the authors were primarily superintendents of large asylums. Their patients were people who were psychotic (see Chapter 1) or so out of touch with reality that they could no longer reside in the larger community (Jablensky, 1985). People with anxiety problems seldom came to the attention of psychiatrists during the nineteenth century because very few cases of anxiety disorder require institutionalization.

Sigmund Freud and his followers were responsible for some of the first extensive clinical descriptions of pathological anxiety states. Working primarily with patients who were not hospitalized, Freud had an opportunity to treat and study a



variety of anxiety-related problems. He described cases of phobia, generalized anxiety, and obsessive-compulsive behavior. The form of specific symptoms (a phobia as compared to a compulsion) was considered to be less important than the underlying causes, which were presumably similar across the different types of anxiety-related problems.

Experts who classify mental disorders can be described informally as belonging to one of two groups, “lumpers” and “splitters” (Rousseau, 2009; Wittchen, Schuster, & Lieb, 2001). Lumpers argue that anxiety is a generalized condition or set of symptoms without any special subdivisions. Splitters distinguish among a number of conditions, each of which is presumed to have its own etiology. During the first half of the twentieth century, psychiatrists tended to adopt a generalized position with regard to anxiety disorders (see Jablensky, 1985). In other words, they lumped together the various anxiety disorders. The DSM-IV-TR system splits them into many separate disorders. That approach—dividing the anxiety disorders into smaller, distinct subcategories—has been quite popular for the past 40 years.

More recently, the field has begun to embrace a more integrated and unified perspective, particularly with regard to anxiety disorders and mood disorders (Brown & Barlow, 2009; Kendler et al., 2011; Krueger & Markon, 2006). In other words, there is a swing back in the direction of lumping. Much of this discussion is focused on the use of a broad conceptual scheme that organizes specific forms of psychopathology using two broad dimensions or spectra: *internalizing* and *externalizing* disorders. Anxiety and mood disorders fall into the former domain because both are characterized by symptoms that involve high levels of negative emotion and internal distress. Externalizing disorders (such as antisocial personality disorder and substance use disorders) are more concerned with symptoms with failure to inhibit problematic behaviors. This organizational scheme will probably play a prominent role in future versions of the official psychiatric classification system (Andrews et al., 2009).

Arguments in favor of a more integrated perspective hinge primarily on statistical analyses of large data sets, but the advantages of a more unified approach to the classification of anxiety disorders can also be explained intuitively. Consider, for example, the cases of Ed in this chapter and Michael in Chapter 4. Both exhibited a relatively wide range of anxiety symptoms. The high rate of comorbidity among anxiety disorders suggests that these cases are not unusual. Should Ed be considered to have both a phobic disorder (fear of axes) and an obsessive-compulsive disorder? Or are these diverse symptoms best viewed as manifestations of the same anxiety disorder? These are questions about the validity of diagnostic categories (see Chapter 4). Decisions regarding the breadth or specificity of anxiety disorders will ultimately depend on evidence from many areas. Do phobias and obsessive-compulsive disorder show distinct, separate patterns in family studies? Do they respond to different types of treatment? Can we distinguish between them in terms of typical patterns of onset and course? Definitive answers are not yet available. Future research efforts are needed to address these issues.

## CONTEMPORARY CLASSIFICATION

The DSM-IV-TR (APA, 2000) approach to classifying anxiety disorders is based primarily on descriptive features and recognizes several specific subtypes. They include panic disorder,

three types of phobic disorders, OCD, and generalized anxiety disorder, as well as posttraumatic stress disorder (PTSD) and acute stress disorder. We will discuss PTSD and acute stress disorder in Chapter 7. The manual also describes problems with anxiety that appear in children, specifically separation anxiety disorder and school refusal. These problems will be discussed in Chapter 16.

**Specific Phobia** A **specific phobia** is defined in DSM-IV-TR as “a marked and persistent fear that is excessive or unreasonable, cued by the presence or anticipation of a specific object or situation.” Frequently observed types of specific phobias include fear of heights, small animals (such as spiders, bugs, mice, snakes, or bats), and being in a closed place (such as a very small room). Exposure to the phobic stimulus must be followed by an immediate fear response. Furthermore, the person must appreciate the fact that the fear is excessive or unreasonable, and the person must avoid the phobic situation. DSM-IV-TR also provides a severity threshold: The avoidance or distress associated with the phobia must interfere significantly with the person’s normal activities or relationships with others.

**Social Phobia** The DSM-IV-TR definition of **social phobia** is almost identical to that for specific phobia, but it includes the additional element of performance. A person with a social phobia is afraid of (and avoids) social situations. These situations fall into two broad headings: doing something in front of unfamiliar people (performance anxiety) and interpersonal interactions (such as dating and parties). Fear of being humiliated



Specific phobias are irrational fears associated with specific situations that the person avoids. Acrophobia is the name given to fear of heights.



## SOCIAL PHOBIA



## STEVE

"I imagine that people are watching me. They are watching me stumble in my efforts. . . ."

Watch the video "Social Phobia: Steve" on MyPsychLab. What is his worst fear when he is talking to another person at a party?

or embarrassed presumably lies at the heart of the person's discomfort. Some people have a circumscribed form of social phobia that is focused on one particular type of situation. Examples include giving a speech, playing a musical instrument, urinating in a public rest room, or eating in a restaurant. For these people, the feared task could be completed easily if they were able to do it privately. In other cases, the fear is more generalized, and the person is intensely anxious in almost any situation that involves social interaction. This type of person might be described as being extremely shy.

**Agoraphobia** The least circumscribed form of phobic disorder is **agoraphobia**, which literally means "fear of the marketplace (or places of assembly)" and is usually described as fear of public spaces. It is often associated with a pervasive avoidance of many different kinds of situations, rather than one specific feared object or situation (as in other phobias). The case of Johanna at the beginning of this chapter provides a brief description of the types of problems experienced by a person suffering from agoraphobia. Typical situations that are feared include crowded streets and shops, enclosed places like theaters and churches, traveling on public transportation, and driving an automobile on bridges, in tunnels, or on crowded expressways. In any of these situations, the presence of a trusted friend may help the person with agoraphobia feel more comfortable. In the most extreme form of the disorder, agoraphobic patients are unable to venture away from their own homes.

DSM-IV-TR defines agoraphobia in terms of anxiety about being in situations from which escape might be either difficult or embarrassing. Avoidance and distress are important elements of the definition. In order to meet the DSM-IV-TR criteria, the person must either avoid agoraphobic situations, such as traveling away from his or her own home; endure the experience with great distress; or insist on being accompanied by another person who can provide some comfort or security. In most cases, the person avoids a wide variety of situations rather than just one specific type of situation.

**Generalized Anxiety Disorder** Excessive anxiety and worry are the primary symptoms of **generalized anxiety disorder (GAD)**. The person must have trouble controlling these worries, and the worries must lead to significant distress or impairment in occupational or social functioning. The worry must occur more days than not for a period of at least six months, and it must be about a number of different events

or activities. In order to distinguish GAD from other forms of anxiety disorder, DSM-IV-TR notes that the person's worries should *not* be focused on having a panic attack (as in panic disorder), being embarrassed in public (as in social phobia), or being contaminated (as in obsessive-compulsive disorder). Finally, the person's worries and free-floating anxiety must be accompanied by at least three of the following symptoms: (1) restlessness or feeling keyed up or on edge, (2) being easily fatigued, (3) difficulty concentrating or mind going blank, (4) irritability, (5) muscle tension, and (6) sleep disturbance.

**Panic Disorder** To meet the diagnostic criteria for **panic disorder**, a person must experience recurrent, unexpected panic attacks. At least one of the attacks must have been followed by a period of one month or more in which the person has either persistent concern about having additional attacks, worry about the implications of the attack or its consequences, or a significant change in behavior related to the attacks.

**Obsessive-Compulsive Disorder** DSM-IV-TR defines OCD in terms of the presence of either obsessions or compulsions. Most people who meet the criteria for this disorder actually exhibit both of these symptoms. The person must recognize that the obsessions or compulsions are excessive or unreasonable. The diagnostic manual specifies further that these thoughts must not be simply excessive worries about



Obsessive thoughts about germs and contamination can trigger ritualistic cleaning behaviors that take many hours to complete



real problems. Intrusive thoughts about overdue bills, for example, would not qualify as obsessions. The DSM-IV-TR definition also requires that the person must attempt to ignore, suppress, or neutralize the unwanted thoughts or impulses.

The line of demarcation between compulsive rituals and normal behavior is often difficult to define. How many times should a person wash her hands in a day? How long should a shower last? Is it reasonable to check more than one time to be sure that the door is locked or the alarm clock is set? DSM-IV-TR has established an arbitrary threshold that holds that rituals become compulsive if they cause marked distress, take more than an hour per day to perform, or interfere with normal occupational and social functioning.

## COURSE AND OUTCOME

Anxiety disorders are often chronic conditions. Long-term follow-up studies focused on clinical populations indicate that many people continue to experience symptoms of anxiety and associated social and occupational impairment many years after their problems are initially recognized. On the other hand, some people do recover completely. The most general conclusion, therefore, is that the long-term outcome for anxiety disorders is mixed and somewhat unpredictable (Tyrer, Seivewright, & Johnson, 2004; Yonkers et al., 2003).

Most people with these disorders continue to have significant problems for many years (Rubio & Lopez-Ibor, 2007). The frequency and intensity of panic attacks tend to decrease as people reach middle age, but agoraphobic avoidance typically remains stable. The nature of the most prominent symptoms may also evolve over time. In patients with GAD, worries may be replaced by complaints about physical symptoms. Worse outcomes tend to be associated with a younger age of onset and lack of appropriate treatment.

The long-term course of obsessive-compulsive disorder also follows a pattern of improvement mixed with some persistent symptoms. One remarkable study has reported outcome information for a sample of 144 patients with severe OCD who were assessed at two follow-up intervals: first about five years after they were initially treated at a psychiatric hospital and then again more than 40 years later (Skoog & Skoog, 1999). The data are interesting both because of the very long follow-up interval and because the patients were initially treated

between 1947 and 1953, well before the introduction of modern pharmacological and psychological treatments for the disorder. The results are summarized in Figure 6.1. Slightly less than 30 percent of the patients were rated as being recovered at the first follow-up interval. By the time of the 40-year follow-up, almost 50 percent of the patients were considered to show either full recovery or recovery with subclinical symptoms. More than 80 percent of the patients showed improved levels of functioning if we also count people who continued to exhibit some clinical symptoms. Nevertheless, half of the patients in this sample exhibited symptoms of OCD for more than 30 years. This study shows that although many patients do improve, OCD is a chronic disorder for many people.

## Frequency

Some epidemiological studies focus exclusively on treated cases of a disorder, but that strategy can provide a distorted view of the distribution of the disorder within the general population. Many factors can influence whether a person decides to seek treatment. Some cases are less severe than others. Some people treat themselves without consulting a mental health professional. Some people are suspicious of medical facilities, and others are concerned about what people will think of them if they are treated for a mental disorder. Of course, people with agoraphobia are extremely reluctant to leave their homes for any reason. This issue has been a special problem in epidemiological studies of anxiety disorders. Only about 25 percent of people who qualify for a diagnosis of anxiety disorder ever seek psychological treatment. Therefore, our estimates of the frequency and severity of these problems must be based on community surveys.

**What is the expected long-term outcome for people with anxiety disorders?**

## PREVALENCE

The National Comorbidity Survey Replication (NCS-R), which included approximately 9,000 people aged 18 and older throughout the United States, found that anxiety disorders are more common than any other form of mental disorder (Kessler et al., 2005).

### FIGURE 6.1 Long-Term Outcome of Obsessive-Compulsive Disorder

Changes in clinical severity for 144 patients with OCD measured five years and 40 years after hospitalization.

Source: G. Skoog and I. Skoog, 1999, "A 40-year Follow-up of Patients with Obsessive-Compulsive Disorder," *Archives of General Psychiatry*, 56, pp. 121–127. Copyright © 1999. This material can be found at: <http://archpsyc.ama-assn.org/cgi/content/abstract/56/2/121>. Reprinted by permission of the American Medical Association.

(This item omitted from WebBook edition)



Specific phobias are the most common type of anxiety disorder, with a one-year prevalence of about 9 percent of the adult population (men and women combined). Social phobia is almost as common, with a one-year prevalence of 7 percent. Panic disorder and GAD both affect approximately 3 percent of the population. Obsessive-compulsive disorder and agoraphobia without panic both affect another 1 percent of the population.

## COMORBIDITY

The symptoms of various anxiety disorders overlap considerably. Many people who experience panic attacks develop phobic avoidance, and many people with obsessive thoughts would also be considered chronic worriers. One study found that 50 percent of people who met the criteria for one anxiety disorder also met the criteria for at least one other form of anxiety disorder or mood disorder (Brown & Barlow, 1992).

Both anxiety and depression are based on emotional distress, so it is not surprising that considerable overlap also exists between anxiety disorders and mood disorders (Kessler et al., 2008; Regier et al., 1998). Approximately 60 percent of people who receive a primary diagnosis of major depression also qualify for a secondary diagnosis of some type of anxiety disorder. The average age of onset for anxiety disorders is much younger than the average age of onset for depression, so when they are both present in the same person's life, the usual pattern is for anxiety to appear first (Kessler et al., 2007).

This extensive overlap between anxiety and depression raises interesting questions about the relation between these general diagnostic categories. Do people who meet the criteria for both depression and an anxiety disorder really suffer from two distinct syndromes? Or should we think about the existence of three types of disorders: “pure” anxiety disorders, “pure” mood disorders, and a third type of disorder that represents a mixture of anxiety and depression? Reasonable arguments have been made on both sides of this debate, which remains unresolved (Das-Munshi et al., 2008; Schmidt et al., 2007).

Substance dependence is another problem that is frequently associated with anxiety disorders. People who have an anxiety

disorder are about three times more likely to have an alcohol use disorder than are people without an anxiety disorder (Grant et al., 2004). In situations such as these, questions of cause and effect are not clear. Did the person use alcohol in an attempt to reduce heightened anxiety, or did he or she become anxious after drinking excessively? Prospective studies conclude that it works both ways (Kushner, Sher, & Erickson, 1999).

## GENDER DIFFERENCES

There are significant gender differences in lifetime prevalence for several types of anxiety disorders. Furthermore, among people who suffer from an anxiety disorder, relapse rates are higher for women than for men. The gender difference in prevalence is particularly large for specific phobias, where women are three times as likely as men to experience the disorder. Women are about twice as likely as men to experience panic disorder, agoraphobia (without panic disorder), and generalized anxiety disorder. Social phobia is also more common among women than among men, but the difference is not as striking as it is for other types of phobias. The only type of anxiety disorder for which there does not appear to be a significant gender difference is OCD (Torres et al., 2006).

The significant gender differences in the prevalence and course of anxiety disorders must be interpreted in the light of etiological theories, which are considered in the next section. Several explanations remain plausible. Psychological speculation has focused on such factors as gender differences in child-rearing practices or differences in the way in which men and women respond to stressful life events. Gender differences in hormone functions or neurotransmitter activities in the brain may also be responsible (Altemus, 2006).

## ANXIETY ACROSS THE LIFE SPAN

Prevalence rates for anxiety disorders have been found to be lower when people over the age of 60 are compared to younger adults (Kessler et al., 2005). On the other hand, the gradual



Heavy drinkers are more likely than other people to develop anxiety disorders, and people who are highly anxious are more likely to start to drink heavily.



reduction in anxiety that has been observed among middle-aged adults may reverse itself later in life. Anxiety may increase as people move into their 70s and 80s (O'Connor, 2006; Teachman, 2006). Increased anxiety among the elderly may be due to problems associated with loneliness, increased dependency, declining physical and cognitive capacities, and changes in social and economic conditions.

Most elderly people with an anxiety disorder have had the symptoms for many years. It is relatively unusual for a person to develop a new case of panic disorder, specific phobia, social phobia, or obsessive-compulsive disorder at an advanced age. The only type of anxiety disorder that begins with any noticeable frequency in late life is agoraphobia (Barlow et al., 2003).

The diagnosis of anxiety disorders among elderly people is complicated by the need to consider factors such as medical illnesses and other physical impairments and limitations (Carmin & Ownby, 2010). Respiratory and cardiovascular problems may resemble the physiological symptoms of a panic attack. Hearing losses may lead to anxiety in interpersonal interactions. Subsequent avoidance might be inappropriately attributed to the onset of a social phobia. A frail elderly person who falls down on the street may become afraid to leave home alone, but this may be a reasonable concern rather than a symptom of agoraphobia. For reasons such as these, the diagnosis of anxiety disorders must be done with extra caution in elderly men and women.

## CROSS-CULTURAL COMPARISONS

People in different cultures express anxiety in different ways (see the description of *ataques de nervios* in Chapter 4 on page 82). As in the case of depression, people in nonwestern cultures are more likely to communicate their anxiety in the form of somatic complaints, such as “My chest hurts,” “I can’t breathe,” or “I’m tired and restless all the time” (Halbreich et al., 2007; Hoge et al., 2006). The primary focus of anxiety complaints also varies considerably across cultural boundaries. In other words, we need to consider the kinds of situations that provoke intense anxiety as well as the ways in which we recognize that a person is anxious. People in Western societies often experience anxiety in relation to their work performance, whereas in other societies people may be more concerned with family issues or religious experiences. In the Yoruba culture of Nigeria, for example, anxiety is frequently associated with fertility and the health of family members (Good & Kleinman, 1985).

Anxiety disorders have been observed in preliterate as well as Westernized cultures. Of course, the same descriptive and diagnostic terms are not used in every culture, but the basic psychological phenomena appear to be similar (Draguns & Tanaka-Matsumi, 2003). Cultural anthropologists have recognized many different culture-bound syndromes that, in some cases, bear striking resemblance to anxiety disorders listed in DSM-IV-TR.

Very few epidemiological studies have attempted to collect cross-cultural data using standardized interviews and specific diagnostic criteria. One such study was conducted to evaluate specific drugs for the treatment of panic attacks (Cross-National Collaborative Panic Study, 1992). More than 1,000 patients were treated in 14 different countries in North America, Latin America, and Europe. Several interesting findings emerged from this study. Most important was the fact that panic disorder occurred in all the countries that were included in the study. The most prominent symptoms—choking or

smothering, fear of dying, phobic avoidance—varied from one region to the next, but the overall prevalence rate appeared to be about the same.

## Causes

Now that we have discussed the various symptoms associated with anxiety disorders and their distribution within the population, we can consider the origins of these disorders. How do these problems develop? Going back to the cases that were presented at the beginning of the chapter, what might account for the onset of Johanna’s panic attacks? Why would Ed find himself plagued by violent images and compelled to form letters in a meticulous fashion?

## ADAPTIVE AND MALADAPTIVE FEARS

Current theories regarding the causes of anxiety disorders often focus on the evolutionary significance of anxiety and fear. These emotional response systems are clearly adaptive in many situations. They mobilize responses that help the person survive in the face of both immediate dangers and long-range threats. An evolutionary perspective helps to explain why human beings are vulnerable to anxiety disorders, which can be viewed as problems that arise in the regulation of these necessary response systems (Hofer, 2010). The important question is not why we experience anxiety, but why it occasionally becomes maladaptive. When anxiety becomes excessive, or when intense fear is triggered at an inappropriate time or place, these response systems can become more harmful than helpful. In order to understand the development of anxiety disorders, we must consider a variety of psychological and biological systems that have evolved for the purpose of triggering and controlling these alarm responses.

*Is there a unique causal pathway for each type of anxiety disorder?*

Should we expect to find unique causal pathways associated with each of the types of anxiety disorder listed in DSM-IV-TR? This seems unlikely, particularly in light of the extensive overlap among the various subtypes. Should we expect that all the different types of anxiety disorders are produced by the same causes? This also seems unlikely, and an evolutionary perspective suggests that a middle ground between these two extremes may provide the most useful explanation (Marks & Nesse, 1994). Generalized forms of anxiety probably evolved to help the person prepare for threats that could not be identified clearly. More specific forms of anxiety and fear probably evolved to provide more effective responses to certain types of danger. For example, fear of heights is associated with a freezing of muscles rather than running away, which could lead to a fall. Social threats are more likely to provoke responses such as shyness and embarrassment that may increase acceptance by other people by making the individual seem less threatening. Each type of anxiety disorder can be viewed as the dysregulation of a mechanism that evolved to deal with a particular kind of danger. This model leads us to expect that the etiological pathways leading to various forms of anxiety disorders may be partially distinct but not completely independent.





Social phobias may involve prepared conditioning associated with faces that seem angry, critical, or rejecting.

## SOCIAL FACTORS

Stressful life events, particularly those involving danger and interpersonal conflict, can trigger the onset of certain kinds of anxiety disorders. For example, various aspects of parent–child relationships may leave some people more vulnerable to the development of anxiety disorders when they become adults. Taken together, the evidence bearing on these issues helps explain the relationship between, and the overlap among, anxiety disorders and mood disorders.

**Stressful Life Events** Common sense suggests that people who experience high stress levels are likely to develop negative emotional reactions, which can range from feeling “on edge” to the onset of full-blown panic attacks. In Chapter 5 we reviewed the literature concerning stressful life events and depression. Several investigations suggest that stressful life events can influence the onset of anxiety disorders as well as depression. Patients with anxiety disorders are more likely than other people to report having experienced a negative event in the months preceding the initial development of their symptoms (Kendler et al., 2003).

Why do some negative life events lead to depression while others lead to anxiety? The nature of the event may be an important factor in determining the type of mental disorder that appears (McLaughlin & Hatzenbuehler, 2009; Updegraff & Taylor, 2000). People who develop an anxiety disorder are much more likely to have experienced an event involving danger, insecurity, or family discord, whereas people who are depressed are more likely to have experienced a severe loss (lack of hope). Different types of environmental stress lead to different types of emotional symptoms.

**Childhood Adversity** If recent dangers and conflicts can precipitate the full-blown symptoms of an anxiety disorder, do past experiences—those that took place years ago—set the stage for this experience? Several research studies indicate that they can (Harkness & Wildes, 2002). Studies of these phenomena focus on measures of childhood adversity. This concept includes experiences such as maternal prenatal stress, multiple maternal partner changes, parental indifference

(being neglected by parents), and physical abuse (being physically beaten or threatened with violence). Children who are exposed to higher levels of adversity are more likely to develop anxiety disorders later in their lives (Moffitt et al., 2007; Phillips et al., 2005).

Evidence regarding childhood adversity and the development of psychopathology points, once again, to similarities between depression and anxiety. Keep in mind that there is substantial overlap in these disorders; people who meet criteria for anxiety disorders also frequently meet criteria for major depression. Those who are exposed to parental abuse, neglect, and violence are more vulnerable to the development of both anxiety disorders and major depression (Kessler et al., 2008; Lara & Klein, 1999). There does not seem to be a direct connection between particular forms of adverse environmental events and specific types of mental disorders.

**Attachment Relationships and Separation Anxiety** The evidence regarding childhood adversity is similar to another perspective on the origins of anxiety disorders that has been concerned with the infant’s attachment relationship with caretakers. Attachment theory (see Chapter 2) integrates the psychodynamic perspective with field observations of primate behavior and with laboratory research with human infants. According to the British psychiatrist John Bowlby (1973, 1980), anxiety is an innate response to separation, or the threat of separation, from the caretaker. Those infants who are insecurely attached to their parents are presumably more likely to develop anxiety disorders, especially agoraphobia, when they become adults.

Several studies have found that people with a variety of anxiety disorders are more likely to have had attachment problems as children (Cassidy & Mohr, 2001; Dozier et al., 2008; Lewinsohn et al., 2008). Anxious attachment as infants may make these individuals more vulnerable, once they are adults, to the threats that are contained in interpersonal conflict, for example, loss of a loved one if a marriage dissolves. This hypothesis fits nicely with the observation that interpersonal conflict is a relatively frequent triggering event for the onset of agoraphobic symptoms. There is also an interesting connection between attachment styles and childhood adversity. People



who report childhood adversities involving interpersonal trauma (assault, abuse, neglect) are more likely to be insecurely attached, and they are also more vulnerable to depression and anxiety (Mickelson, Kessler, & Shaver, 1997).

## PSYCHOLOGICAL FACTORS

Research suggests that stressful life events and childhood adversity contribute to the development of anxiety disorders. But what are the specific mechanisms that link these experiences to emotional difficulties, such as intense fears, panic attacks, and excessive worry? This question brings our discussion of causes to a different level of analysis. A number of psychological mechanisms undoubtedly play important roles in helping to shape the development and maintenance of anxiety disorders. They include learning processes and cognitive events.

**Learning Processes** Since the 1920s, experimental psychologists working in laboratory settings have been interested in the possibility that specific fears might be learned through classical (or Pavlovian) conditioning (Ayres, 1998). The central mechanism in the classical conditioning process is the association between an unconditioned stimulus (US) and a conditioned stimulus (CS). The US is able to elicit a strong unconditioned emotional response (UR), such as fear. Examples of potential USs are painfully loud and unexpected noises, the sight of dangerous animals, and sudden, intense pain. According to psychologists' original views of the classical conditioning process, the CS could be any neutral stimulus that happened to be present when an intense fear reaction was provoked. Through the process of association, the CS would subsequently elicit a conditioned response (CR), which was similar in quality to the original UR (see Chapter 2). This explanation for the development of specific phobias fits easily with common sense as well as with clinical experience. Many intense, persistent, irrational fears seem to develop after the person has experienced a traumatic event (Merckelbach, Muris, & Schouten, 1996).

Current views on the process by which fears are learned suggest that the process is guided by a *module*, or specialized circuit in the brain, that has been shaped by evolutionary pressures (Öhman & Mineka, 2001). Some psychologists have argued that the mind includes a very large number of prepared modules (specialized neural circuits) that serve particular adaptive functions, such as the recognition of faces and the perception of language (Pinker, 1997). These modules are designed to operate at maximal speed, are activated automatically, and perform without conscious awareness. They are also highly selective, in the sense that the module is particularly responsive to a narrow range of stimuli. Human beings seem to be prepared to develop intense, persistent fears only to a select set of objects or situations. Fear of these stimuli may have conferred a selective advantage upon those people—hundreds of thousands of years ago—who were able to develop fears and consequently avoid certain kinds of dangerous stimuli, such as heights, snakes, and storms. This is not to say that the fears are innate or present at birth, but rather that they can be learned and maintained very easily.

Many investigations have been conducted to test various facets of this **preparedness model** (Mineka & Oehlberg, 2008). The results of these studies support many features of the theory. For example, conditioned responses to fear-relevant stimuli (such as spiders and snakes) are more resistant to extinction

than are those to fear-irrelevant stimuli (such as flowers). Furthermore, it is possible to develop conditioned fear responses after only one trial of learning.

The process of prepared conditioning may play an important role in the development of both social phobias and specific phobias. In specific phobias, the prepared stimuli are things like snakes, heights, storms, and small enclosed places. The prepared stimulus in social phobias might involve other people's faces. We are prepared to fear faces that appear angry, critical, or rejecting if they are directed toward us (Öhman, 1996). This process is presumably an evolutionary remnant of factors involved in establishing dominance hierarchies, which maintain social order among primates. Animals that are defeated in a dominance conflict are often allowed to remain as part of the group if they behave submissively. The responses of people with social phobias may be somewhat analogous, in the sense that they are afraid of directly facing, or being evaluated by, other people.

When a performer makes eye contact with his or her audience, an association may develop very quickly between fear and angry or critical facial expressions.

We all learn many behaviors through imitation. Albert Bandura's early work on modeling, for example, demonstrated that children who observe a model hitting a doll are more likely to behave aggressively themselves when given the opportunity (see Chapter 2). Similar processes may also affect the development of intense fear, because some phobias develop in the absence of any direct experience with the feared object. People apparently learn to avoid certain stimuli if they observe other people showing a strong fear response to those stimuli (Poulton & Menzies, 2002). In other words, the traumatic event does not have to happen to you; it may be enough for you to witness a traumatic event happening to someone else or to watch someone else behave fearfully.

**Cognitive Factors** Up to this point, we have talked about the importance of life events and specific learning experiences—variables that can be measured outside the organism. But cognitive events also play an important role as mediators between experience and response. Perceptions, memory, and attention all influence the ways that we react to events in our environments. It is now widely accepted that these cognitive factors play a crucial role in the development and maintenance of various types of anxiety disorders. We will focus on four aspects of this literature: perception of controllability and predictability, catastrophic misinterpretation (panic attacks), attentional biases and shifts in the focus of attention, and thought suppression.

**Perception of Control** There is an important relationship between anxiety and the perception of control. People who believe that they are able to control events in their environment are less likely to show symptoms of anxiety than are people who believe that they are helpless. This is, of course, part of the reason that the events of September 11, 2001, were so terrifying. The attack on the World Trade Center in New York City was beyond the control of its victims, who were going about their everyday activities.

An extensive body of evidence supports the conclusion that people who believe that they are less able to control events in their

*If phobias are learned quickly and easily, why are they so hard to extinguish?*



environment are more likely to develop global forms of anxiety (Andrews, 1996), as well as various specific types of anxiety disorders (Mineka & Zinbarg, 1998). Laboratory research indicates that feelings of lack of control contribute to the onset of panic attacks among patients with panic disorder. The perception of uncontrollability has also been linked to the submissive behavior frequently seen among people with social phobias as well as the chronic worries of people with generalized anxiety disorder.

**Catastrophic Misinterpretation** A somewhat different type of cognitive dysfunction has been discussed extensively with relation to the development of panic disorder. According to this view, panic disorder may be caused by the *catastrophic misinterpretation* of bodily sensations or perceived threat (D. M. Clark, 1986; L. A. Clark, 1999). Although panic attacks can be precipitated by external stimuli, they are usually triggered by internal stimuli, such as bodily sensations, thoughts, or images. On the basis of past experience, these stimuli initiate an anxious mood, which leads to a variety of physiological sensations that typically accompany negative emotional reactions (changes in heart rate, respiration rate, dizziness, and so on). Anxious mood is accompanied by a narrowing of the person's attentional focus and an increased awareness of bodily sensations.

The crucial stage comes next, when the person misinterprets the bodily sensation as a catastrophic event. For example, a person who believes that there is something wrong with his heart might misinterpret a slight acceleration in heart rate as being a sign that he is about to have a heart attack. He might say to himself, "My heart will stop and I'll die!" This reaction ensures the continued operation of this feedback loop, with the misinterpretation enhancing the person's sense of threat, and so on, until the process spirals out of control. Thus, both cognitive misinterpretation and biological reactions associated with the perception of threat are necessary for a panic attack to occur.

The person's automatic, negative thoughts may also lead him to engage in behaviors that are expected to increase his safety, when in fact they are counterproductive. For example, some people believe that they should take deep breaths or monitor their heart rate if they become aroused. This is actually incorrect information, and the alleged safety behaviors can further exaggerate the person's fear response.

Many research studies have found that the subjective experience of body sensations is, in fact, closely associated with maladaptive or catastrophic thoughts among patients with panic disorder (McNally, 1994). This connection by itself does not provide strong evidence for a *causal* link between catastrophic thoughts and the onset of panic attacks because catastrophic thoughts (such as fear of losing control and fear of dying) are, in fact, part of the definition of a panic attack (see Table 6.1). The theory is difficult to test (cannot be disproven) if there is no way to separate the measurement of catastrophic thoughts and the panic attack itself (Roth, Wilhelm, & Pettit, 2005).

Catastrophic misinterpretations cannot account for all instances of panic attacks. For example, patients with panic disorder sometimes experience panic attacks in their sleep (Craske & Rowe, 1997; Klein & Klein, 1989). How could that happen if the escalation to panic requires catastrophic misinterpretation of physical sensations, which presumably involves conscious cognitive processes? Clearly, other factors are also involved. One alternative explanation involves classical conditioning. The experience of an initial panic attack might lead to conditioned anxiety to cues associated with the first attack.

These could be either internal bodily sensations or external stimuli. The conditioned anxiety might lower the person's threshold for subsequent panic attacks (Bouton, Mineka, & Barlow, 2001).

### **Attention to Threat and Biased Information Processing**

Earlier in this chapter we mentioned that anxiety involves negative thoughts and images anticipating some possible future danger. In recent years, several lines of research have converged to clarify the basic cognitive mechanisms involved in generalized anxiety disorder as well as panic disorder. Experts now believe that attention plays a crucial role in the onset of this process. People who are prone to excessive worrying and panic are unusually sensitive to cues that signal the existence of future threats (MacLeod et al., 2002; Teachman, Smith-Janik, & Saporito, 2007). They attend vigilantly to even fleeting signs of danger, especially when they are under stress. At such times, the recognition of danger cues triggers a maladaptive, self-perpetuating cycle of cognitive processes that can quickly spin out of control.

The threatening information that is generated in this process is presumably encoded in memory in the form of elaborate schemas, which are easily reactivated. The threat schemas of anxious people contain a high proportion of "what-if" questions, such as "What am I going to do if I don't do well in school this semester?" Once attention has been drawn to threatening cues, the performance of adaptive, problem-solving behaviors is disrupted, and the worrying cycle launches into a repetitive sequence in which the person rehearses anticipated events and searches for ways to avoid them. This process activates an additional series of "what-if" questions that quickly leads to a dramatic increase in negative affect (McLaughlin, Borovec, & Sibrava, 2007).

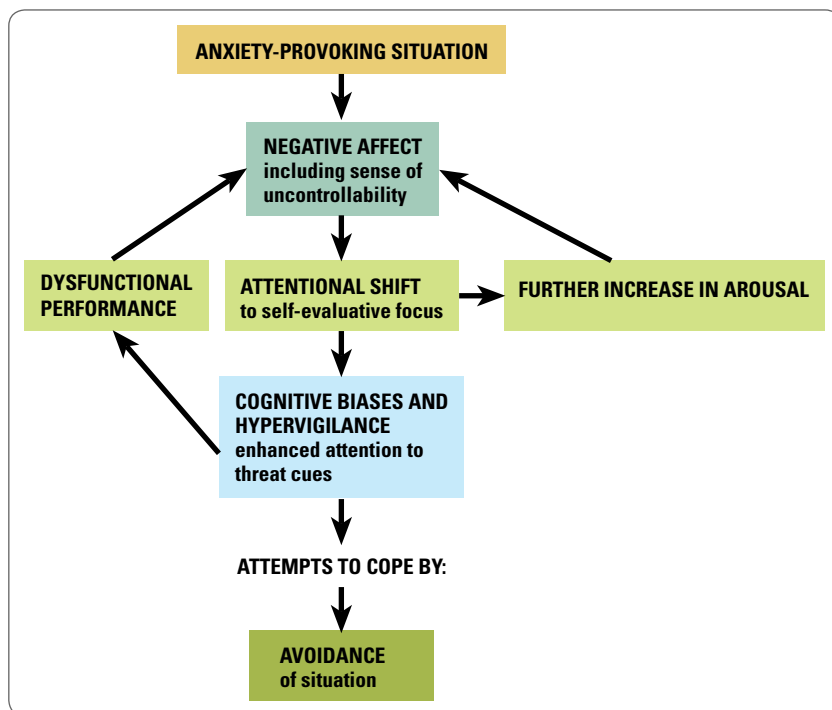
If worriers are preoccupied with the perception of threat cues and the rehearsal of dangerous scenarios but are unable to reach satisfactory solutions to their problems, why do they continue to engage in this vicious, maladaptive cycle? Two considerations are particularly important in explaining the self-perpetuating nature of worry: (1) Worry is an experience that is made up of "self-talk"—things that people say to themselves rather than visual images ("I'll never get all this work done!"). (2) Worry serves the function of avoiding unpleasant somatic activation through the suppression of imagery (Borkovec, Alcaine, & Behar, 2004). In other words, some people apparently continue to worry, even though it is not productive, because worrying is reinforced by an immediate (though temporary) reduction in uncomfortable physiological sensations.

Attentional mechanisms also seem to be involved in the etiology and maintenance of social phobias. People who are capable of performing a particular task when they are alone (in practice) cannot perform it in front of an audience. This deterioration in skill may be caused by anxious apprehension, which is similar to the cognitive processes involved in worrying (Barlow, 2004). The cycle is illustrated in Figure 6.2. An increase in negative affect presumably triggers a shift toward self-focused attention ("Oh, no, I'm getting really upset") and activates cognitive biases and threat schemas ("What if I make a mistake?"). The person becomes distracted by these thoughts, and performance deteriorates. In a sense, the person's fearful expectations become a self-fulfilling prophesy (Heerey & Kring, 2007).

### **Thought Suppression: Obsessive–Compulsive Disorder**

The cognitive model of worry or anxious apprehension places primary emphasis on the role of attentional processes.





**FIGURE 6.2** Anxious Apprehension and Social Phobia

Processes involved in the generation of social anxiety.

Source: Adapted from *Anxiety and Its Disorders: The Nature and Treatment of Anxiety and Panic* by Barlow, David H. Copyright 2001 Reproduced with permission of Guilford Publications, Inc. in the format Textbook via Copyright Clearance Center.

Worrying is unproductive and self-defeating in large part because it is associated with a focus on self-evaluation (fear of failure) and negative emotional responses rather than on external aspects of the problem and active coping behaviors. We may be consciously aware of these processes and simultaneously be unable to inhibit them. The struggle to control our thoughts often leads to a process known as *thought suppression*, an active attempt to stop thinking about something.

It seems simple to say, “Stop worrying,” but it is virtually impossible for some people to do so. In fact, recent evidence suggests that trying to rid one’s mind of a distressing or unwanted thought can have the unintended effect of making the thought more intrusive (Wegner, 1994). Thought suppression might actually increase, rather than decrease, the strong emotions associated with those thoughts. The bond between a thought and its associated emotion allows activation of one to result in the reinstatement of the other, a kind of dual pathway.

Obsessive-compulsive disorder may be related, in part, to the maladaptive consequences of attempts to suppress unwanted or threatening thoughts that the person has learned to see as being dangerous or forbidden (Abramowitz, Tolin, & Street, 2001; Purdon, 2004). Remember that obsessive thoughts are a common experience in the general population. They resemble “abnormal” obsessions in form and content. However, the obsessions of those in treatment for OCD are more intense and, perhaps most importantly, are more often strongly resisted and more difficult to dismiss. This resistance may be a key component in the association between emotional sensitivity and the development of troublesome obsessive thoughts. People who are vulnerable to the development of OCD apparently react strongly to events that trigger an emotional response. These individuals become aware of their exaggerated reactivity and find it unpleasant. In an effort to control their reaction, they attempt to resist or suppress the emotion (Campbell-Sills et al., 2006).

As a result of an individual’s attempt to suppress strong emotion, a rebound effect may occur, culminating in a vicious cycle. Thoughts that are present during the instigation of such a cycle become robustly associated with the emotion and may become the content of an obsessive thought. This model may help to explain the episodic nature of obsessive-compulsive symptoms; relapse may be triggered by intense emotional episodes.

**Is it useful to struggle actively against unwanted thoughts?**

## BIOLOGICAL FACTORS

Several pieces of evidence indicate that biological events play an important role in the development and maintenance of anxiety disorders. In the following pages we review the role of genetic factors, the connection between anxiety symptoms and specific regions in the brain, and the use of chemicals to induce symptoms of panic. These factors undoubtedly interact with the social and psychological variables that we have considered in the preceding sections.

**Genetic Factors** Some of the most useful information about the validity of anxiety disorders comes from studies aimed at identifying the influence of genetic factors. These data address the overlap, as well as the distinctions, among various types of anxiety disorders. They also shed additional light on the relationship between anxiety and depression.

One particularly influential study, known as the Virginia Adult Twin Study, has examined anxiety disorders—as well as many other forms of psychopathology—in a large sample of twins (Kendler & Prescott, 2006). The people who participated in this study were not psychiatric patients; they were living in the community and were identified through a statewide registry of twins born in Virginia. For each specific type of anxiety disorder, concordance rates were significantly higher for MZ twins than



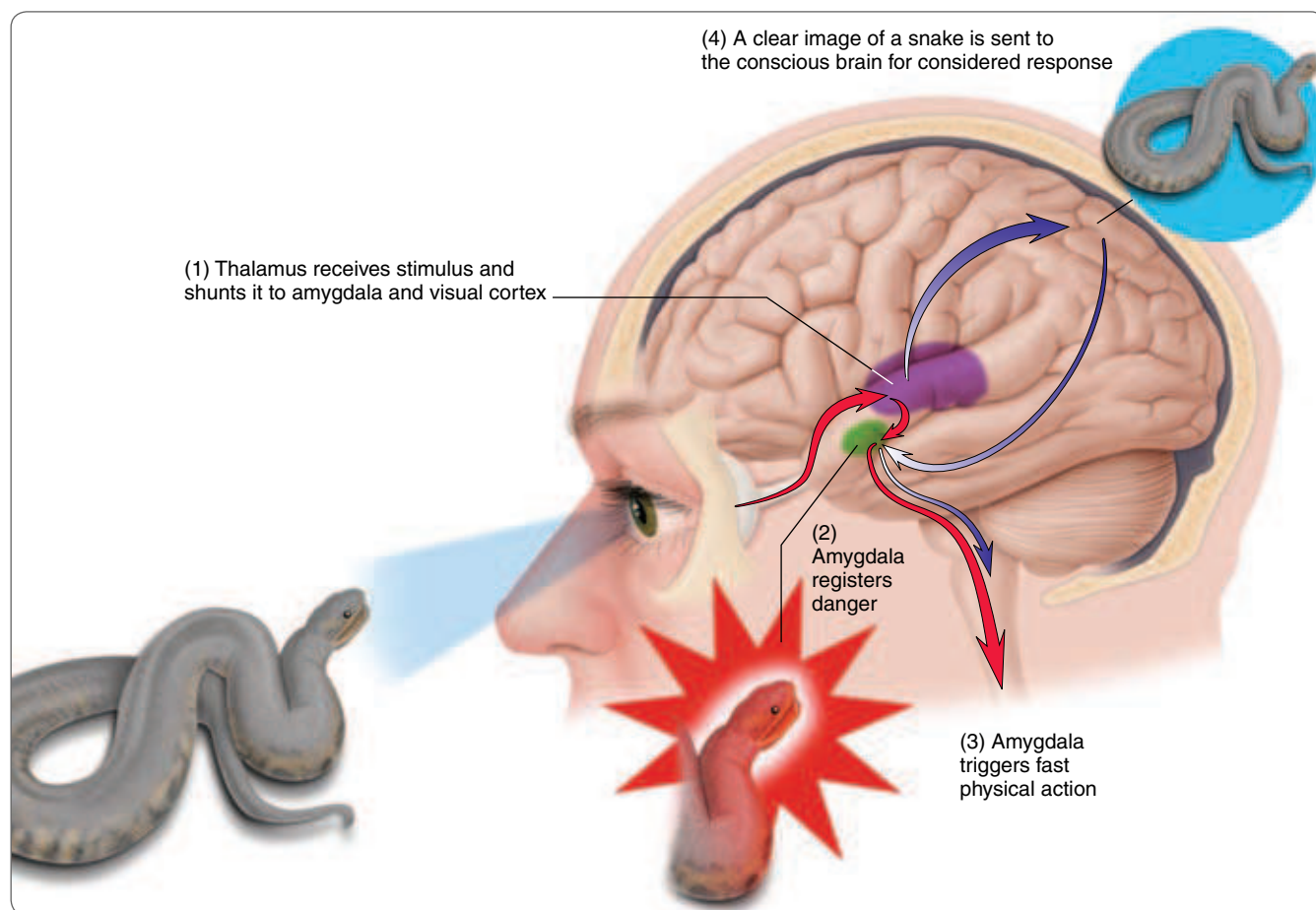
for DZ twins. Nevertheless, the MZ concordance rates were also relatively low (in comparison to MZ concordance rates for bipolar mood disorders, for example). Anxiety disorders appear to be modestly heritable, with genetic factors accounting for between 20 and 30 percent of the variance in the transmission of GAD. (See Research Methods in Chapter 16 for a discussion of heritability.) These results led the investigators to several important conclusions:

1. Genetic risk factors for these disorders are neither highly specific (a different set of genes being associated with each disorder) nor highly nonspecific (one common set of genes causing vulnerability for all disorders).
2. Two genetic factors have been identified: one associated with GAD, panic disorder, and agoraphobia, and the other with specific phobias.
3. Environmental risk factors that would be *unique* to individuals also play an important role in the etiology of all anxiety disorders. Environmental factors that would be *shared* by all members of a family do not seem to play an important role for many people.

**Neurobiology** Laboratory studies of fear conditioning in animals have identified specific pathways in the brain that

are responsible for detecting and organizing a response to danger (LeDoux, 2000; Öhman & Mineka, 2003). The amygdala plays a central role in these circuits, which represent the biological underpinnings of the evolved fear module that we discussed earlier in connection with classical conditioning and phobias (see page 151). Scientists have discovered these pathways by monitoring and manipulating brain activities in animals that are participating in studies using classical conditioning to pair an originally neutral stimulus (the CS) with an aversive stimulus (the US). The results of these studies tell us *where* emotional responses, such as fear and panic, are located in terms of brain regions. They also begin to explain *how* they are produced. That knowledge, coupled with data regarding social and psychological factors, will help us understand *why* people experience problems such as irrational fears and panic attacks.

The brain circuits involved in fear conditioning are illustrated in Figure 6.3. This drawing uses the example of a person who has seen a dangerous snake (Carter, 1999). Sensory information is projected to the thalamus, and from there it is directed to other brain areas for processing. Emotional stimuli follow two primary pathways, both of which lead to the amygdala. The first pathway (the red arrow) might be called a “shortcut” and represents the evolved fear module for conditioned fear. The



**FIGURE 6.3 Two Pathways in the Brain That Detect Danger and Trigger Fear Responses**

(1) Evolved fear module, and (2) slower, indirect route through cortical processing areas.

Source: Carter, 1998, *Mapping the Mind*, Berkeley: University of California Press, illustrations by Malcolm Godwin. Copyright © 1998 by Moonrunner Design Ltd. Reprinted by permission of Malcolm Godwin, Moonrunner Design, Ltd.



# Critical Thinking Matters

## CAN A STREP INFECTION TRIGGER OCD IN CHILDREN?

New hypotheses about the causes of mental disorders are usually based on clinical observations. These ideas are then evaluated in research studies designed to test their validity. Sometimes the data support the new idea, and sometimes they don't. During this period of evaluation, clinicians and scientists find themselves in a period of uncertainty, with some people embracing what they consider to be an important advance in knowledge while others provide skeptical criticism. Both groups need to think critically about relevant evidence.

This state of affairs is currently illustrated by a controversial proposal regarding the development of OCD in children. Clinical scientists at the National Institute of Mental Health suggested that, in some cases, symptoms of OCD develop suddenly following a strep infection. According to their hypothesis, antibodies that are triggered by the infection attack nerve cells in the basal ganglia of the brain (see Figure 4.1 on page 98). The investigators created a new term to use in diagnosing children with OCD who have a sudden onset and also test positive for a strep infection. They call the disorder *pediatric autoimmune neuropsychiatric disorders associated with streptococcal infection*, or PANDAS (Swedo & Grant, 2005). They recommend that a throat culture be

given to any child who shows a sudden onset of symptoms of OCD. Children who test positive for strep are put on long-term antibiotics that are claimed, in some cases, to produce "miraculous results" (Anderson, 1996).

Does the recognition of PANDAS represent a breakthrough discovery? Is it a valid diagnostic concept? Or is it a mistaken hypothesis with potentially risky treatment implications? Reasonable people have taken both sides. The empirical evidence is incomplete (da Rocha, Correa, & Teixeira, 2008; Leckman et al., 2011), and some say it is weak (Gilbert & Kurlan, 2009). Many cases have been described that fit this clinical profile. One paper described 109 cases in which the parents described a rapid onset of OCD symptoms (Swedo et al., 1998). Among these, 50 tested positive for strep. That leaves 59 rapid-onset cases that must have been triggered by some other, unknown factor. But even in the cases that did test positive, the existence of a strep infection does not prove that it was *causally* related to the OCD.

If 100 kids fall out of a tree and break their arms and we test them for strep, there's going to be a very high percentage of children who have evidence of recent infection.

That doesn't mean strep is the reason they fell out of a tree. (Shulman, quoted in Belkin, 2005)

Skeptics argue that, until more conclusive evidence is available to support the theory, we should assume that children who experience obsessions and compulsions are suffering from OCD, nothing more or less (Kurlan & Kaplan, 2004). Undue emphasis on the

### *Can claims surrounding discovery of a new disorder be harmful?*

use of antibiotic treatment may lead parents to ignore more conventional treatments for the disorder. In fact, the combination of cognitive behavior therapy and SSRI medications has been shown to be effective for children with PANDAS-related OCD (Storch et al., 2006). Clinicians should also consider potential problems associated with the use of antibiotics as a form of treatment for children with OCD. Risks include the possibility of developing drug allergies and the promotion of antibiotic resistance.

While PANDAS is an intriguing hypothesis, remember that the burden of proof lies with those who propose new diagnostic categories or causal theories. Until it has been supported by *strong* empirical evidence, which is not yet the case with regard to PANDAS, the community of scientists assumes that the new hypothesis is false.

message follows a direct connection between the thalamus and the amygdala, which is connected to the hypothalamus. Behavioral responses (such as the "fight-or-flight" response) are then activated and coordinated through projections from the hypothalamus to endocrine glands and the autonomic nervous system (see Chapter 2, as well as the discussion of the HPA axis in Chapter 5). Notice that this first pathway does not involve connections to cortical areas of the brain that might involve higher-level cognitive functions such as conscious memory or decision making. The amygdala does store unconscious, emotional memories—the kind that are generated through prepared learning.

A second, complementary path from the thalamus (the purple arrow) leads to the cortex and provides for a detailed, and comparatively slower, analysis of the information that has been detected. Using the example in Figure 6.3, information about the snake would be sent to the visual cortex. Once the pattern is recognized as a snake, the data would be integrated with additional information from memory about its emotional significance ("potentially dangerous"). This message would then be sent to the amygdala, which could, in turn, trigger an organized response to threat. This second pathway is longer and more complex than the first, and it will take longer to generate a response. The first pathway has presumably evolved because it is adaptive; it provides the



organism with an alarm system that can be used to avoid immediate dangers in the environment. The fact that information can follow either path is consistent with the idea that some fear responses are “hardwired” (easily learned, difficult to extinguish, and mediated by unconscious processes) while others are dependent on higher-level analyses that involved thinking and reasoning.

A word of caution must be added when we consider the functions of these specific neural pathways. The fact that they are involved in processing fearful reactions does not mean that the amygdala and associated structures are exclusively dedicated to this particular purpose. Studies with animals have shown that artificial stimulation of the amygdala can produce different effects, depending in large part on the environmental context in which the animal is stimulated (Kagan, 1998). Anger, disgust, and sexual arousal are all emotional states that are associated with activity in pathways connecting the thalamus, the amygdala, and their projections to other brain areas. Fear responses are, therefore, only one of the many kinds of behavior associated with these circuits.

The brain regions that have been identified in studies of fear conditioning play an important role in phobic disorders and panic disorder (Etkin & Wager, 2007; Ninan & Dunlop, 2005). In the case of panic disorder, the fear module may be triggered at an inappropriate time. The sensitivity of this pathway is not the same in all people, and it is presumably influenced by genetic factors as well as hormone levels. Social and psychological factors that affect the threshold of the fear module include stressful life events and the development of separation anxiety during childhood (which increases the rate of panic disorder when these children become adults). The subcortical pathway between the thalamus and the amygdala may be responsible for the misinterpretation of sensory information, which then triggers the hypothalamus and activates a variety of autonomic processes (dramatic increases in respiration rate, heart rate, and so on). Some investigators have also speculated that this brain circuit may be associated with the biased attention to threat cues that has been demonstrated in patients with various types of anxiety disorders (Bishop, 2007).

The neurological foundations of OCD seem to involve regions of the brain that are different than those involved in other types of anxiety disorders (Bartz & Hollander, 2006). As we discussed in Chapter 4, obsessions and compulsions are associated with multiple brain regions, including the basal ganglia (a system that includes the caudate nucleus and the putamen), the orbital prefrontal cortex, and the anterior cingulate cortex (see Figure 4.1 on page 98). These circuits are overly active in people with OCD, especially when the person is confronted with stimuli that provoke his or her obsessions (Husted et al., 2006; Menzies et al., 2008).

Several different neurotransmitters are responsible for communication in the brain regions that regulate emotion. Their role in the development and maintenance of anxiety disorders has been examined in studies of animal models of anxiety (Pohl et al., 2007) as well as in studies of the impact of medications on human behavior (Kalueff & Nutt, 2007). Perhaps most important with regard to the anxiety disorders are serotonin, norepinephrine, gamma-aminobutyric acid (GABA), and dopamine. Serotonin and GABA are inhibitory neurotransmitters that function to dampen stress responses. Pharmacological and environmental challenges that increase their availability lead to decreased levels of anxiety. Conversely, experiences that reduce levels of serotonin and GABA can provoke increases in fear and anxiety.

Anxiety disorders are one of the areas of psychopathology in which clinical psychologists and psychiatrists are best prepared to improve the level of their clients’ functioning (see *Getting Help*). We begin by describing procedures that were used in an effort to help Ed, the person with obsessive-compulsive disorder whose problems were described at the beginning of this chapter.

## BRIEF CASE STUDY

### Ed’s Treatment

Ed’s psychiatrist gave him a prescription for clomipramine (Anafranil), an antidepressant drug that is also used to treat people with severe obsessions. Weekly psychotherapy sessions continued as the dose was gradually increased. The medication had a beneficial impact after four weeks. Ed said that he had begun to feel as though he was trapped at the bottom of a well. After the medication, he no longer felt buried. His situation still wasn’t great, but it no longer seemed hopeless or unbearable. He was also less intensely preoccupied by his obsessive violent images. They were still there, but they weren’t as pressing. The drug had several annoying, though tolerable, side effects. His mouth felt dry, and he was occasionally a bit dizzy. He also noticed that he became tired more easily. Although Ed was no longer feeling seriously depressed, and the intensity of his obsessions was diminished, they had not disappeared, and he was now avoiding writing altogether.

Because the obsessions were still a problem, Ed’s psychiatrist referred him to a psychologist who specialized in behavior therapy for anxiety disorders. He continued seeing the psychiatrist every other week for checks on his medication, which he continued to take. The new therapist told Ed that his fears of particular letters and numbers would be maintained as long as he avoided writing. Ed agreed to begin writing short essays every day, for a period of at least 30 minutes. The content could vary from day to day—anything that Ed felt like writing about—but he was encouraged to include the names of his wife and brother as often as possible. Furthermore, he was instructed to avoid his compulsive writing style, intentionally allowing the parts of letters to be separated or loops to be closed. At the beginning and end of each essay, Ed was required to record his anxiety level so that the therapist could monitor changes in his subjective discomfort. Over a period of 8 to 10 weeks, Ed’s handwriting began to change. It was less of a struggle to get himself to write, and his handwriting became more legible.

The final aspect of behavioral treatment was concerned with his fear of axes. Ed and his therapist drew up a list of objects and situations related to axes, arranging them from those that were the least anxiety-provoking through those that were most frightening. They began with the least frightening. In their first exposure session, Ed agreed to meet with the psychologist while a relatively dull, wood-splitting maul was located in the adjoining room. Ed was initially quite anxious and distracted, but his anxiety diminished considerably before the end of their two-hour meeting. Once that had been accomplished, the therapist helped him to confront progressively more difficult situations. These sessions



were challenging and uncomfortable for Ed, but they allowed him to master his fears in an orderly fashion. By the end of the twelfth session of exposure, he was able to hold a sharp ax without fear.

## PSYCHOLOGICAL INTERVENTIONS

Psychoanalytic psychotherapy has been used to treat patients with anxiety disorders since Freud published his seminal papers at the turn of the twentieth century. The emphasis in this type of treatment is on fostering insight regarding the unconscious motives that presumably lie at the heart of the patient's symptoms, such as Ed's feelings about his brother. Although many therapists continue to employ this general strategy, it has not been shown to be effective in controlled outcome studies.

### Systematic Desensitization and Interoceptive Exposure

Like psychoanalysis, behavior therapy was initially developed for the purpose of treating anxiety disorders, especially specific phobias. The first widely adopted procedure was known as systematic desensitization (see Chapter 3). In desensitization, the client is first taught progressive muscle relaxation. Then the therapist constructs a hierarchy of feared stimuli, beginning with those items that provoke only small amounts of fear and progressing through items that are most frightening. Then, while the client is in a relaxed state, he or she imagines the lowest item on the hierarchy. The item is presented repeatedly until the person no longer experiences an increase in anxiety when thinking about the object or situation. This process is repeated several times as the client moves systematically up the hierarchy, sequentially confronting images of stimuli that were originally rated as being more frightening.

In the years since systematic desensitization was originally proposed, many different variations on this procedure have been employed. The crucial feature of the treatment involves systematic maintained exposure to the feared stimulus (McNally, 2007; Rachman, 2002). Positive outcomes have been reported, regardless of the specific manner in which exposure is accomplished. Some evidence indicates that direct ("in vivo") exposure works better than imaginal exposure. A few prolonged exposures can be as effective as a larger sequence of brief exposures. Another variation on exposure procedures, known as flooding, begins with the most frightening stimuli rather than working up gradually from the bottom of the hierarchy. All of these variations on the basic procedure have been shown to be effective in the treatment of phobic disorders (Barlow, Raffa, & Cohen, 2002).

The treatment of panic disorder often includes two specific forms of exposure. One, *situational exposure*, is used to treat agoraphobic avoidance (Hahlweg et al., 2001). In this procedure, the person repeatedly confronts the situations that have previously been avoided. These often include crowded public places, such as shopping malls and theaters, as well as certain forms of transportation, such as buses and trains. *Interoceptive exposure*, the other form of exposure, is aimed at reducing the person's fear of internal, bodily sensations that are frequently associated with the onset of a panic attack, such as increased heart and respiration rate and dizziness. The process is accomplished by having the person engage in

standardized exercises that are known to produce such physical sensations. These may include spinning in a swivel chair, running in place, breathing through a narrow straw, or voluntary hyperventilation, depending on the type of sensation that the person fears and avoids. Outcome studies indicate that interoceptive exposure is one of the most important ingredients in the psychological treatment of panic disorder (Barlow et al., 2002; Meuret et al., 2005).

**Exposure and Response Prevention** The most effective form of psychological treatment for obsessive-compulsive disorder combines prolonged exposure to the situation that increases the person's anxiety with prevention of the person's typical compulsive response (Abramowitz, 2006; Franklin & Foa, 2002).

Neither component is effective by itself. The combination of exposure and response prevention is necessary because of the way in which people with obsessive-compulsive disorder use their compulsive rituals to reduce anxiety that is typically stimulated by the sudden appearance of an obsession. If the compulsive behavior is performed, exposure is effectively cut short.

Consider, for example, the treatment program employed with Ed. His obsessive thoughts and images, which centered

*Why is response prevention coupled with exposure in the treatment of OCD?*



Exposure treatments can be administered in imagination or in the person's natural environment. This tarantula is not dangerous, and it is used in desensitization for people with spider phobias.



around violence, were associated with handwriting. They were likely to pop into his mind when he noticed letters that were poorly formed. In an effort to control these thoughts, Ed wrote very carefully, and he corrected any letter that seemed a bit irregular. By the time he entered behavior therapy, Ed had avoided writing altogether for several months. The therapist arranged for him to begin writing short essays on a daily basis to be sure that he was exposed, for at least 30 minutes each day, to the situation that was most anxiety-provoking. He encouraged Ed to deliberately write letters that did not conform to his compulsive style. In their sessions, for example, Ed was also required to write long sequences of the letter T in which he deliberately failed to connect the two lines. He was not allowed to go back and correct this “mistake.” The combination represents prolonged exposure to an anxiety-provoking stimulus and response prevention.

Controlled outcome studies indicate that this approach is effective with most OCD patients (Allen, 2006). After a few weeks of treatment with exposure and response prevention, most patients show improvements that are clinically important (see Research Methods). On the other hand, some patients (perhaps as many as 20 percent) do not respond positively to this form of treatment and many continue to exhibit mild symptoms of the disorder after they have been successfully treated.

**Relaxation and Breathing Retraining** Behavior therapists have used relaxation procedures for many years. Relaxation training usually involves teaching the client alternately to tense and relax specific muscle groups while breathing slowly and deeply. This process is often described to the client as an active coping skill that can be learned through consistent practice and used to control anxiety and worry.

Outcome studies indicate that relaxation is a useful form of treatment for various forms of anxiety disorder (Arntz, 2003; Siev & Chambless, 2007). For example, applied relaxation and cognitive behavior therapy have been compared to nondirective psychotherapy for the treatment of patients with generalized anxiety disorder. Patients who received relaxation training and those who received cognitive therapy were more improved at the end of treatment than those who received only nondirective therapy (Borkovec et al., 2002).

*Breathing retraining* is a procedure that involves education about the physiological effects of hyperventilation and practice in slow breathing techniques. It is often incorporated in treatments used for panic disorder (Hazlett-Stevens & Craske, 2009). This process is similar to relaxation in the sense that relaxation exercises also include instructions in breathing control. The person learns to control his or her breathing through repeated practice using the muscles of the diaphragm, rather than the chest, to take slow, deep breaths. Although breathing retraining appears to be a useful element in the treatment of panic disorder, the mechanisms involved are not entirely clear. A simple reduction in the frequency of hyperventilation is apparently not the main effect of breathing retraining. Some clinicians believe that the process works by enhancing relaxation or increasing the person's perception of control.

**Cognitive Therapy** Cognitive therapy is used extensively in the treatment of anxiety disorders. Cognitive treatment

procedures for anxiety disorders are similar to those employed in the treatment of depression. Therapists help clients identify cognitions that are relevant to their problem; recognize the relation between these thoughts and maladaptive emotional responses (such as prolonged anxiety); examine the evidence that supports or contradicts these beliefs; and teach clients more useful ways of interpreting events in their environment (Schuyler, 1991).

In the case of anxiety disorders, cognitive therapy is usually accompanied by additional behavior therapy procedures. Barlow's approach to the treatment of panic disorder, for example, includes a cognitive component in addition to applied relaxation and exposure (Barlow, 1997). One aspect of the cognitive component involves an analysis of errors in the ways in which people think about situations in their lives. Typical examples of faulty logic include jumping to conclusions before considering all of the evidence, overgeneralizing (“That C in biology shows I'll never be a doctor”), all-or-none thinking (assuming that one mistake means total failure), and so on.

A second aspect of Barlow's cognitive component for panic patients is called *decatastrophizing*. In this procedure, the therapist asks the client to imagine what would happen if his or her worst-case scenario actually happened. The same principles that are used in examining faulty logic are then applied to this situation. The therapist might say, “I don't think that you will fail the exam. But what would happen if you did fail the exam?” The client's initial reaction might be catastrophic (“I would die.” “My parents would kill me.” “I would flunk out of school.”). Upon more careful analysis, however, the client might agree that these negative predictions actually represent gross exaggerations that are based on cognitive errors. Discussions in the therapy session are followed by extensive practice and homework assignments during the week. As one way of evaluating the accuracy of their own hypotheses, clients are encouraged to write down predictions that they make about specific situations and then keep track of the actual outcomes.

Several controlled outcome studies attest to the efficacy of cognitive therapy in the treatment of various types of anxiety disorders, including panic disorder, agoraphobia, social phobia, generalized anxiety disorder, and obsessive-compulsive disorder (Allen, 2006; Otto, Smits, & Reese, 2004). Improvement in symptoms over time seems to be preceded by changes in cognitive processing. This observation provides support for the hypothesis that cognitive factors do play an important role in maintenance of these disorders (Hofmann, 2004; Teachman, Marker, & Smith-Janik, 2009).

## BIOLOGICAL INTERVENTIONS

Medication is the most effective and most commonly used biological approach to the treatment of anxiety disorders. Several types of drugs have been discovered to be useful. They are often used in conjunction with psychological treatment (Vanin, 2008).

**Antianxiety Medications** The most frequently used types of minor tranquilizers are from the class of drugs known as benzodiazepines, which includes diazepam (Valium) and alprazolam (Xanax). These drugs reduce many symptoms of



# RESEARCH METHODS

## STATISTICAL SIGNIFICANCE: WHEN DIFFERENCES MATTER

Let's say that an outcome study reveals a statistical difference in the effectiveness of one form of treatment versus another form (or no treatment at all). Does this automatically mean that the difference is clinically significant? The answer is no. We can explain this point by using a hypothetical example. Imagine that you want to know whether exposure and response prevention are effective in the treatment of OCD. You could conduct a study, using an experimental design, in which 50 patients with OCD are randomly assigned to receive exposure and response prevention and another 50 patients—the control group—are not. The latter group might receive a placebo pill or nondirective supportive psychotherapy for purposes of comparison. Measures of obsessions and compulsions are collected before and after treatment for patients in both groups. Your hypothesis is that exposure treatment will lead to more improvement than will placebo or nondirective therapy. In contrast, the null hypothesis (see Research Methods in Chapter 1) holds that the two forms of treatment are not truly different. To conclude that exposure and response prevention are effective, you must reject the null hypothesis.

After collecting your data, you can use statistical tests to help you decide whether you can reject the null hypothesis. These tests assign a probability to that result, indicating how often we would find that result if there are not really differences between the two treatments. Psychologists have adopted the .05 level, meaning that if a difference occurs only by chance, you would find this

difference less than 5 times out of every 100 times you repeated this experiment. Differences that exceed the .05 level, therefore, are assumed to reflect real differences between the variables rather than mere chance. Such results are said to be *statistically significant*.

Statistical significance should not be equated with clinical importance (Jacobson & Truax, 1991; Lambert, Hansen, & Bauer, 2008). It is possible for an investigator to find statistically significant differences between groups (and therefore reject the null hypothesis) on the basis of relatively trivial changes in the patients' adjustment. Consider the hypothetical example outlined above and suppose that you measured outcome in terms of a questionnaire for obsessions and compulsions whose scores could range from 0 (no symptoms) to 100 (highest score possible). Let's also assume that the average person without OCD gets a score of 50 on this questionnaire and that a score of 70 or higher is typically considered to indicate the presence of problems that are associated with a disruption of the person's social and occupational functioning. Both groups have a mean rating of 90 on the scale prior to treatment. At the end of treatment, the mean rating for the exposure group has dropped to 75, and the mean for the control group is now 85. If you have included enough subjects, and depending on the amount of variation among scores within each group, this difference might reach statistical significance. But is it clinically important? Probably not. The average patient

in the exposure group still has a score above the cutoff for identifying meaningful levels of psychopathology and 25 points above the average for adults in the general population.

Clinical importance is sometimes measured in terms of the proportion of people in the treatment group whose outcome scores fall below a certain threshold of severity or within the range of scores that are produced by people without the disorder in question. In the case of OCD, people treated with exposure and response prevention do show levels of change that are considered clinically important as well as statistically significant (Abramowitz, 1998).

### ***What is the difference between statistical significance and clinical importance?***

Clinical investigators should also consider the *kind* of changes that they expect to find as well as the *amount* of change. In addition to looking at changes in particular symptoms, such as a reduction in the frequency of compulsive behaviors, some clinical investigators also ask questions about the patient's quality of life (Gladis et al., 1999). These include an interest in the person's overall satisfaction as well as his or her ability to perform various social roles, at work, at school, or with friends and family. Therapists obviously hope that their patients will experience improvements in their overall quality of life and level of social adjustment when they are able to achieve a reduction in the severity of symptoms of mental disorders.

anxiety, especially vigilance and subjective somatic sensations, such as increased muscle tension, palpitations, increased perspiration, and gastrointestinal distress. They have relatively less effect on a person's tendency toward worry and rumination. Benzodiazepines were the most widely prescribed form of psychiatric medication until the 1990s.

Benzodiazepines bind to specific receptor sites in the brain that are ordinarily associated with a neurotransmitter

known as GABA. Benzodiazepines, which enhance the activity of GABA neurons, are of two types, based on their rate of absorption and elimination from the body. Some, such as alprazolam and lorazepam (Ativan), are absorbed and eliminated quickly, whereas others, such as diazepam, are absorbed and eliminated slowly.

Benzodiazepines have been shown to be effective in the treatment of generalized anxiety disorders and social phobias



(Ballenger, 2001; Benitez et al., 2008). Drug effects are most consistently evident early in treatment. The long-term effects of benzodiazepines (beyond six months of treatment) are not well established (Mahe & Balogh, 2000). They are not typically beneficial for patients with specific phobias or obsessive-compulsive disorder. Certain high-potency benzodiazepines are also useful for treating panic disorder (Spiegel & Bruce, 1997). Alprazolam (Xanax) is considered by some psychiatrists to be the drug of choice for patients with this condition because it produces clinical improvement more quickly than antidepressants.

Many patients with panic disorder and agoraphobia relapse if they discontinue taking medication (Marks et al., 1993). Exposure may be a preferable form of treatment for patients with a diagnosis of panic disorder with agoraphobia because of high relapse rates that have been observed after alprazolam is withdrawn.

Common side effects of benzodiazepines include sedation accompanied by mild psychomotor and cognitive impairments. These drugs can, for example, increase the risk of automobile accidents, because they interfere with motor skills. They can also lead to problems in attention and memory, especially among elderly patients.

The most serious adverse effect of benzodiazepines is their potential for addiction. Approximately 40 percent of people who use benzodiazepines for six months or more will exhibit symptoms of withdrawal if the medication is discontinued (Micheline et al., 1996). Withdrawal reactions include the reappearance of anxiety, somatic complaints, concentration problems, and sleep difficulties. They are most severe among patients who abruptly discontinue the use of benzodiazepines that are cleared quickly from the system, such as alprazolam. The risk for becoming dependent on benzodiazepines is greatest among people who have a history of abusing other substances, like alcohol.

Another class of antianxiety medication, known as the azapirones, includes drugs that work on entirely different neural pathways than the benzodiazepines (Cadieux, 1996). Rather than inhibiting the activity of GABA neurons, azapirones act on serotonin transmission. The azapirone that is used most frequently in clinical use is known as buspirone (BuSpar).

***Do psychological treatments have any advantages over medication for treatment of anxiety?***

Placebo-controlled outcome studies indicate that buspirone is effective in the treatment of generalized anxiety disorder (Davidson et al., 1999). Some clinicians believe that buspirone is preferable to the benzodiazepines because it does not cause drowsiness and does not interact with the effects of alcohol. The disadvantage is that patients do not experience relief from severe anxiety symptoms as quickly with buspirone as they do with benzodiazepines.

**Antidepressant Medications** The selective serotonin reuptake inhibitors (SSRIs), discussed in Chapter 5, have become the preferred form of medication for treating almost all forms of anxiety disorder. These include drugs

such as fluoxetine (Prozac), fluvoxamine (Luvox), sertraline (Zoloft), and paroxetine (Paxil). Reviews of controlled outcome studies indicate that they are at least as effective as other, more traditional forms of antidepressants in reducing symptoms of various anxiety disorders (Anderson, 2006; Roy-Byrne & Cowley, 2002). They also have fewer unpleasant side effects, they are safer to use, and withdrawal reactions are less prominent when they are discontinued. Therefore, the SSRIs are now considered the first-line medication for treating panic disorder, social phobia, and obsessive-compulsive disorder.

Imipramine (Tofranil), a tricyclic antidepressant medication, has been used for more than 40 years in the treatment of patients with panic disorder. A large number of double-blind, placebo-controlled studies indicate that it produces beneficial results (Jefferson, 1997; Mavissakalian & Ryan, 1998). Psychiatrists often prefer imipramine to antianxiety drugs for the treatment of panic disorder because patients are less likely to become dependent on the drug than they are to high-potency benzodiazepines like alprazolam.

The tricyclic antidepressants are used less frequently than the SSRIs because they produce several unpleasant side effects, including weight gain, dry mouth, and overstimulation (sometimes referred to as an “amphetamine-like” response). Some of the side effects (like feeling jittery, nervous, lightheaded, and having trouble sleeping) are upsetting to patients because they resemble symptoms of anxiety. Side effects often lead patients to discontinue treatment prematurely. In one study of patients who received long-term treatment with imipramine, 50 percent experienced distressing side effects, including 17 percent who found the effects intolerable (Noyes, Garvey, & Cook, 1989).

Clomipramine (Anafranil), another tricyclic antidepressant, has been used extensively in treating obsessive-compulsive disorder. Several placebo-controlled studies have shown clomipramine to be effective in treating OCD (Abramowitz, 1997; Kozak, Liebowitz, & Foa, 2000). One study found that more than 50 percent of the patients who received clomipramine improved to a level of normal functioning over a period of 10 weeks, compared to only 5 percent of the patients in a placebo group (Katz, DeVeaugh-Geiss, & Landau, 1990). Patients who continue to take the drug maintain the improvement, but relapse is common if medication is discontinued.

In actual practice, anxiety disorders are often treated with a combination of psychological and biological procedures. The selection of specific treatment components depends on the specific group of symptoms that the person exhibits. Table 6.3 summarizes various types of psychological treatment and specific types of medication that are effective with anxiety disorders. These are not the only types of treatment that are available, but they include those that have been subjected to empirical validation. The potential benefits and costs of combined treatment with medication and psychological procedures should be studied more carefully. Current evidence suggests that patients who receive both medication and psychotherapy may do better in the short run, but patients who receive only cognitive behavior therapy may do better in the long run because of difficulties that can be encountered when medication is discontinued (Otto et al., 2005).



# Getting Help

Most people suffering from anxiety disorders can be treated successfully. Several forms of intervention are beneficial, primarily behavior therapy, cognitive therapy, and medication. If you plan to work with a professional therapist, do some research before you begin working with a specific service provider. Read about treatments that have been evaluated empirically. One terrific source of information is a website on research-supported psychological treatments that is maintained by the Society of Clinical Psychology. The address is: [www.psychology.sunysb.edu/klonsky/division12/index.html](http://www.psychology.sunysb.edu/klonsky/division12/index.html).

Some other excellent Internet sites may help you find the best therapist for you, hopefully someone who uses one of the procedures that has been shown to be effective. Patient-run organizations have established sup-

port groups in many communities and share information about treatment alternatives. One outstanding example is the Anxiety Disorders Association of America. The URL for its website is [www.adaa.org](http://www.adaa.org). It includes a consumer's guide to treatment alternatives that is organized by specific types of anxiety disorders. More detailed information about obsessive-compulsive disorder and related problems can be obtained from the Obsessive Compulsive Foundation, a not-for-profit organization composed of people with OCD, their families, and professionals. Its Web address is [www.ocfoundation.org](http://www.ocfoundation.org).

Some people may be able to make improvements on their own with the advice of a useful self-help book. There are a lot of good alternatives to choose from in the area of anxiety disorders. We recommend two books that describe a combination of cognitive and behavioral

approaches to treatment. *Triumph over Fear*, by Jerilyn Ross and Rosalynn Carter, describes the successful experiences of people who have recovered from various types of anxiety disorders, including phobias, panic disorder, and generalized anxiety disorder. Practical, self-help strategies are also summarized in *Overcoming Panic, Anxiety, and Phobias: New Strategies to Free Yourself from Worry and Fear*, written by Shirley Babior and Carol Goldman. This book includes simple instructions in progressive muscle relaxation, cognitive techniques to master anxiety, and exposure procedures for overcoming avoidance. Finally, more specific information about dealing with obsessive-compulsive disorder can be found in *Stop Obsessing: How to Overcome Your Obsessions and Compulsions*, by Edna Foa and Reid Wilson.

## SUMMARY

- Anxiety disorders are defined in terms of a preoccupation with, or persistent avoidance of, thoughts or situations that provoke **fear** or anxiety. **Anxiety** involves a diffuse emotional reaction that is associated with the anticipation of future problems and is out of proportion to threats from the environment.
- A **panic attack** is a sudden, overwhelming experience of terror or fright. Panic attacks are defined largely in terms of a list of somatic sensations, ranging from heart palpitations, sweating, and trembling to nausea, dizziness, and chills.
- **Phobias** are persistent and irrational narrowly defined fears that are associated with avoidance of a specific object or situation. The most complex type of phobic disorder is **agoraphobia**, which is usually described as fear of public spaces.
- **Obsessions** are repetitive, unwanted, intrusive cognitive events that may take the form of thoughts or images or urges. They intrude suddenly into consciousness and lead to an increase in subjective anxiety. **Compulsions** are repetitive behaviors that reduce the anxiety associated with obsessions.
- DSM-IV-TR recognizes several specific subtypes of anxiety disorders: **panic disorder**, specific phobia, social phobia, agoraphobia, obsessive-compulsive disorder, and generalized anxiety disorder, as well as posttraumatic stress disorder and acute stress disorder.
- Anxiety disorders are the most common type of mental disorder. Specific phobias have a one-year prevalence of about 9 percent among adults, followed by social phobia (7 percent), generalized anxiety disorder (3 percent), and panic disorder (3 percent).
- Severe life events, particularly those involving danger, insecurity, or family conflict, can lead to the development of anxiety symptoms. Various kinds of childhood adversity, including parental neglect and abuse, increase a person's risk for the later onset of an anxiety disorder.
- The learning model explained the development of phobic disorders in terms of classical conditioning. A modified learning view, known as the **preparedness model**, is based on recognition that there are biological constraints on this process. We may be prepared to develop intense, persistent fears only to a select set of objects or situations.
- Cognitive theorists have argued that panic disorder is caused by the catastrophic misinterpretation of bodily sensations or perceived threat.



- People who are prone to excessive **worrying** are unusually sensitive to cues that signal the existence of future threats. The recognition of danger cues triggers a maladaptive, self-perpetuating cycle of cognitive processes that can quickly spin out of control.
- Twin studies indicate that genetic factors are involved in the etiology of several types of anxiety disorders, including panic disorder, generalized anxiety disorder, and social phobias. The influence of environmental events seems to be greatest in specific phobias.
- Studies of fear conditioning in animals have identified specific pathways in the brain that are responsible for detecting and organizing a response to danger. The amygdala plays a central role in these circuits. Several other areas of the brain are also associated with anxiety and the symptoms of anxiety disorders.
- Serotonin, norepinephrine, GABA, and dopamine are some of the neurotransmitters that are involved in the production of panic attacks. Many interacting neurotransmitter systems play a role in the etiology of anxiety disorders, and they are largely the same ones that are also involved in major depression.
- Several psychological approaches to the treatment of anxiety disorders have been shown to be effective. These include the use of exposure and flooding in the treatment of phobic disorders, prolonged exposure and response prevention in the treatment of obsessive-compulsive disorders, and cognitive therapy in the treatment of panic disorder and GAD. Various types of medication are also effective treatments for anxiety disorders.

## The Big Picture

### CRITICAL THINKING REVIEW

- **Why is a panic attack sometimes called a “false alarm”?**  
Panic attacks resemble normal fear responses, but they are triggered at an inappropriate time (when the person is not confronted by an immediate source of danger) . . . (see p. 141)
- **What is the difference between obsessions and normal intrusive thoughts?**  
Their content is similar (such as impulses to hurt other people). The differences hinge on duration, frequency, and the extent to which the person struggles against the obsessive thought . . . (see p. 144)
- **What is the expected long-term outcome for people with anxiety disorders?**  
Some people recover, but they are most often chronic conditions . . . (see p. 147)
- **Is there a unique causal pathway for each type of anxiety disorder?**  
Probably not. Studies of environmental events, genetic factors, and neurobiological mechanisms suggest that pathways leading to different types of anxiety disorders overlap to a considerable extent . . . (see p. 149)
- **If phobias are learned quickly and easily, why are they so hard to extinguish?**  
Because their development is guided by a “prepared module,” which is presumably efficient, highly selective, and operating outside conscious awareness . . . (see p. 151)
- **Why is response prevention coupled with exposure in the treatment of OCD?**  
If the therapist did not prevent compulsive behaviors, a patient with OCD would use them to reduce anxiety that is stimulated by exposure to the obsession and the process would not be effective . . . (see pp. 157–158)
- **Do psychological treatments have any advantages over medication for treatment of anxiety?**  
Yes. Problems with medication include various side effects, the potential for addiction (benzodiazepines), and increased risk of relapse following their discontinuation . . . (see p. 160)

## KEY TERMS

agoraphobia  
anxiety  
compulsions

fear  
generalized anxiety  
disorder (GAD)

obsessions  
panic attack  
panic disorder

phobias  
preparedness model  
social phobia

specific phobia  
worry



# Acute and Posttraumatic Stress Disorders, Dissociative Disorders, and Somatoform Disorders

Acute and Posttraumatic Stress Disorders 164

Dissociative Disorders 175

Somatoform Disorders 184

- The *Three Faces of Eve* is a classic 1957 film about a woman with multiple personality disorder based on an actual case history that we discuss in this chapter.

A soldier experiences vivid flashbacks of combat long after returning to civilian life. A young woman discovers hidden parts of her personality that her therapist links to some long-forgotten trauma. A middle-aged man finds his leg nearly paralyzed with weakness, but neurological tests show normal strength. Each of these cases apparently involves *unconscious*



*mental processes*, information processing outside of conscious awareness. Anxiety, stress, and trauma seemingly are transformed, unconsciously, into a flashback, the splitting of consciousness, or a physical symptom. Do unconscious mental processes really affect people in such mysterious ways? What is the unconscious mind? How can we understand it?



## The Big Picture

- What kinds of experiences count as being traumatic?
- Does trauma always cause PTSD?
- What is the unconscious mind?
- Can therapy help people recover memories of child abuse?
- Is multiple personality disorder real?
- Were conversion disorders common in Freud's time but uncommon today?

## OVERVIEW

We ask these questions in this chapter in the context of discussing traumatic stress disorders, dissociative disorders, and somatoform disorders. These psychological problems look very different but share one important similarity: **dissociation**—the disruption of the normally integrated mental processes involved in memory, consciousness, identity, or perception. You should know from the outset that we are entering controversial territory in this chapter. Some psychologists view the unconscious mind as all powerful; others doubt its existence, or at least view unconscious mental processes as relatively unimportant. We approach the topic with both skepticism and curiosity. Especially given limited research, we are skeptical about problems that can be overdramatized. At the same time, we are captivated by unusual case studies that raise fascinating questions about their origin—and about how the mind works.

We begin by considering the least controversial and most studied problems, traumatic stress disorders. The DSM-IV-TR groups these diagnoses with anxiety disorders. We discuss traumatic stress disorders in a separate chapter, however, so we can consider them in detail and highlight their mixed symptoms of anxiety and dissociation.

## Acute and Posttraumatic Stress Disorders

Stress is an inevitable, and in many ways a desirable, fact of everyday life. Some stressors, however, are so catastrophic and horrifying that they can cause serious psychological harm. Such **traumatic stress** is defined in DSM-IV-TR as an event that involves actual or threatened death or serious injury to self or others and creates intense feelings of fear, helplessness, or horror. Examples include rape, military combat, bombings, airplane crashes, earthquakes, major fires, and devastating automobile wrecks. In recent years, we know trauma all too well as a result of the September 11, 2001 terrorist attacks, school shootings, sexual assault, and the aftermath of combat in Iraq and Afghanistan.

It is normal for both survivors and witnesses to be greatly distressed by trauma. For some, however, the disturbance continues long after the trauma has ended. **Acute stress disorder (ASD)** occurs within four weeks after exposure to traumatic stress and is characterized by dissociative symptoms, reexperiencing of the event, avoidance of reminders of the trauma,

and marked anxiety or arousal. **Posttraumatic stress disorder (PTSD)** also is defined by symptoms of reexperiencing, avoidance, and arousal, but the symptoms either are longer lasting or have a delayed onset. The following case study illustrates the horrors and lasting trauma of sexual assault.



A businessman stumbles away from the collapsing World Trade Center towers on September 11, 2001. Over 100,000 people directly witnessed the attacks on the World Trade Center and the Pentagon.



One spring evening, Stephanie Cason, a bright, attractive, and well-adjusted 27-year-old graduate student, ran outside to investigate a fire in another building in her apartment complex. While watching the firemen, Stephanie chatted with a man whom she assumed was a neighbor. After talking with a few other people, she returned to her apartment. The fire had caused a power outage, but Stephanie found her way upstairs and changed into her nightclothes. When she came back downstairs, she was startled by the man she had met outside. Without saying a word, he raised a tire iron and struck Stephanie across the top of her head—repeatedly—until she fell to the floor and stopped screaming. Stephanie was cut deeply and stunned by the vicious blows, but she attempted to resist as the man began to grab at her breasts and rip at her clothes. He began to mutter obscenities and told Stephanie he wanted to have sex with her. Stephanie thought, “He’s going to kill me.”

Somehow Stephanie managed to think clearly despite the blood pouring from her head. She “agreed” to have sex with her assailant but told him that she needed to “freshen up” first. Eventually, he let her go to clean up. When Stephanie reached her bedroom, she shoved a bureau in front of the door and screamed frantically out the window for help. Her screams frightened her attacker, who tried to flee. But one of the firefighters tackled and captured him as he attempted to run away.

Stephanie saved herself from being raped, but she could not protect herself from the emotional fallout of her sexual assault. For days, eventually weeks and months, she felt intermittently terrified, dazed, and

grateful to be alive. She replayed the horror of the evening in her mind repeatedly, and when she managed to fall asleep, she often was awakened by frightening nightmares. Stephanie was terrified to be alone, especially at night, but also at many times during the day. She relied on the unwavering support of her boyfriend and friends to stay nearby and help her cope.

Shortly after the assault, Stephanie sought help from a skilled clinical psychologist, but she fell into a depression despite the therapy. Antidepressant medication helped somewhat with her mood and lethargy, but for months she was hypervigilant—constantly on the lookout for new threats. She had difficulty concentrating and experienced intermittent feelings of numbness or unreality. In addition, she frequently reexperienced the images and emotions surrounding the dreaded event. She was able to resume her studies after about three months, and within six or eight months she was working fairly regularly but with considerably less confidence and concentration than before. As the anniversary of her assault approached, Stephanie grew increasingly upset. The spring weather, usually a welcome change, reminded her of the terror of the previous spring. Her feelings of unreality returned. She had more flashbacks, reliving the dreaded night in her mind. The nightmares and fears of being alone reappeared. As the dreaded date passed, her reactions eased slowly. After about two or three months, she was able to resume her normal life—as normal as her life could be.

Stephanie found it painful but also helpful to talk about her assault with

friends and, over time, more publicly. After the passing of the one-year anniversary, she actually began to lecture about her experiences to classes and to women’s groups. Lecturing gave her some relief, and more importantly, it gave her a sense that some good might come from her trauma. Stephanie also testified at the trial of her assailant, who was convicted and sent to prison for 20 years. Although she appeared strong in the courtroom, the trial renewed many of Stephanie’s symptoms. She again relived the terror of the assault, avoided being alone at night, and became fearful and hypervigilant about dangers in her world.

Once her assailant was imprisoned, Stephanie felt a degree of resolution about the trauma. Still, she could not fully banish the demons. She again experienced intensely distressing episodes near the second and third anniversaries of the assault. And even at other times, Stephanie could unexpectedly fall victim to terror. For example, more than three years after the assault, her boyfriend (now her husband) silently entered her room after returning home unexpectedly one night. Frightened by his sudden appearance, Stephanie first screamed in terror, then sobbed in uncontrollable fear, and felt numb and unreal for several days afterwards.

Stephanie showed amazing bravery during her assault, throughout the trial, and in her public discussions of her trauma. But despite her strength, Stephanie could not prevent or control the recurrent terror of PTSD brought on by a violent sexual assault.

## SYMPTOMS OF ASD AND PTSD

The defining symptoms of both acute and posttraumatic stress disorder include (1) reexperiencing, (2) avoidance, and (3) persistent arousal or anxiety. Dissociative symptoms also are common in the immediate aftermath of a trauma and must be present to make a diagnosis of ASD, but not PTSD (Frances, First, & Pincus, 1995).

**Reexperiencing** Like Stephanie, survivors often *reexperience* trauma in various ways. Some people experience repeated, distressing images or thoughts of the incident. They visualize

the trauma over and over, for example, or repeatedly question what they might have done differently. Others relive the trauma in horrifying dreams. Many people with ASD or PTSD have repeated and intrusive **flashbacks**, sudden memories during which the trauma is replayed in images or thoughts—often at full emotional intensity. In rare cases, reexperiencing occurs as a *dissociative state*, where the person feels and acts as if the trauma actually were recurring in the moment. A combat veteran in a dissociative state might act as if he is back in battle, and he may even take dangerous actions like gathering weapons or barricading himself in his residence. Typically, dissociative states are of short duration, but in unusual cases they can last for days.





Following trauma, many people have intrusive flashbacks, sudden memories during which the trauma is replayed in images and thoughts often at full emotional intensity.

**Avoidance** Marked or persistent avoidance of stimuli associated with the trauma is another symptom of ASD and PTSD. Trauma victims may attempt to avoid thoughts or feelings related to the event, or, like Stephanie, they may avoid people, places, or activities that remind them of the trauma. In PTSD, the avoidance also may manifest itself as a general *numbing of responsiveness*—emotions are dampened or even nonexistent. This symptom may be referred to as “emotional anesthesia,” a term that captures its essence. Emotional numbing can cause sufferers to withdraw from others, particularly from close relationships.

**Arousal or Anxiety** People suffering from ASD and PTSD also experience increased arousal and anxiety following the trauma, a symptom that, when it is more severe, predicts a worse prognosis (Schell, Marshall, & Jaycox, 2004). Examples of arousal and anxiety include Stephanie’s hypervigilance in searching for dangers in her world, as well as restlessness, agitation, and irritability. A number of people with PTSD or ASD also have an *exaggerated startle response*, excessive fear reactions to unexpected stimuli, such as loud noises. These symptoms are why traumatic stress disorders are grouped with the anxiety disorders in DSM-IV-TR.

**Dissociative Symptoms** Acute stress disorder is characterized by explicit dissociative symptoms. Following trauma, many people feel dazed, and act “spaced out.” Others experience *depersonalization*, feeling cut off from

themselves or their environment. They might feel “like a robot,” for example, or as if they were sleepwalking. Still others experience *derealization*, a marked sense of unreality about yourself and the world around you. Immediately after 9/11, for example, many people awoke wondering if the terrorist attacks had been only a nightmare—a sense of unreality that continued for days or longer. ASD also may be characterized by features of *dissociative amnesia*, the inability to recall important aspects of the traumatic experience (Harvey, Bryant, & Dang, 1998).

DSM-IV-TR lists a sense of numbing or detachment from others as a dissociative symptom that characterizes acute stress disorder. A very similar symptom is listed as an indicator of avoidance, not dissociation, in the diagnosis of PTSD (see Table 7.1). This discrepancy reflects some of the broader controversy about whether ASD and PTSD should be classified as dissociative disorders, anxiety disorders, or separately from both (van der Kolk & McFarlane, 1996).

## DIAGNOSIS OF ASD AND PTSD

Maladaptive reactions to trauma have long been of interest to the military, where “normal” performance is expected in the face of the trauma of combat. Historically, most of the military’s concern has focused on battle dropout, that is, men who leave the field of action as a result of what has been called “shell shock” or “combat neurosis” (Jones, Thomas & Ironside, 2007). During the Vietnam War, however, battle dropout was less frequent than in earlier wars, but delayed reactions to combat were much more common (Figley, 1978). This change prompted much interest in PTSD, a condition first listed in the DSM in 1980. Acute stress disorder was included as a separate diagnostic category with the publication of DSM-IV in 1994.

**Acute Stress Disorder** The diagnostic criteria for ASD and PTSD are essentially the same, except that ASD explicitly includes dissociative symptoms and lasts no longer than four weeks (see Table 7.2). PTSD must continue longer or have a delayed onset (see Table 7.1). Not surprisingly, many people suffer from ASD after experiencing trauma (Bryant et al., 2010). Still, some experts wonder whether ASD really describes *normal* reactions to trauma and suggest that

## MyPsychLab

### VIDEO CASE

#### Posttraumatic Stress Disorder



#### BONNIE

*“I basically resigned myself to the fact that I was going to die.”*

Watch the video “Posttraumatic Stress Disorder: Bonnie” on MyPsychLab. As you watch the video, consider the terrible events Bonnie witnessed on 9/11. Her

PTSD symptoms make sense. What treatments might help her recover?



**TABLE 7.1 DSM-IV-TR Diagnostic Criteria for Posttraumatic Stress Disorder (PTSD)**

**A. The person has been exposed to a traumatic event in which both of the following were present:**

1. The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others.
2. The person's response involved intense fear, helplessness, or horror.

**B. The traumatic event is persistently reexperienced in one (or more) of the following ways:**

1. Recurrent and intrusive distressing recollections of the event including images, thoughts, or perceptions
2. Recurrent distressing dreams of the event
3. Acting or feeling as if the traumatic event were recurring
4. Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event
5. Physiologic reactivity upon exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

**C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:**

1. Efforts to avoid thoughts, feelings, or conversations associated with the trauma
2. Efforts to avoid activities, places, or people that arouse recollections of the trauma
3. Inability to recall an important aspect of the trauma
4. Markedly diminished interest or participation in significant activities
5. Feeling of detachment or estrangement from others
6. Restricted range of affect
7. Sense of a foreshortened future

**D. Persistent symptoms of increased arousal, as indicated by two (or more) of the following:**

1. Difficulty falling or staying asleep
2. Irritability or outbursts of anger
3. Difficulty concentrating
4. Hypervigilance
5. Exaggerated startle response

**E. Duration of the disturbance is more than 1 month**

*Specify if:* Acute: If duration of symptoms is less than 3 months

Chronic: If duration of symptoms is 3 months or more

*Specify if:* With delayed onset: If onset of symptoms is at least 6 months after the stressor

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the diagnosis should not be called a “mental disorder” (Bryant et al., 2010). Many experts raise similar questions about PTSD, a diagnosis that may be handed out too easily, particularly to combat veterans returning from Iraq and Afghanistan. Many normal reactions to combat and to readjustment to civilian life are being called PTSD, in part because mental health resources and veterans benefits are tied to the diagnosis (Dobbs, 2009).

ASD was added to the DSM without much research support. Why? The hope was that early intervention would prevent the development of PTSD (Frances et al., 1995). If this was the goal, then the diagnosis offers only half a loaf. Only about 50 percent of people who eventually develop PTSD meet diagnostic criteria for ASD in the month following trauma (Bryant et al., 2010). ASD *symptoms* predict PTSD better than the full DSM-IV-TR diagnosis, thus the number of symptoms used to define ASD may need to be trimmed. On the positive

side of prevention, interventions with ASD do reduce the number of expected cases of PTSD. Early treatment can prevent PTSD (Bryant et al., 2010).

**What Defines Trauma?** Earlier versions of DSM defined trauma as an event “outside the range of usual human experience.” Unfortunately, many traumatic stressors are a *common* part of human experience. Thus, DSM-IV-TR defines trauma as (1) the experience of an event involving actual or threatened death or serious injury to self or others and (2) a response of intense fear, helplessness, or horror in reaction to the event. One controversy is whether PTSD can be caused by indirect exposure to trauma, such as seeing horrible scenes of 9/11 on television (Neria & Galea, 2007).

*Why is trauma no longer defined as “outside of usual human experience”?*



**TABLE 7.2 DSM-IV-TR Diagnostic Criteria for Acute Stress Disorder (ASD)**

- A. The person has been exposed to a traumatic event in which both of the following were present:**
1. The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others.
  2. The person's response involved intense fear, helplessness, or horror.
- B. Either while experiencing or after experiencing the distressing event, the individual has three (or more) of the following dissociative symptoms:**
1. A subjective sense of numbing, detachment, or absence of emotional responsiveness
  2. A reduction in awareness of his or her surroundings (e.g., "being in a daze")
  3. Derealization
  4. Depersonalization
  5. Dissociative amnesia (i.e., the inability to recall an important aspect of the trauma)
- C. The traumatic event is persistently reexperienced in at least one of the following ways: recurrent images, thoughts, dreams, illusions, flashback episodes, or a sense of reliving the experience; or distress on exposure to reminders of the traumatic event.**
- D. Marked avoidance of stimuli that arouse recollections of the trauma (e.g., thoughts, feelings, conversations, activities, places, people).**
- E. Marked symptoms of anxiety or increased arousal (e.g., difficulty sleeping, irritability, poor concentration, hypervigilance, exaggerated startle response, motor restlessness).**
- F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning or impairs the individual's ability to pursue some necessary task, such as obtaining necessary assistance or mobilizing personal resources by telling family members about the traumatic experience.**
- G. The disturbance lasts for a minimum of 2 days and a maximum of 4 weeks and occurs within 4 weeks of the traumatic event.**

Source: Reprinted with permission from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*, (Copyright © 2000). American Psychiatric Association.

While some suggest that such "secondary exposure" can be traumatic, proposals to clarify the DSM definition explicitly exclude media exposure as qualifying as traumatic stress (Bryant et al., 2010).

Any trauma is horrific, but different events have unique psychological consequences. Thus, researchers study both common and unique reactions to traumatic events including combat (Monson et al., 2006), terrorism (Hobfoll, Canetli-Nisim, & Johnson, 2006), child sexual abuse (McDonagh et al., 2005), spouse abuse (Taft et al., 2005), children's coping with residential fires (Jones & Ollendick, 2002), and torture (Basoglu et al., 1997). We discuss some unique aspects of sexual assault in The Trauma of Sexual Assault box.

One trauma that is a particular concern is exposure to disasters because disasters commonly involve large numbers of people. For example, a random telephone survey of 1,008 residents living south of 110th Street in Manhattan on September 11, 2001, found that, regardless of whether they directly witnessed the World Trade Center (WTC) attacks, 7.5 percent—67,000 people—suffered from PTSD one month later (Galea et al., 2002). This obviously is a huge

public health issue, yet there are reasons for optimism, too. Four months after the attacks, the current prevalence of PTSD in the same area dropped to 1.7 and to 0.6 percent after six months (Galea et al., 2003). What protected the New Yorkers? We cannot know for certain, but key influences surely include the outpouring of support (McNally, Bryant, & Ehlers, 2003) and underestimated human resilience (Bonanno, Westphal, & Mancini, 2011).

Firefighters, police, and paramedics must remain calm during a disaster, but this does not make them immune from aftereffects. Five months after Hurricane Katrina in 2005, 22 percent of responding firefighters in New Orleans suffered from PTSD (CDC, 2006). In general, however, emergency workers are less than half as likely to develop PTSD as victims (Neria & Galea, 2007). Emergency workers are protected by their training, preparation, and sense of purpose. More generally, *hardiness*, a sense of commitment, control, and challenge in facing stress, predicts lower risk for PTSD (Sutker et al., 1995). Still, emergency workers need education about the psychological effects of trauma on *them*, opportunities to express troubling emotions, and, in some cases, specialized psychological help.



## THE TRAUMA OF SEXUAL ASSAULT

Like many other traumas, sexual assault is all too common. Almost 10 percent of women report having been raped at least once in their lifetime, according to national surveys, and 12 percent report having been sexually molested (Kessler et al., 1995). Other evidence suggests a notably higher prevalence when the data include *acquaintance rapes*, assaults committed by people known to the victim (Goodman, Koss, & Russo, 1993).

Rape can be devastating physically, socially, and emotionally. Thirty-nine percent of rape victims are physically injured on parts of their bodies other than the genitals. A significant proportion of rape victims are infected with sexually transmitted diseases, and about 5 percent of rapes result in pregnancy (Goodman et al., 1993). Socially, sexual assault can undermine women's

work, as well as their intimate relationships (Byrne et al., 1999).

Most victims of sexual assault show the symptoms of PTSD. Victims may reexperience the horrors of the assault; they may feel numbed in reacting to others, particularly sexual partners; they may avoid any potentially threatening situation; and they may maintain both autonomic hyperarousal and hypervigilance against possible victimization.

Depression is also common. Sadness, crying, and withdrawal from others often are coupled with sleep and appetite disturbances. Loss of interest in sex, insecurities about sexual identity, sexual dysfunction, and negative feelings toward men also are common (Goodman et al., 1993).

Many victims of sexual assault also blame themselves. Women may wonder

if they unwittingly encouraged their assailant or chastise themselves for not being more cautious in avoiding dangerous circumstances. This irrational self-blame is abetted by cultural myths that women provoke rape or actually enjoy it. *Secondary victimization* is a growing concern, as insensitive legal, medical, and even mental health professionals can add

### What is "secondary victimization"?

to a rape victim's emotional burden. In fact, victims of acquaintance rape show increased symptoms of PTSD when they encounter victim-blaming behaviors from professionals who are supposed to help them (Campbell, 2008). Such findings may help explain why as many as two-thirds of stranger rapes and four-fifths of acquaintance rapes are not reported to authorities.

**Comorbidity** Many people with PTSD also suffer from another mental disorder, particularly depression, other anxiety disorders, and substance abuse (Brady, Back, & Coffey, 2004). Other problems associated with PTSD include disturbing nightmares, physical symptoms like headaches and gastrointestinal problems, grief, and relationship difficulties (Cook et al., 2004). Anger—at others or at oneself—is another prominent issue (Orth & Wieland, 2006). A very important concern is increased suicide risk. One study found that 33 percent of rape survivors had thoughts of suicide, and 13 percent actually made a suicide attempt (Kilpatrick, Edmunds, & Seymour, 1992). Negative emotions like these are so common in PTSD that they may become a part of the diagnosis in the future (Grant et al., 2008).

## FREQUENCY OF TRAUMA, PTSD, AND ASD

Early studies suggested that PTSD was uncommon (e.g., Helzer, Robins, & McEvoy, 1987). However, more recent research documents that the prevalence of PTSD is high. A national study found that 6.8 percent of the people in the United States suffered from PTSD at some point (Kessler et al., 2005).

Higher estimates are due to the recognition that trauma is common, not rare. A study of a random sample of 2,181 adults living in the Detroit area found that almost 90 percent had experienced at least one trauma in their lifetime. About 9 percent developed PTSD following a trauma (Breslau et al., 1998; see Figure 7.1). Similar rates of trauma and PTSD also are found in



Emergency workers cut an accident victim out of a car wreck. Police, firefighters, and other emergency personnel are frequently exposed to trauma and often develop PTSD, but training cuts the risk in half in comparison to victims of trauma.



(This item omitted from WebBook edition)

### FIGURE 7.1

Bars to the left of center indicate the percentage of adults who had experienced each trauma among a representative sample of 2,181 adults aged 18 to 45 and living in the Detroit area. Bars to the right of center indicate the percentage of adults who developed PTSD after exposure to the particular trauma.

*Note:* The prevalence of rape as reported in this study was lower than that reported in other studies.

We assume that this statistic reflects only more violent rapes.

*Source:* From "Traumatic and Posttraumatic Stress Disorder in the Community: The 1996 Detroit Area Survey of Trauma" by N. Breslau, R. C. Kessler, H. D. Chilcoat, L.R. Schultz, G. C. Davis, and P. Andreski, *Archives of General Psychiatry*, (1998), 55, pp. 626–632. Copyright © 1998. This material can be found at: <http://archpsyc.ama-assn.org/cgi/content/abstract/55/7/626>. Reprinted by permission of American Medical Association.

Mexico (Norris et al., 2003). Rape and assault clearly are among the very worst traumas, and they pose an especially high risk for PTSD (see Figure 7.1).

Women are especially likely to develop PTSD following rape, while combat exposure is a major risk factor for men (Kessler et al., 1995; Prigerson, Maciejewski, & Rosenbeck, 2002). In general, women are more likely to develop PTSD following exposure to any trauma (Tolin & Foa, 2006). Children also are especially vulnerable, with 20 to 40 percent developing PTSD (Neria & Galea, 2007). Minority group members are more likely to experience PTSD, in large part because of their more difficult living conditions (Pole, Gone, & Kulkarni, 2008). PTSD also is common among crime victims (Kilpatrick & Acierno, 2003). Still, the most common cause of PTSD is the sudden, unexpected death of a loved one. The risk for PTSD following the sudden death of a loved one is low; however, the high prevalence of unexpected death makes it the most common cause of PTSD (see Figure 7.1).

**Trauma Is Not Random** Whether people get caught in events like September 11 or the Virginia Tech shootings is a matter of luck—good or bad.

#### *Is trauma always just a result of bad luck?*

Many traumas, however, do not occur at random. Because they engage in more risky behavior, men, young people in their late teens and early 20s, people with a history of conduct disorders, and extroverts all are more likely to experience trauma. People who are anxious or who have a family history of mental illness also experience

more trauma, but the reasons why are less clear. As noted, minorities and people with less education also are more likely to live in dangerous environments and be exposed to more traumatic stress.

The development of PTSD following a trauma also is not random. Those who are “neurotic”—anxious and easily upset—are more likely to develop PTSD after a trauma, as are people with a family or personal history of mental disorder (Breslau et al., 1998). In fact, a recent prospective study found that over 90 percent of those who developed PTSD following trauma exposure met criteria for some other diagnosis earlier in their life (Koenen et al., 2008). People who developed PTSD following an earlier trauma also are at greater risk following a second trauma (Breslau, Peterson, & Schultz, 2008). Even as we call attention to these risk factors, however, you should know that *resilience*, successful psychological coping, is the most common human response to trauma (Bonanno et al., 2011).

**Course and Outcome** People who suffer from ASD are more likely to develop PTSD subsequently. *Subclinical* ASD, symptoms not severe or pervasive enough to meet diagnostic criteria, is an even better predictor (Bryant et al., 2010). Three symptoms—numbing, depersonalization, and a sense of reliving the experience—are the best predictors of future PTSD (Bryant & Harvey, 2000).

The symptoms of PTSD generally diminish with time. Symptoms improve fairly rapidly during the first year, but more gradually over the next several years (see Figure 7.2). Symptoms diminish faster among people who receive treatment.



(This item omitted from WebBook edition)

## FIGURE 7.2

The symptoms of PTSD decline over time but persist for 10 years among one-third of people. Treatment appears to hasten recovery, but this correlational finding may not mean causation.

Source: R. C. Kessler, A. Sonnega, E. Bromet, M. Hughes, and C. B. Nelson, 1995, "Posttraumatic Stress Disorder in the National Comorbidity Survey," *Archives of General Psychiatry*, 52, p. 1057. Copyright © 1995. This material can be found at: <http://archpsyc.ama-assn.org/cgi/content/abstract/52/12/1048>. Reprinted by permission of American Medical Association.

Despite improvements, over one-third of people still report symptoms 10 years after the trauma, regardless of whether they were treated (Kessler et al., 1995).

PTSD can persist even longer. One study found symptoms among World War II prisoners of war—40 years after confinement. Only 30 percent of POWs who had suffered from PTSD (as diagnosed by retrospective report) were fully recovered, while 60 percent still had mild to moderate symptoms. Another 10 percent either showed no recovery or had a deteriorating course (Kluznik et al., 1986). Many victims of the Holocaust also show PTSD symptoms decades later. Still, even following exposure to the unbelievable horrors of the Holocaust, remarkable resilience is the most common outcome (Barel et al., 2010).

## CAUSES OF PTSD AND ASD

By definition, trauma causes ASD and PTSD. Because not every traumatized person develops a disorder, however, trauma is a necessary but not a sufficient cause. What increases risk or resilience in the face of trauma?

**Social Factors** Research on social factors and the risk for PTSD focuses primarily on (1) the nature of the trauma and the individual's level of exposure to it and (2) the availability of social support following the trauma. Victims of trauma are more likely to develop PTSD when the trauma is more intense, life-threatening, and involves greater exposure (Neria & Galea, 2007). For example, victims of attempted rape are more likely to develop PTSD if the rape is completed, if they are physically injured during the assault, and if they perceive the sexual assault as life-threatening (Kilpatrick et al., 1989). Similarly, PTSD is more prevalent in Vietnam veterans who were wounded, who were involved in the deaths of noncombatants, or who witnessed atrocities (Koenen et al., 2003; Oei, Lim, & Hennessy, 1990). A study of PTSD following September 11 found a greater prevalence among people who lived south of Canal Street, close to the World Trade Center (Galea et al., 2002).

As with less severe stressors, social support after a trauma can play a crucial role in alleviating long-term psychological damage. A lack of social support is thought to have contributed to the high prevalence of PTSD found among Vietnam veterans (Oei et al., 1990). Rather than being praised as heroes,

returning veterans often were treated with disdain. This made it difficult for many veterans to find meaning in their sacrifices and likely increased their risk for PTSD. People who had little social support also were more likely to develop PTSD following September 11 (Galea et al., 2002).

A study of identical twins strongly supports the role of the environment in PTSD. Among 715 MZ twin pairs who were discordant for military service in Southeast Asia during the Vietnam War era, the prevalence of PTSD was *nine times* higher for co-twins who served in Vietnam and experienced high levels of combat in comparison to their identical twin who did not serve (Goldberg et al., 1990).

### Does trauma always cause PTSD?

**Biological Factors** The same twin study also strongly points to biological factors in PTSD. In an analysis of more than 4,000 twin pairs, MZ twins had a higher concordance rate for exposure to combat than DZ twins. Following exposure, identical twins also had higher concordance rates for PTSD symptoms than fraternal twins (True et al., 1993). Importantly, genetic contributions differed across symptoms. Genes contributed most strongly to arousal/anxiety symptoms and least strongly to reexperiencing. Conversely, level of combat exposure predicted reexperiencing and avoidance but not arousal/anxiety (True et al., 1993).

## BIOLOGICAL EFFECTS OF EXPOSURE TO TRAUMA

Does exposure to trauma have biological *consequences* as well as biological causes? People with PTSD show alterations in the functioning, and perhaps the structure, of the amygdala and hippocampus, findings consistent, respectively, with the experience of heightened fear reactivity and intrusive memories (Kolassa & Elbert, 2007). Other evidence links PTSD with general psychophysiological arousal, for example, an increased resting heart rate (Pole, 2007). Together, the pattern of biological findings suggests that the sympathetic nervous system is aroused and the fear response is sensitized in PTSD.



## POSTTRAUMATIC STRESS DISORDER

**SARA**

*"I would wake up 37 times a night for the slightest noise, thinking this crazy person was going to come in and do something to me."*

Watch the video "Posttraumatic Stress Disorder: Sara" on MyPsychLab.

As you watch the video, listen for Sara's description of her PTSD symptoms: arousal, avoidance, and reexperiencing. Also consider ways in which the trauma of domestic violence is unique—for example, in the social isolation of the victim.

Does this mean that trauma damages the brain? Think critically. The differences in brain function and structure between PTSD and control groups may reflect (1) damage caused by trauma, (2) normal biological adaptations to stress, or (3) preexisting differences (Newport & Nemeroff, 2000; Pitman, 1997). In support of the last possibility, a study of identical twins—including one Vietnam veteran with PTSD and his co-twin who neither served in Vietnam nor suffered from PTSD—found smaller than average hippocampus volume in *both* twins (Gilbertson et al., 2002). Similarly, twin research shows that preexisting differences account for IQ deficits that have been mistakenly attributed to brain damage owing to trauma (Gilbertson et al., 2006). Differences between people with and without PTSD are *correlations*. And even if assessed with sophisticated measures like fMRI, correlation still does not mean causation.

**Psychological Factors** An important learning perspective on psychological contributions to PTSD is *two-factor theory*. The first factor, classical conditioning, *creates* fears when the terror of trauma is paired with the cues associated with it. The second factor, operant conditioning, *maintains* avoidance by reducing fear. (People are negatively reinforced when they contemplate confronting trauma cues, which increases anxiety, but ultimately avoid the difficult circumstance, which lowers anxiety—albeit temporarily.) Avoidance also prevents the extinction of anxiety through exposure (Keane, Zimering, & Caddell, 1985).

We can readily illustrate two-factor theory in Stephanie's case. Her fears of being alone at night—when she was attacked—are easy to trace to classical conditioning. Her avoidance was

*Is trauma by itself  
a sufficient cause  
of PTSD?*

negatively reinforced (she felt far less anxious) when friends and family initially stayed with her at night. Stephanie's courage in confronting her fears—eventually staying alone—also shows a necessary step in overcoming PTSD.

What gives Stephanie and other people the courage to face their fears? Research points to cognitive factors such as preparedness, purpose, and blame. For example, pilots cope more

successfully with helicopter crashes if they have training than if they have none, underscoring the importance of preparedness and control (Shalev, 1996). The importance of purpose comes from evidence that, despite greater physical suffering, political activists develop fewer psychological symptoms than nonactivists following torture (Basoglu et al., 1997). On the other hand, negative appraisals—the rape victim who blames herself, or the driver who thinks he could have avoided an accident—are strongly tied to an increased risk for PTSD (Bonanno et al., 2011; Bryant & Guthrie, 2005; Halligan et al., 2003; McNally et al., 2003).

Some theories suggest that dissociation is an unconscious defense that helps victims to cope with trauma (Oei et al., 1990). However, research indicates that dissociation predicts more not less PTSD (Ehlers, Mayou, & Bryant, 1998; Griffin, Resick, & Mechanic, 1997; Harvey et al., 1998). Among a sample of Israeli war trauma victims, for example, more dissociation reported within one week following trauma predicted more severe PTSD six months later (Shalev et al., 1996).

Dissociation may not be adaptive, but most theorists agree that victims of trauma must, over time, find a balance between gradually facing their painful emotions while not being overwhelmed by them. The balancing act can be tricky, but it is essential. New York City college students had lower rates of PTSD following September 11 if they were better at enhancing *and* suppressing emotional expression (Bonanno et al., 2004). This is an example of what psychologist Edna Foa, a leading PTSD researcher, calls *emotional processing*, which involves three key stages. First, victims must engage emotionally with their traumatic memories. Second, victims need to find a way to articulate and organize their chaotic experience. Third, victims must come to believe that, despite the trauma, the world is not a terrible place (Cahill & Foa, 2007; Foa & Street, 2001).

This last step is similar to what other psychologists call *meaning making*—eventually finding some value or reason for having endured trauma (Ehlers & Clark, 2000). Meaning making is very personal and may involve religion, a renewed appreciation for life, or public service. Importantly, the *search* for meaning is associated with *more* PTSD symptoms, whereas *finding* meaning is linked to better adjustment (Park, 2010). Stephanie found meaning in her efforts to make others more aware of sexual assault.

In the long run, many people actually report that trauma leads to growth (Park & Helgeson, 2006). *Posttraumatic growth*, positive changes resulting from trauma, is linked with less depression and more positive well-being, but also with more intrusive and avoidant thoughts (Helgeson, Reynolds, & Tomich, 2006). Finding meaning in trauma does not mean forgetting about it.

**Integration and Alternative Pathways** As with other disorders, there are multiple pathways to developing ASD and PTSD. In some cases, anyone might develop ASD or PTSD if exposed to a trauma of sufficient intensity. In other cases, trauma exacerbates or reveals a preexisting disorder. In most cases, however, trauma is a necessary but not a sufficient cause. ASD and PTSD develop as a result of a combination of factors, including personality characteristics that predate the trauma, exposure during the trauma, and emotional processing and social support afterwards (Ozer et al., 2003; Ozer & Weiss, 2004). Resilience, the most common outcome following



trauma exposure, results from the flip side of these risk factors (Bonanno et al., 2011).

## PREVENTION AND TREATMENT OF ASD AND PTSD

We know that trauma precedes ASD and PTSD. This leads to a very important question: Can we prevent the disorders with early intervention?

**Emergency Help for Trauma Victims** Many experts hope that prevention is possible. In fact, the U.S. Federal Emergency Management Agency (FEMA) provides special funding to community mental health centers during disasters. Emergency treatments range from intensive individual counseling sessions with hurricane victims to group discussions with children following school violence (Litz, 2004). Approaches differ greatly, but offering immediate support to trauma victims is a common goal of all early interventions (McNally et al., 2003; Raphael et al., 1996).

Perhaps the most widely used early intervention is *critical incident stress debriefing (CISD)*, a single one- to five-hour group meeting offered one to three days following a disaster. CISD involves several phases where participants share their experiences and reactions, and group leaders offer education, assessment, and referral if necessary (Mitchell, 1982; Mitchell & Dyregrov, 1993). CISD is difficult to evaluate, since it is conducted in the midst of a crisis (Tuckey, 2007). Still, research provides *no* evidence that CISD prevents future PTSD (Bryant & Harvey, 2000; McNally et al., 2003), and some studies find that CISD is harmful (Lilienfeld, 2007). CISD may provoke too much emotion too soon after trauma. Another problem is the CISD is unnatural. It is not offered by and to people who are a part of the victims' world. CISD generally is provided by outsiders to groups of individuals who have no relationship to one another.

More naturalistic interventions show more promise. Since World War I, interventions with soldiers who drop out of

combat have been based on the three principles of offering (1) immediate treatment in the (2) proximity of the battlefield with the (3) expectation of return to the front lines upon recovery (Jones et al., 2007). The effectiveness of these principles was not studied systematically until a 1982 evaluation of the Israeli army during the Lebanon war. Results indicated that 60 percent of soldiers treated near the front recovered sufficiently to return to battle within 72 hours. Soldiers who expected to return to the front experienced lower rates of PTSD than did those who did not. Soldiers who were treated on the front lines also were less likely to develop PTSD subsequently compared to soldiers who were treated away from the battlefield (Oei et al., 1990).

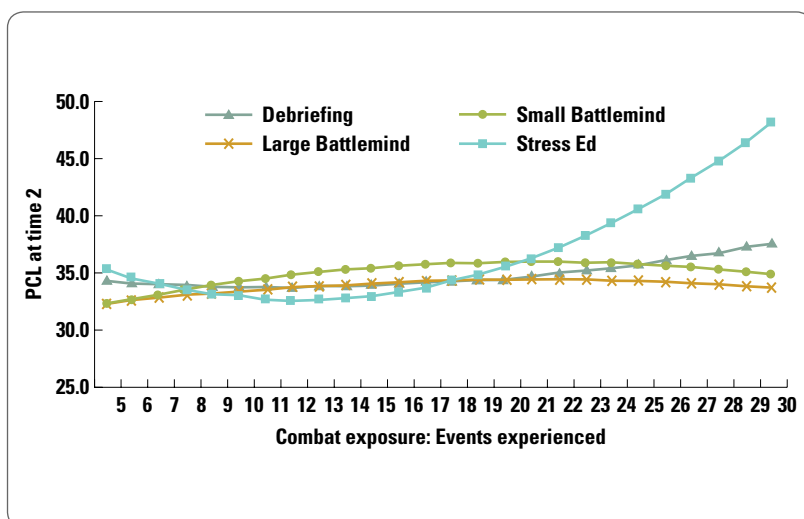
Former Mayor Rudolph Giuliani intuitively followed similar principles when, in the immediate aftermath of September 11, he regularly encouraged New Yorkers to grieve but also to go back to work, to go out, and to go on despite the horrors of the World Trade Center attacks. Such community-based efforts are more appealing, and perhaps more effective, than artificial debriefings. Consider this: Government agencies allocated over \$150 million to pay for psychotherapy for New Yorkers in the wake of September 11, but \$90 million remained unspent two years later (McNally et al., 2003).

A recent study of veterans returning from a year-long deployment in Iraq shows the promise of more naturalistic interventions in preventing PTSD symptoms (Adler et al., 2009). The investigation compared soldiers randomly assigned to (1) the army's "treatment as usual," stress education in groups of about 100, (2) battlemind debriefing, discussions in groups of 20 to 32 that included some review of combat experiences but focused on the transition home and building peer support, and (3) battlemind training, a psychoeducational approach that focuses on finding inner strength in combat, teaches skills to help unit members, and reframes redeployment transition difficulties as normal problems that require adapting occupational coping skills to a new environment. Battlemind training was offered both in small (18 to 45 individuals) and large (126 to 225 individuals) groups to control for the potential



Students gather for a vigil following the Virginia Tech shootings. For many, shared grief and support eases the pain of trauma and reduces the risk for PTSD.





**FIGURE 7.3** PTSD Symptoms among Soldiers Returning from Iraq: Effects of Four Prevention Programs

Battlemind debriefing and battlemind training (in small and large groups) significantly reduced symptoms measured on the PTSD Checklist (PCL) when compared to stress education, but only among soldiers exposed to high levels of combat. These results support the benefits of more naturalistic prevention efforts directed toward groups most at risk.

Source: From A. B. Adler, et al., "Battlemind debriefing and battlemind training as early interventions with soldiers returning from Iraq: Randomized by platoon." *Journal of Consulting and Clinical Psychology*, 77, 937. Copyright © 2009, American Psychological Association. Reprinted by permission.

confound of group size. As portrayed in Figure 7.3, all three experimental conditions produced a significant reduction on the PTSD Checklist (PCL) when compared to stress reduction. However, benefits were observed only among soldiers exposed to a large number of combat events (Adler et al., 2009). Thus, the study both showed the benefits of more naturalistic prevention efforts and, consistent with other literature, suggested that prevention is most effective when targeted toward those most at risk (Bonanno et al., 2010).

**Cognitive Behavior Therapy for PTSD** While great sensitivity is required, the most effective treatment for PTSD is reexposure to trauma. One of the first studies of *prolonged exposure* asked rape victims to relive the trauma repeatedly over nine therapy sessions. While surely painful, exposure reduced PTSD symptoms more, over the long term, than three randomized alternatives, including relaxation/stress management, supportive counseling, and a wait list control group (Foa et al., 1991). Prolonged exposure has now been successfully used for PTSD following combat (Monson et al., 2006), childhood sex abuse (McDonagh et al., 2005), and assault (Foa et al., 2005).

Depending on the client, the therapist, and the circumstances of the trauma, prolonged exposure might involve confronting feared situations in real life, in one's imagination, or by recounting events in therapy. One treatment, *imagery rehearsal therapy*, successfully reduces recurrent nightmares, a troubling problem frequently associated with PTSD. The exposure involves reliving nightmares while awake, but rewriting the nightmare script in any way the client wishes (Krakow et al., 2001).

Other cognitive behavior therapy elements typically are included in treatment, for example, challenging maladaptive beliefs stemming from trauma, such as "No one cares" or "The world is hopeless." Some evidence indicates that adding such cognitive restructuring enhances treatment effects (Bryant et al., 2008). Still, exposure appears to be the key "active ingredient;" other CBT procedures do not add to its effectiveness (Foa et al., 2005). Nevertheless, we view prolonged exposure

as the beginning, not the end, of the healing process. After all, across studies, approximately 50 percent of patients still meet diagnostic criteria after treatment (Resick et al., 2007). Obviously, we need even more effective, short-term treatments. Moreover, emotional processing and meaning making—keys to successful long-term adjustment—require time and perspective, perhaps beyond what can be expected from therapy.

**EMDR** One final treatment for PTSD, *eye movement desensitization and reprocessing (EMDR)*, is a technique that has been greeted with considerable enthusiasm—and skepticism. Psychologist Francine Shapiro (1995) "discovered" that rapid back-and-forth eye movements reduced her own anxiety, so she tried the technique on her clients, who appeared to benefit from it. Why should this work? No one has a good theory why, which is the heart of the controversy (Keane, Marshall, & Taft, 2006). Still, Shapiro and other proponents use EMDR as a relaxation technique, while clients with PTSD simultaneously relive vivid images of trauma. A recent meta-analysis concluded that EMDR may be effective (Bisson et al., 2007); however, prolonged exposure, not eye movements, again appears to be the "active ingredient" (Davidson & Parker, 2001).

**Treatment of ASD** Several studies of ASD treatment have now been completed. Research indicates that structured interventions with ASD *can* lead to the prevention of future PTSD (Bryant et al., 2010). Unlike CIST, these treatments last longer and target the select group of trauma victims who meet ASD diagnostic criteria. The empirically backed ASD treatments are based on the principles of cognitive behavior therapy, although they are briefer, typically involving five 90-minute sessions (Bryant et al., 2006; Bryant, Moulds, & Nixon, 2003).

**Antidepressant Medication** In addition to cognitive behavior therapy, numerous practice guidelines recommend antidepressants (SSRIs) as a treatment for PTSD (Friedman &



Davidson, 2007). The effectiveness of SSRIs is likely at least partially due to the high comorbidity between PTSD and depression (Newport & Nemeroff, 2000). While antidepressants are helpful, only about 30 percent of treated patients recover fully from PTSD symptoms (Friedman, Resick, & Keane, 2007). Traditional antianxiety medications are *not* effective for PTSD (Golier, Legge, & Yehuda, 2007).

## Dissociative Disorders

While dissociation in ASD and PTSD can be dramatic, the symptoms of **dissociative disorders**—characterized by persistent, maladaptive disruptions in the integration of memory, consciousness, or identity—verge on the unbelievable. They include psychologically produced amnesia, confused travel long distances from home (perhaps under a new identity), and the existence of two or more separate personalities in one person. Are these symptoms real? The answer is controversial. Some experts think dissociative disorders are phony, examples of nothing more than the power of suggestion. Others view them as real but rare problems.

Still others believe dissociative disorders are misunderstood, overlooked, and prevalent. This controversy is about much more than dissociative disorders. It concerns the very nature of the human psyche.

Dissociative disorders sometimes are of more interest to novelists than to scientists. You may be familiar with dramatic portrayals of *multiple personality disorder*, an old name for a dissociative disorder, in *Sybil*<sup>1</sup> or *The Three Faces of Eve*, both of which were widely read books that became popular motion pictures. In recent years, psychological scientists have grown more interested in unconscious mental processes (Bargh & Morsella, 2008). Partially as a result, interest in dissociative disorders also has grown—without resolving basic controversies. We introduce these problems, and the debate, in the following case study.

**Why are dissociative disorders so controversial?**

<sup>1</sup> A review of tapes of a few of Sybil's sessions concluded that her "alters" were implanted by her therapist. Sybil reportedly confessed that she created her alters to please her therapist (Rieber, 2006).

### CASE STUDY

#### Dissociative Fugue—Dallae's Journey

Dallae disappeared mysteriously in the middle of final exams during her junior year at a California university. Her roommate last saw her studying for her organic chemistry exam. Dallae had been agitated that night. She kept bothering her roommate, who was cramming for the same exam, and left her room repeatedly. Dallae did not take the exam the next day. When she missed two more finals, her roommate contacted the authorities.

At first, the police suspected foul play, because it seemed unlikely that Dallae would leave college on her own. None of her personal possessions was missing; even her eyeglasses were still sitting on her desk. However, bank records indicated that Dallae withdrew all of her money from her bank account the day before the exam. Investigators also discovered that Dallae had told her parents that she had an A in organic chemistry. In fact, she was failing the course.

When the local police failed to locate Dallae, they contacted the FBI. After a four-week investigation, they found Dallae in a college town on the East Coast. She had been brought to a hospital emergency room after she was found wandering the streets. She appeared confused and disoriented. She told the emergency room (ER) physician that her name was Dawn and that she had been living on the streets and sleep-

ing in dormitory lounges. She said that she had just moved from the West Coast and had come to the town because she hoped to attend the university. She gave a vague account of other details of her life. For example, she could not say how she got to the East Coast.

Dallae allowed herself to be voluntarily admitted to the hospital's psychiatric unit. There she talked little and spent most of her time watching television. She told the staff that she was Vietnamese and had been adopted by American parents, but her stories remained vague and inconsistent. She said that she could not remember, but she was not upset by her memory impairment. A CAT scan and neuropsychological tests detected no physical abnormalities or deficits in short-term memory or motor functioning.

A hospital social worker contacted the local police about the disoriented young patient, and the police were able to identify Dallae from a missing persons report. The social worker contacted Dallae's parents, and her mother immediately flew east to see her. When her mother appeared at the hospital, Dallae did not recognize her. Her mother was greatly distressed by Dallae's indifference and noted other oddities and inconsistencies. For one thing, Dallae

was not Vietnamese, and she was not adopted. She had grown up with her married parents, who were Korean immigrants. Her mother also noted that although Dallae was right-handed, she used her left hand to write a note at the hospital. Dallae's consistent use of her left hand was confirmed by the staff and by the neuropsychologist who had tested her.

Two nights after her mother arrived, Dallae's memories apparently returned. That night, she attempted suicide by slashing her wrists, but she was discovered by a hospital staff member, who quickly stopped the bleeding. Dallae was intermittently depressed and extremely agitated for the next several days, especially after seeing her mother. Although she would not talk at length, her conversation indicated that much of her memory was now intact, and she began using her right hand again.

During the next two weeks, Dallae gradually related details about her life to the psychologist who was treating her. Dallae had been a quiet and obedient girl all through her childhood. Her parents worked very hard and had high ambitions for their three children. Dallae's older brother had an M.B.A. and was a successful young executive. Her older sister currently was editor of



the law review at a prestigious law school. Throughout her life, her parents had told friends and relatives that Dallae would be a doctor one day.

During discussions with her therapist, Dallae began to talk more freely. She noted that she had been terrified to tell her parents about her grades and her lack of interest in medicine, especially her father. She cried at length when relating how he had struck her

across the face during the previous Thanksgiving break, when she tried to tell him that she no longer wanted to study medicine.

After six weeks in the hospital, Dallae returned to California with her parents. Her memory was intact at the time of the discharge, except that she continued to have no recollection of her trip across the country or many of her days living on the streets. She was uncertain

why she thought her name was Dawn. She did mention being vaguely influenced by a television show about a Vietnamese child who had been adopted. At the time of Dallae's discharge, her depression had abated, and she was no longer actively suicidal. She reported being relieved at having told her mother about her feelings about medical school, but she remained very anxious about facing her father.

Dallae suffered from *dissociative fugue*, a rare disorder characterized by sudden, unplanned travel, the inability to remember details about the past, and confusion about identity or the assumption of a new identity. The travel is purposeful. Despite her confusion and memory impairments, Dallae knew where she was going and provided at least a vague explanation about why. Dissociative fugue typically follows a traumatic event. It perhaps is most commonly observed among soldiers following a particularly gruesome battle.

Purposeful travel is the distinguishing symptom, but the core questions about fugue—and about all dissociative disorders—concern the split between conscious and unconscious psychological experience. How could Dallae be aware of the present but be unaware of her past? Why didn't all her memories return after she saw her mother? Could she be faking part or all of her "illness"? Key figures in the history of abnormal psychology have tried to answer such perplexing questions.

## HYSTERIA AND THE UNCONSCIOUS

Historically, dissociative disorders (and somatoform disorders, which we discuss shortly) were seen as forms of hysteria. In Greek, *hystera* means "uterus," and the term **hysteria** reflects the ancient view that frustrated sexual desires, particularly a woman's desire to have a baby, cause the symptoms. Supposedly the uterus detached and moved about the body, causing a problem wherever it eventually lodged. Variations of this sexist view continued into the late nineteenth century, when many physicians erroneously believed that hysteria occurred only among women (Showalter, 1997).

**Charcot, Freud, and Janet** In the latter half of the nineteenth century, French neurologist Jean-Martin Charcot used hypnosis both to induce and treat hysteria. Charcot greatly influenced Sigmund Freud, who observed Charcot's hypnotic treatments early in his training. Charcot also strongly influenced Freud's contemporary and rival, Pierre Janet (1859–1947). Janet was a French philosophy professor who conducted psychological experiments on dissociation and who later trained as a physician in Charcot's clinic.

Both Janet and Freud were eager to explain hysteria, and both developed theories of unconscious mental processes to do so. Their theories differed sharply, however. Janet saw dissociation as an abnormal process. To him, detachment from conscious awareness occurred only as a part of psychopathology. In contrast, Freud considered dissociation to be normal, a routine means through which the ego defended

itself against unacceptable unconscious thoughts. Freud saw dissociation and repression as similar processes, and, in fact, he often used the two terms interchangeably (Erdelyi, 1990). Thus, Freud viewed dissociative and somatoform disorders as merely two of many expressions of unconscious conflict.

The two theorists criticized each other frequently. Janet thought that Freud greatly overstated the importance of the unconscious; Freud thought that Janet greatly underestimated it. Janet's work became increasingly obscure over time, however, as Freudian theory dominated the mental health professions throughout much of the twentieth century. As Freudian influences have declined in recent years, scholars have rediscovered Janet's contributions and his more narrow conception of dissociation and unconscious mental processes.

**Psychological Science and the Unconscious** Although contemporary theory differs greatly from Freud's and Janet's views, psychological scientists generally agree that unconscious mental processes play a role in both normal and abnormal emotion and cognition (Bargh & Morsella, 2008). We remember a phone number, for example, without knowing how we accessed the memory. However, scientists debate the importance of unconscious processing. Some cognitive scientists call the unconscious mind "dumb," not "smart" (Loftus & Klinger, 1992), that is, of limited importance. Others propose elaborate models of unconscious mental processes—for example, that we have two systems of information processing (Epstein, 1994). The *rational system* uses abstract, logical knowledge to solve complex problems over time. The *experiential system* uses intuitive knowledge to respond to problems immediately without the delay of thought. The unconscious experiential system is hypothesized to be emotional, powerful, and often illogical (Epstein, 1994). Rationally, we might know that airplanes are safer than automobiles, for example, but emotionally, we are more likely to fear airplanes.

Contemporary scientists have created new techniques to study unconscious processes. Consider the distinction between explicit and implicit memory. *Explicit memory* is the conscious recollection of a past event. *Implicit memory* is indicated by changes in behavior based on a memory of a prior event but with no conscious remembering of the event (Schacter, 1987). Psychological scientists have developed new measures like the *implicit association test*, which assesses hidden attitudes based on response times to various cues. Implicit, presumably unconscious attitudes about things like prejudice differ considerably from explicit, self-reported beliefs (Ratcliff & Nosek, 2010). While we must be skeptical, and careful, in drawing inferences about





The French neurologist Jean Charcot (1825–1893) demonstrating a case of hysteria at the Salpêtrière, a famous hospital in Paris.

the role of the unconscious in psychological disorders, we also can be inquiring, as exciting new methods allow us to better document the nature and influence of the unconscious mind.

**Hypnosis: Altered State or Social Role?** A topic of historical importance and contemporary debate about the unconscious mind is the nature of **hypnosis**, in which subjects experience loss of control over their actions in response to suggestions from the hypnotist. All agree that demonstrations of the power of hypnotic suggestion are impressive, and that different people are more or less susceptible to hypnosis. However, some experts assert that hypnosis is a dissociative experience, an altered state of consciousness. Others argue that hypnosis is merely a social role, a subject voluntarily complying with suggestions due to social expectations (Barnier, 2002; Kihlstrom, 1998b; Kirsch & Lynn, 1998; Woody & Sadler, 1998). Beware of concluding that hypnosis must be real and powerful because you have seen it at work in a group demonstration. Hypnotists

select highly susceptible (or highly compliant!) participants from a large group for demonstration purposes. How? They usually give a small suggestion to the entire group, like closing your eyes and imagining that a helium balloon is tied to your hand. If your arm flies in the air, you're a candidate for coming on stage.

## SYMPTOMS OF DISSOCIATIVE DISORDERS

The extraordinary symptoms of dissociative disorders apparently involve mental processing outside of conscious awareness. Extreme cases of dissociation include a split in the functioning of the individual's entire sense of self. In *dissociative identity disorder (DID)*, two or more personalities coexist within a single individual. Unless we assume that the symptom is feigned, dissociative identity disorder demonstrates that the mind can function on multiple levels of consciousness.



Hypnotized college students reacting to the suggestion that they are on a beach in Hawaii. Performance hypnotists produce such dramatic effects by selecting only highly suggestible subjects for their demonstrations.



*Depersonalization* is a less dramatic symptom where people feel detached from themselves or their social or physical environment. Examples of depersonalization include feeling like a stranger in social interactions and out-of-body experiences—feelings of detachment from one’s physical being, for example, the sensation of floating outside yourself and watching your actions as if you were another person.

Another dramatic example of dissociation is *amnesia*—the partial or complete loss of recall for particular events or for a particular period of time. Brain injury or disease can cause amnesia, but *psychogenic* (psychologically caused) amnesia results from traumatic stress or other severe emotional distress. Psychogenic amnesia may occur alone or in conjunction with other dissociative experiences. For example, in dissociative identity disorder one personality may report that it does not remember the actions, or even the existence, of another (Spiegel & Cardena, 1991). Recent laboratory evidence calls self-reports of amnesia into question, however, as DID patients showed transfer of memories between identities on experimental tasks (Kong, Allen, & Glisky, 2008).

**Trauma and Dissociative Symptoms** It is widely accepted that fugue and psychogenic amnesia are usually precipitated by trauma (thus providing another link between dissociative and traumatic stress disorders). The trauma usually is clear and sudden, and, in most cases, psychological functioning rapidly returns to normal. Much more controversial is the role of trauma in DID. Some argue that DID is linked with past, not present, trauma, particularly with chronic physical or sexual child abuse (Gleaves, 1996). Many psychological scientists are skeptical about this assertion, however, because information about childhood trauma is based solely on clients’ reports—reports that may be distorted by many factors, including a therapist’s expectations (Kihlstrom, 2005). A related controversy concerns so-called *recovered memories*, dramatic recollections of long-ago traumatic experiences supposedly blocked from the conscious mind by dissociation (see Critical Thinking Matters box).

## DIAGNOSIS OF DISSOCIATIVE DISORDERS

DSM-IV-TR distinguishes four major subtypes of dissociative disorders: dissociative fugue, dissociative amnesia, depersonalization disorder, and dissociative identity disorder. **Dissociative fugue** is characterized by sudden and unexpected travel away from home, an inability to recall details about the past, and confusion about identity or the assumption of a new identity.

**Dissociative amnesia** involves a sudden inability to recall extensive and important personal information that exceeds normal forgetfulness. Patients typically suffer from *selective amnesia*—they do not lose all of their memory but instead cannot remember

selected events and information, often related to a traumatic experience. The memory loss is not attributable to substance abuse, head trauma, or a cognitive disorder, such as Alzheimer’s disease. As with fugue, dissociative amnesia typically has a sudden onset following trauma or extreme stress and an equally sudden recovery of memory. The following case study provides one dramatic account, based on an article written by David Grann for the *New York Times* (January 13, 2002).

## BRIEF CASE STUDY

### Amnesia for September 11

Kevin Shea, a firefighter for the Fire Department of New York, was one of the very few survivors rescued from the wreckage of the World Trade Center. On the evening of September 11, Shea was found buried under a pile of rubble, his thumb severed and his neck broken in three places. Fortunately, Shea was not paralyzed by his spinal injury, but, like his neck, Shea’s memory was badly fractured.

Shea could remember his past and a few events from early on the day of September 11. For example, he could remember volunteering to help, even though he was off duty, and jumping on his firehouse’s Engine 40 to rush downtown. As the engine approached the scene, he remembered seeing people falling from high floors of the towers. After this, however, Shea had no real memory of September 11, not until after he was hospitalized late in the day. For example, he had no memory of either tower collapsing, even though he was there at the horrifying, chaotic scene.

Shea lost every member of his engine in the WTC rescue attempt. He became desperate to learn that he survived despite trying to save others and not because he instead focused

on saving himself. Through diligent efforts in the months after September 11, he was able to piece together some evidence about what happened to him. Some details brought back fragments of his memory. For example, when another firefighter reminded him that they had embraced in the command center of the South Tower shortly before it collapsed, Shea remembered the event. However, no memories returned when Shea met another firefighter who himself was injured while trying to rescue Shea.

It is unclear whether Shea suffered from dissociative amnesia due to the emotional trauma of the day, or whether his memory loss was caused by a blow to his head. Although by all accounts Kevin Shea was a hero, he had trouble convincing himself of the truth of this assessment, because he could not remember his own actions on September 11.



Kevin Shea, a firefighter for the FDNY, received numerous injuries, including a broken vertebrae, working as a rescue worker during the World Trade Center attacks. Shea also suffered from amnesia, perhaps as a result of a blow to the head or perhaps from emotional causes.



# Critical Thinking Matters

## RECOVERED MEMORIES?

In 1990, George Franklin was convicted of the brutal murder of an 8-year-old girl. The crime occurred over 20 years earlier. The major evidence was the “recovered memory” of Franklin’s daughter Eileen. Eileen claimed she had witnessed her father commit a rape and murder, but dissociation pushed the memory into her unconscious mind. Twenty years later, according to the daughter, the memory returned.

Eileen provided both verifiable and inconsistent accounts of the horrifying event. She recalled a smashed ring on her friend’s finger as she raised her hand to protect herself from a blow with a rock. Records corroborated the incident. On the other hand, Eileen changed her story about the time of day and whether her sister also was with them. Based solely on his daughter’s testimony, George Franklin was convicted. However, his conviction was overturned in 1995, and he was released from prison. A U.S. District Court judge ruled that the lower court erred in excluding evidence that Eileen could have learned details of the 1969 murder from newspaper articles. The prosecutor decided not to retry the case when Eileen’s sister revealed they both were hypnotized before the first trial—a fact Eileen lied about. Eileen also had accused her father of a second murder, but DNA evidence cleared him.

Was Eileen’s memory fact or fiction? Our concern about so-called recovered memories extends well beyond the Franklin case. In the 1990s, as many as 25 percent of therapists said that recovering memories, particularly of sexual abuse, was an important part of their therapy with female clients (Poole et al., 1995). Popular books also have encouraged people to search for (create?) memories. For example, in *The Courage to Heal*, the authors stated:

To say “I was abused,” you don’t need the kind of recall that would stand up in a court of law. . . . Often the knowledge that you were abused starts with a tiny feeling, an intuition. It’s important to trust that inner voice and work from there. Assume your feelings are valid. So far, no one we’ve talked to thought she might have been abused and then later discovered that she hadn’t been. (Bass & Davis, 1988, p. 22)

Could such suggestions lead some people to create memories about events that never happened? Faced with accusations of past abuse, many parents say that misguided therapists have created false memories. In fact, the term, *false memory syndrome*, was coined to account for the implanting of false beliefs (Kihlstrom, 1998a).

Research shows that memories, even of highly dramatic events, can be inaccurate (Loftus, 2003, 2004). In one study, researchers interviewed

people the day after the space shuttle *Challenger* exploded and detailed how participants learned of the tragedy. Three years later, they asked the same people to remember what they were doing. About one-third reported vivid and grossly inaccurate memories (Neisser & Harsch, 1992). In another study, researchers created false memories of “sliming” a first- or second-grade teacher (putting slime in the teacher’s desk)—among 65 percent of the participants! The key to the deception was using actual school photos to help participants to “remember” (Lindsay et al., 2004). Such research does not prove that recovered memories of trauma are false (Gleaves et al., 2004). In fact, recent experimental research shows that laboratory-induced interference and subsequent cuing can produce forgetting and remembering, respectively (Smith & Moynan, 2008). Still, the malleability of memory suggests many reasons for skepticism.

There certainly are good reasons to question the validity of “recovered memories” from early in life, since few people can report *any* accurate memories before age 3 or 4 (Loftus, 2003, 2004). The fact that people are especially likely to remember emotionally intense events is another reason to think critically about claims of recovered

**Are recovered memories real?** memories. Some documented victims of sexual abuse do not recall the experience many years later (Williams, 1994), but most do remember what happened (Goodman et al., 2003). And, of course, documented cases of forgetting do not prove that undocumented cases of remembering are accurate.

Are some claims of recovered memories more accurate than others? A recent study found that memories that returned outside of therapy were more likely to be corroborated than memories “recovered” in therapy (Geraerts et al., 2007). Sadly, some patients with recovered memories apparently are victims of their therapists, not of abuse.



Where were you when the World Trade Center towers collapsed? Researchers find that even powerful “flashbulb” memories of dramatic events often grow inaccurate over time.



**Depersonalization disorder**, a less dramatic problem, is characterized by feelings of being detached from oneself, including such sensations as feeling as though you are living in a dream or floating above your body and watching yourself. Occasional depersonalization experiences, like feelings of *déjà vu*, are normal and are reported by about half the population. In depersonalization disorder, the symptoms are persistent or recurrent and cause marked personal distress. The onset of the disorder commonly follows a new or disturbing event, such as drug use. All depersonalization experiences are “as-if” feelings, not rigid, delusional beliefs. You *feel* as if you are in a dream; you don’t really believe it. In fact, some experts question whether depersonalization should be considered a dissociative disorder, because it involves only limited splitting between conscious and unconscious mental processes, and no memory loss occurs (Spiegel & Cardena, 1991).

To many people, the most fascinating dissociative disorder is **dissociative identity disorder (DID)**, a condition formerly known as **multiple personality disorder**. This extremely unusual disorder is characterized by the existence of two or more distinct personalities in a single individual. Two or more of these personalities repeatedly take control of the person’s behavior, with at least some loss of recall between the personalities. The original personality especially is likely to have amnesia for subsequent personalities, which may or may not be aware of other “alters” (Aldridge-Morris, 1989). Recent case studies claim to have identified more and more alters. The case of “Eve,” published in 1957, identified three; “Sybil” was reported to have 16 in a 1973 best-seller (the veracity of which has been questioned; Rieber, 2006); and some more recent case studies have “discovered” 100, even 1,000, alters. Not surprisingly, such claims have generated more debate about a controversial diagnosis.

## BRIEF CASE STUDY

### The Three Faces of Eve

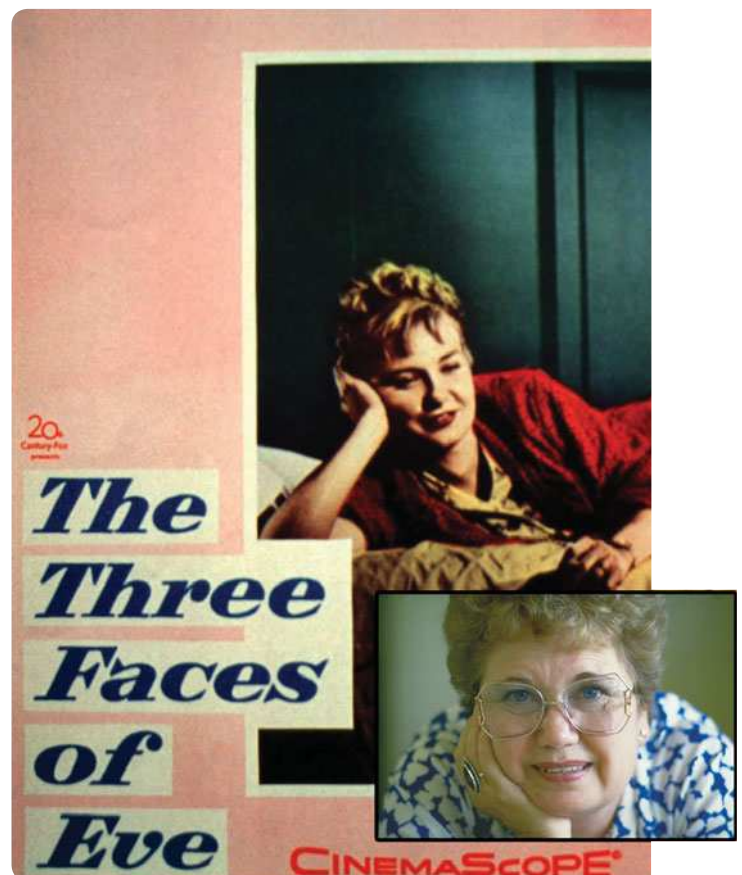
A famous case history of multiple personality disorder is Thigpen and Cleckley’s (1957) *The Three Faces of Eve*, which was made into a motion picture. Thigpen and Cleckley, two psychiatrists who treated the young woman, described Eve White as a young mother with a troubled marriage who sought psychotherapy for severe headaches, feelings of inertia, and “blackouts.” Eve White was seen for several therapy sessions and was hypnotized during this time as a treatment for her amnesia. Then, during what proved to be a remarkable session, Eve White became agitated and complained of hearing an imaginary voice. As Thigpen and Cleckley wrote, “After a tense moment of silence, her hands dropped. There was a quick, reckless smile and, in a bright voice that sparkled, she said, ‘Hi there, Doc!’” (p. 137). Eve Black had emerged—a carefree and flirtatious personality who insisted upon being called “Miss” and who scorned Eve White, the wife and mother.

Therapy with Eve White, Eve Black, and a third, more calm and mature personality, Jane, lasted over two and a half years. Thigpen used hypnosis to bring out the different personalities in an attempt to understand and reconcile them with one another. He eventually adopted the goal of fading out the two Eves and allowing Jane to take control. Therapy appeared to be successful. According to the psychiatrists’ account, treatment ended with one

integrated personality in control. This personality was much like Jane, but she decided to call herself “Mrs. Evelyn White.”

But the end of therapy with Thigpen and Cleckley was not the end of therapy for “Eve.” Eve, whose real name is Chris Sizemore, claims to have had a total of 22 different personalities, some of which developed before her treatment with Thigpen and Cleckley and some of which developed afterward. The personalities always occurred in groups of three, and they always included a wife/mother image, a party girl, and a more normal, intellectual personality (Sizemore & Pittillo, 1977). Sizemore has written several books about her life, and, as a well-functioning, unified personality, she has become a spokesperson for mental health concerns. In her book *A Mind of Her Own*, she offers the following observations on her personalities:

Among these twenty-two alters, ten were poets, seven were artists, and one had taught tailoring. Today, I paint and write, but I cannot sew. Yet these alters were not moods or the result of role-playing. They were entities that were totally separate from the personality I was born to be, and am today. They were so different that their tones of voice changed. What’s more, their facial expressions, appetites, tastes in clothes, handwritings, skills, and IQs were all different, too (Sizemore, 1989, p. 9).



Chris Sizemore is “Eve” from the book and the movie *The Three Faces of Eve*, based on her psychiatrists’ account of her life and treatment for multiple personality disorder. Sizemore is now cured and is an advocate for the mentally ill.



The case of Chris Sizemore dramatically illustrates the characteristics of DID. Sizemore's words also foreshadow controversies about the condition. Some professionals argue that DID is nothing more than role playing; others assert that multiple personalities are very real and very common. While controversy centers on DID, skepticism abounds about all dissociative disorders. Little evidence supports the validity of dissociative amnesia (McNally, 2003), as in the case of Kevin Shea, dissociative fugue may be attributable to neurological conditions (Kihlstrom, 2005), and very little research has been completed on the seemingly less controversial problem of depersonalization disorder (Geisbrecht et al., 2008).

## FREQUENCY OF DISSOCIATIVE DISORDERS

Given such controversies, you should not be surprised to learn that the prevalence of dissociative disorders is difficult to establish. Most experts consider the problems to be extremely rare. Only about 200 case histories of DID were reported in the entire world literature prior to 1980 (Greaves, 1980). Surely as a result of *Sybil* influences, the estimated number skyrocketed to about 40,000(!) in the next two decades (Pintar & Lynn, 2008). In fact, a small but vocal group of professionals has argued that many patients suffering from dissociative disorders are misdiagnosed as having schizophrenia, borderline personality disorder, depression, panic disorder, or substance abuse (Gleaves, 1996; Ross, 2009). One study claimed that over 10 percent of the general adult population suffers from

a dissociative disorder—including 3 percent of adults with DID (Ross, 1991). The same author claimed that 40 percent of hospitalized psychiatric patients met DSM-IV-TR criteria for the diagnosis of a dissociative disorder (Ross, Duffy, & Ellason, 2002).

Clearly, experts either missed tens of thousands of cases of dissociative disorders for decades, or some advocates have been overzealous in defining dissociative disorders. Research suggests many reasons to disbelieve claims that dissociative disorders are prevalent and overlooked (Kihlstrom, 2005; Piper & Merskey, 2004a, 2004b):

- Most cases of dissociative disorders are diagnosed by a handful of ardent advocates.
- The frequency of the diagnosis of dissociative disorders in general, and DID in particular, increased rapidly after release of the very popular book and movie *Sybil*.
- The number of personalities claimed to exist in cases of DID grew rapidly, from a handful to 100 or more.
- Interest in dissociative disorders declined beginning in the middle 1990s (after *Sybil*), as specialized treatment units closed and professionals withdrew from organizations and journals devoted to the topic.
- Dissociative disorders are rarely diagnosed outside of the United States and Canada; for example, only one unequivocal case of DID has been reported in Great Britain in the last 25 years (Casey, 2001).
- The symptoms of dissociation in the most commonly used instruments like the Dissociative Experiences Questionnaire are far less dramatic than those found in dissociative disorders (Geisbrecht et al., 2008; see Table 7.3).

**Why should you doubt claims that dissociative identity disorder is common?**



**Disorder or Role Enactment?** Some experts even doubt the very existence of DID, arguing that DID is created by the power of suggestion (Piper & Merskey, 2004a, 2004b). The Canadian psychologist Nicholas Spanos (1942–1994) was a particularly outspoken critic, who argued that multiple personalities are caused by role playing. Spanos (1994) asserted that patients are influenced by their own and their therapists' goals and expectations about DID, and, like an actor who loses all perspective, they come to believe that the role is real.

To test his theory, Spanos and his colleagues conducted analogue experiments inspired by the case of Kenneth Bianchi, the infamous "Hillside Strangler." In 1979, Bianchi was charged with murdering two college women and was implicated in several other rape-murder cases where victims were left naked on the hillsides of Los Angeles. Considerable evidence supported Bianchi's guilt, but he reported frequent episodes of "blacking out," including an inability to remember events from the night that the murders were committed. At the request of his attorney, Bianchi was seen by a mental health expert, who hypnotized Bianchi and suggested to him, "I've talked a bit to Ken, but I think that perhaps there might be another part of Ken that I haven't talked to, another part that maybe feels somewhat differently from the part I've talked to. And I would like to communicate with that other part" (Watkins, 1984). Bianchi responded that



**TABLE 7.3 Sample Items from the Dissociative Experiences Questionnaire**

- Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear part or all of what was said.
- Some people have the experience of being in a familiar place but finding it strange and unfamiliar.
- Some people have the experience of finding themselves dressed in clothes that they don't remember putting on.
- Some people are told that they sometimes do not recognize friends or family members.
- Some people have the experience of feeling that their body does not seem to belong to them.
- Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people.

Source: E.M. Bernstein and F.W. Putnam, 1986, "Development, Reliability, and Validity of a Dissociation Scale," *Journal of Nervous and Mental Disorders*, 174, pp. 727–735. Copyright © 1986. Reprinted with permission.

he was not Ken, but Steve. Steve knew of Ken, and he hated him. Steve also confessed to strangling "all of these girls."

Numerous experts who interviewed Bianchi disagreed about whether his apparent DID was real or feigned. One was the psychologist and psychiatrist Martin Orne (1927–2000), an internationally recognized authority on hypnosis. Orne tested Bianchi by suggesting new symptoms to him. If Bianchi was faking, he might further the deception by developing the new symptoms. Orne suggested, for example, that if Bianchi really had DID, he should have a third personality. Sure enough, a third personality, Billy, "emerged" when Bianchi was hypnotized (Orne, Dingers, & Orne, 1984). While hypnotized, Bianchi also followed Orne's suggestion to hallucinate that his attorney was in the room. Bianchi actually shook hands with the supposed hallucination—a very unusual behavior for someone under hypnosis. Orne concluded that Bianchi was indeed faking and actually suffered from antisocial personality disorder (see Chapter 9). Bianchi's insanity defense failed, and he was found guilty of murder.

In testing his role theory, Spanos simulated procedures from the Bianchi case. In one study, undergraduate students played the role of the accused murderer and were randomly assigned to one of three conditions. In the "Bianchi" condition, the subjects were hypnotized, and the interviewer asked to communicate with their other part, just as Bianchi's interviewer had asked. Subjects assigned to the second "hidden part" condition also were hypnotized, but this time it was suggested that hypnosis could get behind the "wall" that hid inner thoughts and feelings from awareness. In the final condition, there was no hypnosis, and subjects simply were told that personality included "walls" between hidden thoughts and feelings.

When subsequently asked, "Who are you?" in the mock murder case, 81 percent of the subjects in the Bianchi condition gave a name different from the one assigned to them in the role play, as did 70 percent of the subjects in the hidden part condition. In contrast, only 31 percent of the subjects in the no-hypnosis condition gave a new name (Spanos, Weekes, & Bertrand, 1985). In a subsequent study, hypnotized subjects also provided more "information"

**Can multiple personalities be created by suggestion?**

on exactly when in the past their alternate personalities had first emerged (Spanos et al., 1986).

These findings certainly raise the caution that the "symptoms" of DID can be induced by role playing and hypnosis (Lilienfeld et al., 1999). Moreover, accumulating evidence indicates that fantasy proneness and suggestibility play a key role in the development of dissociative disorders (Geisbrecht et al., 2008). Still, analogue studies cannot prove that role playing causes real cases of multiple personality (Gleaves, 1996).

Given the limited research, our inquiring skepticism causes us to reach some cautious conclusions. True dissociative disorders appear to be rare. Although some cases no doubt are misdiagnosed, a much greater problem is the creation of the diagnosis in the minds of clinicians and clients (Piper & Mersky, 2004a, 2004b). At the same time, we remain curious about the dramatic cases and theoretical issues posed by accounts of dissociative disorders.

## CAUSES OF DISSOCIATIVE DISORDERS

Little systematic research has been conducted on the cause of dissociative disorders. Thus, theory and outright speculation dominate this field.

**Psychological Factors** There is little controversy that dissociative amnesia and fugue usually are precipitated by trauma. What about DID? Many case studies suggest that DID develops in response to trauma, particularly the trauma of child abuse. In fact, some researchers have compiled large numbers of case studies from surveys of practitioners that support this view (Ross, 2009; see Table 7.4).

When interpreting these findings, however, you should note that studies of the long-term consequences of child physical or sexual abuse find little evidence of dissociation or, indeed, of any consistent forms of psychopathology (Clancy, 2010; Emery & Laumann-Billings, 1998; Rind, Tromovitch, & Bauserman, 1998). And case studies are based on patients' memories and clinicians' evaluations. They are not objective assessments of the past. Researchers have many concerns about the validity of such *retrospective reports*—evaluations of the past from the vantage point of the present (see the Research Methods box). Memories may be selectively recalled,



**TABLE 7.4 Correlates of Dissociative Identity Disorder in Two Surveys of Clinicians**

	<b>Ross<sup>1</sup></b>	<b>Putnam<sup>2</sup></b>
<b>Item</b>	<b>N = 236</b>	<b>N = 100</b>
Average age	30.8	35.8
Percentage of females	87.7%	92.0%
Average years of treatment before diagnosis	6.7	6.8
Average number of personalities	15.7	13.3
Opposite-sex personality present	62.6%	53.0%
Amnesia between personalities	94.9%	98.0%
Past suicide attempt	72.0%	71.0%
History of child physical abuse	74.9%	75.0%
History of child sexual abuse	79.2%	83.9%

<sup>1</sup>Based on data from C. A. Ross, G. R. Norton, and K. Wozney, 1989, "Multiple Personality Disorder: An Analysis of 236 Cases," *Canadian Journal of Psychiatry*, 34, pp. 413–418. Copyright © 1989. Reprinted by permission of the Canadian Psychiatric Association.

<sup>2</sup>Based on data from F. W. Putnam, J. J. Curoff, et al., 1986, "The Clinical Phenomenology of Multiple Personality Disorder: Review of 100 Recent Cases," *Journal of Clinical Psychiatry*, 47, pp. 285–293. Copyright © 1986 Physicians Postgraduate Press. Reprinted by permission.

## RESEARCH METHODS

### RETROSPECTIVE REPORTS: REMEMBERING THE PAST

Psychologists have long been skeptical about the accuracy of people's reports about the past. The concern is about the reliability and validity of *retrospective reports*—current recollections of past experiences, for example, events that occurred during childhood. Problems with retrospective reports are one of several reasons why investigators prefer prospective, longitudinal studies over retrospective research designs (see the Research Methods box in Chapter 8).

Concerns about retrospective reports focus on three particular issues. First, normal memory often is inaccurate, particularly memory for events that occurred long ago and early in life. Second, memories of people with emotional problems may be particularly unreliable. Third, abnormal behavior may systematically bias memory; for example, memory processes may be "mood congruent." Depressed people may tend to remember sad experiences, anxious people may better recall fearful events, and so on.

Brewin, Andrews, and Gotlib (1993) revisited many of these concerns, but concluded that retrospective memories may be less flawed than some have suggested. The reviewers agreed that retrospective reports are often inaccurate. For example, only moderate correlations are found between children's and parents' reports about their past relationships, and, on

average, children report more negative memories. At the same time, agreement between parents and children increases to an acceptable level for reports of specific, factual aspects of the past. Thus, memory for specific, important events in the family may be fairly reliable and valid, but people may "rewrite" their histories with regard to more global and subjective experiences.

Brewin and colleagues (1993) also questioned the blanket assumption that psychopathology impairs memory. They

found many flaws in research that supposedly demonstrated memory impairments for various psychological problems and concluded that, except for serious mental illness, there is no evidence for memory impairments associated with anxiety or depression. In particular, depressed people do not

#### *Why do researchers question retrospective reports?*

erroneously recall more than their share of negative events about the past.

Brewin and colleagues (1993) urge that retrospective reports should not be dismissed out of hand. Psychologists have many reasons to prefer prospective, longitudinal research over retrospective methods, but longitudinal research is expensive. Retrospective reports of specific events may be sufficiently reliable and valid to justify using them as an initial, less-expensive research method.



distorted, or even created to conform to a clinician's expectations (Geisbrecht et al., 2008; Kihlstrom, 2005).

If trauma is involved, how might it lead to the development of multiple personalities? One theory invokes *state-dependent learning*, a process where learning that takes place in one state of affect or consciousness is best recalled in the same state of affect or consciousness (Bower, 1990). For example, when you are sad rather than happy, you more easily remember what happened when you were sad in the past. By extension, experiences that occur during a dissociated state may be most easily recalled within the same state of consciousness. Perhaps through the repeated experience of trauma, dissociation, and state-dependent learning, more complete and autonomous memories develop—ultimately leading to independent personalities (Braun, 1989).

Even if trauma contributes to dissociative disorders—and we are skeptical about trauma and DID, it clearly is not a sufficient cause. As we saw with ASD and PTSD, the vast majority of people who experience trauma do *not* develop a dissociative disorder. Thus, other factors must contribute to their development.

**Biological Factors** Little evidence or theory addresses the contribution of biological factors to dissociative disorders (Kihlstrom, 2005). A preliminary twin study found no genetic contribution to dissociative symptoms, while the shared environment did contribute (Waller & Ross, 1997).

**Social Factors** Perhaps the most important theory about social contributions to dissociative disorders is that they are caused by **iatrogenesis**, the manufacture of a disorder by its treatment. Mersky (1992) reviewed classic case studies of DID and concluded that many “cases” were created by the expectations of therapists. Mersky does not doubt the pain experienced by the patients in these cases. He argues, however, that the patients developed multiple personalities in response to their therapists’ leading questions. Like Spanos (1994), Mersky argues that DID is a social role. Because of their susceptibility to suggestion, perhaps highly hypnotizable people are especially likely to suffer from iatrogenic effects (Kihlstrom, Glisky, & Angulo, 1994).

We believe that iatrogenesis is the explanation for the explosion of DID cases diagnosed in the United States, especially in the wake of *Sybil*’s popularity. However, evidence that DID can be diagnosed in the general population in Turkey (Akyuz et al., 1999), where there is no public awareness of the disorder, makes us suspect that DID is a real but rare problem.

## TREATMENT OF DISSOCIATIVE DISORDERS

Dating from the time of Janet and Freud, most treatments of dissociative disorders have focused on uncovering and recounting traumatic memories. Presumably, the need for dissociation disappears if the trauma can be expressed and accepted (Horevitz & Loewenstein, 1994). Many clinicians use hypnosis to help patients explore and relive traumatic events. However, no research supports the effectiveness of either *abreaction*, the emotional reliving of a past traumatic experiences, or hypnosis as a treatment for dissociative disorders (Horevitz & Loewenstein, 1994). Skeptics worry, in fact, that hypnosis may create dissociative symptoms or false memories of abuse (Casey, 2001).



Shirley Mason Ardell, the real “Sybil.” Her case spurred an explosion in the diagnosis of dissociative identity disorder, and in the number of diagnosed “alters,” but actual therapy tapes suggest that her therapist may have implanted Sybil’s 16 personalities.

The ultimate goal in treating DID is not to have one personality triumph over the others. Rather, the objective is to integrate the different personalities into a whole (Coons & Bowman, 2001). Integration is not unlike the task we all face in reconciling our different roles in life into a coherent sense of self. Dallae, for example, needed to reconcile her role as a daughter, including her parents’ expectations, together with her role as an independent young woman with her own desires, abilities, and acculturation experiences.

At this time, no systematic research has been conducted on the effectiveness of any treatment for dissociative disorders, let alone on the comparison of alternative treatments (Kihlstrom, 2005; Maldonado, Butler, & Spiegel, 2001). Antianxiety, antidepressant, and antipsychotic medications sometimes are used, but at best these medications reduce distress. They do not cure the disorder. Advances in treatment await a better understanding of the disorders and, more generally, of conscious and unconscious mental processes. In the meantime, you should view treatments championed for dissociative disorders—and the accuracy of the diagnosis itself—with a healthy dose of skepticism.

## Somatoform Disorders

In addition to dissociative disorders, “hysteria” included what we now know as **somatoform disorders**—unusual physical symptoms that occur in the absence of a known physical illness. There is no demonstrable physical cause for the symptoms of somatoform disorders. They are somatic (physical) in form



only—thus their name.<sup>2</sup> We consider somatoform disorders in the same chapter with dissociative disorders because of their historical connection<sup>3</sup> and because somatoform disorders appear to involve dissociation. In some somatoform disorders, the dissociation is relatively minor; in others, it is dramatic.

## SYMPTOMS OF SOMATOFORM DISORDERS

All somatoform disorders involve complaints about physical symptoms when there is nothing known to be physically wrong with the patient. Yet the symptoms are not feigned. The physical problem is very real in the mind, though not the body, of the sufferer.

The physical symptoms can take a number of forms. In dramatic cases, the symptom involves substantial impairment, particularly in the sensory or muscular system. The patient will be unable to see, for example, or will report paralysis in one arm. In other cases, patients experience multiple physical symptoms. These patients usually have numerous, constantly evolving complaints about such problems as chronic pain, upset stomach, and dizziness. Finally, some somatoform disorders are defined by a preoccupation with a particular part of the body or with fears about a particular illness. The patient may constantly worry that he or she has contracted some deadly disease, for example, and the anxiety persists despite negative medical tests and clear reassurance by a physician.

**Unnecessary Medical Treatment** People with somatoform disorders typically do not bring their problems to the attention of a mental health professional. Instead, they repeatedly consult their physicians about their “physical” problems (Bass, Peveler, & House, 2001; Looper & Kirmayer, 2002). This often leads to unnecessary medical treatment. In one study, patients with *somatization disorder* had seen a healthcare provider more than six times, on average, during the previous six months. One-fourth of patients with somatization disorder had been hospitalized in the past year, compared with 12 percent of the general population (Swartz et al., 1987). People with *body dysmorphic disorder* also receive excessive medical care. Three-quarters of patients with the disorder seek medical treatment, primarily dermatologic or surgical, but the medical procedures produce little benefit (Phillips et al., 2001).

Patients with somatoform disorders often complain about realistic physical symptoms that are difficult to evaluate objectively. Thus, physicians frequently do not recognize the psychological nature of the patients’ problems, and they sometimes perform unnecessary medical procedures. Patients with somatoform disorders have surgery twice as often as people in the general population (Zoccolillo & Cloninger, 1986). In fact, some common surgical procedures are performed with

startling frequency on patients with somatoform disorders. One research group concluded that, after discounting cancer surgeries, 27 percent of women undergoing a hysterectomy suffered from somatization disorder (Martin, Roberts, & Clayton, 1980).

**Are somatoform disorders real physical illnesses?**

Such data are distressing not only because of the risk to the patient but also because of the costs of unnecessary medical treatment. Estimates indicate that anywhere from 20 percent to 84 percent of patients who consult physicians do so for problems for which no organic cause can be found (Miller & Swartz, 1990). Such visits may account for as much as half of all ambulatory healthcare costs (Kellner, 1985). A variety of emotional problems can motivate people to consult their physicians, including the experience of trauma (Green et al., 1997), but much excessive healthcare utilization is specific to somatoform disorders. For example, patients with somatization disorder are three times more likely to consult physicians than are depressed patients (Morrison & Herbstein, 1988; Zoccolillo & Cloninger, 1986). In fact, healthcare expenditures for patients with somatization disorder are nine times the average annual per capita cost of medical treatment (Smith, Monson, & Ray, 1986).

## DIAGNOSIS OF SOMATOFORM DISORDERS

DSM-IV-TR lists five major subcategories of somatoform disorders: (1) conversion disorder, (2) somatization disorder, (3) hypochondriasis, (4) pain disorder, and (5) body dysmorphic disorder. We follow this classification system here, but you should know that proposals for revising the DSM recommend dramatic changes. Somatoform disorders would be relabeled as “somatic symptom disorders.” Somatization disorder, hypochondriasis, and pain disorder would be classified together. Conversion disorder would be relabeled “functional neurological syndrome” (APA, 2010). The recommended changes are designed to focus attention on the descriptive features of the disorders (the somatic symptoms) instead of Freudian theory, as well as to address various concerns that we raise in the following pages.

**Conversion Disorder** The dramatic symptoms of **conversion disorder**, the classic somatoform disorder, often mimic those found in neurological diseases. “Hysterical” blindness and “hysterical” paralysis are examples of conversion symptoms. Although conversion disorders often resemble neurological impairments, they sometimes can be distinguished from these disorders because they make no anatomic sense. The patient may complain about anesthesia (or pain) in a way that does not correspond with the innervation of the body. In some facial anesthetics, for example, numbness ends at the middle of the face; but the nerves involved in sensation do not divide the face into equal halves (see Figure 7.4).

The term *conversion disorder* accurately conveys the central assumption of the diagnosis—the idea that psychological conflicts are converted into physical symptoms. This idea captivated Charcot, Freud, and Janet and led them to develop theories about dissociation and unconscious mental processes. The following case from Janet’s writings illustrates his view of “hysteria.”

<sup>2</sup> The absence of demonstrable physical impairment distinguishes somatoform disorders from psychosomatic illnesses, stress-related physical disorders that do involve real, organic pathology (Chapter 8). In everyday language, we sometimes say, “His problems are psychosomatic” to indicate that an illness is “all in his head.” However, somatoform disorders, not psychosomatic disorders, are the purely psychological problems.

<sup>3</sup> Proposed revisions of the DSM would relabel somatoform disorders as “somatic symptom disorders” and de-emphasize the connection between these problems and Freudian theory (American Psychiatric Association [APA], 2010).



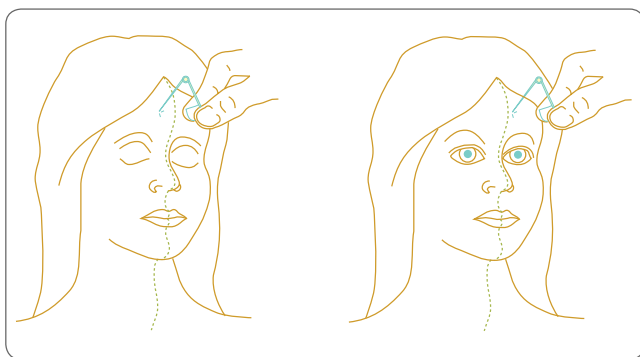
## BRIEF CASE STUDY

### Janet's Patient

A girl of 19 years of age suffered, at the time of her monthly period, convulsive and delirious attacks which lasted several days. Menstruation began normally, but a few hours after the commencement of the flow the patient complained of feeling very cold and had a characteristic shivering; menstruation was immediately arrested and delirium ensued. In the interval of these attacks the patient had paroxysms of terror with the hallucination of blood spreading out before her and also showed various permanent stigmata, among others, anesthesia of the left side of the face with amaurosis of the left eye.

During a careful study of this patient's history, and particularly of the memories she had conserved of various experiences of her life, certain pertinent facts were ascertained. At the age of 13 she had attempted to arrest menstruation by plunging into a tub of cold water with resulting shivering and delirium; menstruation was immediately arrested and did not recur for several years; when it did reappear the disturbance I have just cited took place. Later on she had been terrified by seeing an old woman fall on the stairs and deluge the steps with her blood. At another time, when she was about 9 years old, she had been obliged to sleep with a child whose face, on the left side, was covered with scabs, and during the whole night she had experienced a feeling of intense disgust and horror (Janet, 1914/1915, pp. 3–4).

This case describes symptoms that are consistent with conversion disorder. The numbness on the left side of the face and loss of vision (amaurosis) are clear examples of conversion symptoms. At the same time, we wonder about other aspects of this classic case. The frightening hallucinations of



**FIGURE 7.4**

Conversion disorder symptoms may make no anatomical sense. As illustrated in this figure, pain insensitivity may be limited to one side of the face, but the nerves involved in pain sensation do not divide the face neatly in half.

Source: Adapted from D. M. Kaufman, 1985, *Clinical Neurology for Psychiatrists*, 2nd ed., p. 28. Copyright © 2007 Elsevier. Reprinted by permission.

blood might suggest another diagnosis, perhaps psychotic depression or schizophrenia. Differential diagnosis was poor during the time of Charcot, Janet, and Freud, and we think that this might explain why conversion disorders were thought to be prevalent then (Shorter, 1992) but are rare today. A hundred years ago, many problems that might be diagnosed accurately today as either physical or psychological maladies probably were misdiagnosed as conversion disorders. As we discuss shortly, concerns about misdiagnosing undetected but real physical problems as being “psychological” apply to the diagnosis of conversion disorders today, a worry reflected in the proposal to relabel these problems as “functional neurological symptoms” (Stone et al., 2010).

**Somatization Disorder** A much more common somatoform disorder is **somatization disorder**, characterized by a history of multiple somatic complaints in the absence of organic impairments. The extent of the health concerns is apparent from a cursory examination of the DSM-IV-TR diagnostic criteria. The patient must complain of at least *eight* physical symptoms. The complaints must involve multiple somatic systems, including symptoms of pain, gastrointestinal symptoms, sexual symptoms, and pseudoneurological symptoms (see Table 7.5).

Patients with somatization disorders sometimes present their symptoms in a *histrionic* manner—a vague but dramatic, self-centered, and seductive style. Patients also may exhibit *la belle indifférence* (“the beautiful indifference”), a flippant lack of concern about their symptoms. For example, a patient may list a long series of somatic complaints in an offhanded and cheerful manner. Although some experts view a histrionic style and *la belle indifférence* as defining characteristics of somatization disorders, research indicates that they are found in only a minority of cases (Brown, 2004; Lipowski, 1988).

In contrast to stereotypes, somatization disorder is *not* more common among the aged, who consult healthcare professionals frequently because of chronic and real physical illnesses (National Institute of Mental Health, 1990). In fact, somatization disorder often begins in adolescence, and according to DSM-IV-TR criteria, must have an onset prior to the age of 30. The problem is sometimes referred to as *Briquet's syndrome*, in recognition of the French physician Pierre Briquet, who was among the first to call attention to the multiple somatic complaints found in some “hysterics” (National Institute of Mental Health, 1990).

**Hypochondriasis** **Hypochondriasis** is characterized by a fear or belief that one is suffering from a physical illness. Aspects of this mental disorder surely are familiar to you. The pejorative term *hypochondriac* is a part of everyday language. We all worry about our health, and even unrealistic worries sometimes are normal. For example, medical students often fear that they have contracted each new disease they encounter. We should warn you: Many students in abnormal psychology suffer from a similar problem.

Hypochondriasis is much more serious than these normal and fleeting worries. Hypochondriasis is severe and preoccupying and often leads to substantial impairment in life functioning. The worries must last for at least six months according to DSM-IV-TR criteria. In addition, a thorough medical evaluation does not alleviate fears. The person still worries that the



**TABLE 7.5 DSM-IV-TR Diagnostic Criteria for Somatization Disorder**

- A.** A history of many physical complaints beginning before age 30 that occur over a period of several years and result in treatment being sought or significant impairment in social, occupational, or other important areas of functioning.
- B.** Each of the following criteria must have been met, with individual symptoms occurring at any time during the course of the disturbance.
1. Four pain symptoms: A history of pain related to at least four different sites or functions (for example, head, abdomen, back, joints, extremities, chest, rectum, during menstruation, or sexual intercourse, or during urination)
  2. Two gastrointestinal symptoms: A history of at least two gastrointestinal symptoms other than pain (for example, nausea, diarrhea, bloating, vomiting other than during pregnancy, or intolerance of several different foods)
  3. One sexual symptom: A history of at least one sexual or reproductive symptom other than pain (for example, sexual indifference, erectile or ejaculatory dysfunction, irregular menses, excessive menstrual bleeding, vomiting throughout pregnancy)
  4. One pseudoneurological symptom: A history of at least one symptom or deficit suggesting a neurological disorder not limited to pain (conversion symptoms such as impaired coordination or balance, paralysis or localized weakness, difficulty swallowing or lump in throat, aphonia, urinary retention, hallucinations, loss of touch or pain sensation, double vision, blindness, deafness, seizures; dissociative symptoms such as amnesia; or loss of consciousness other than fainting)

Source: Reprinted with permission from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*, (Copyright © 2000). American Psychiatric Association.

illness may be emerging or that a test was overlooked. Still, the person with hypochondriasis is not delusional. For example, someone may worry excessively about contracting AIDS and therefore repeatedly go for blood tests. When faced with negative results, the person does not delusionally believe that he or she actually has contracted the illness. Instead, he persistently worries that the test was wrong or was taken too soon to detect the disease.

**Pain Disorder** As its name indicates, **pain disorder** is characterized by preoccupation with pain. Although there is no objective way to evaluate pain, psychological factors are judged to be significant in creating or intensifying the chronic pain in pain disorder. Complaints seem excessive and apparently are motivated at least in part by psychological factors. For example, some pain disorder patients seem to relish the attention their illness brings to them.

As with other somatoform disorders, pain disorder can lead to repeated, unnecessary medical treatments. People who experience chronic pain are at a particular risk for developing a dependence on minor tranquilizers or painkillers. The disorder also frequently disrupts social and occupational functioning.

**Body Dysmorphic Disorder** **Body dysmorphic disorder** is a somatoform disorder in which the patient is preoccupied with some imagined defect in appearance. The preoccupation typically focuses on some facial feature, such as the nose or mouth, and in some cases may lead to repeated visits to a plastic surgeon. Preoccupation with the body part far exceeds normal worries about physical imperfections. The endless worry causes significant distress, and in extreme cases, it may interfere with work or social relationships.

U.S. researchers are only beginning to study body dysmorphic disorder (Phillips et al., 2010). The problem has received somewhat more attention in Japan and Korea, where

it is classified as a type of social phobia (Phillips, 1991). In contrast, DSM committees have considered grouping body dysmorphic disorder with obsessive compulsive disorders (Phillips et al., 2010). The following brief case history illustrates this problem.

## BRIEF CASE STUDY

### Body Dysmorphic Disorder

A 28-year-old single white man became preoccupied at the age of 18 with his minimally thinning hair. Despite reassurance from others that his hair loss was not noticeable, he worried about it for hours a day, becoming “deeply depressed,” socially withdrawn, and unable to attend classes or do his schoolwork. Although he could acknowledge the excessiveness of his preoccupation, he was unable to stop it. He saw four dermatologists but was not comforted by their reassurances that his hair loss was minor and that treatment was unnecessary. The patient’s preoccupation and subsequent depression have persisted for 10 years and have continued to interfere with his social life and work, to the extent that he avoids most social events and has been able to work only part-time as a baker. He only recently sought psychiatric referral, at the insistence of his girlfriend, who said his symptoms were ruining their relationship (Phillips, 1991, pp. 1138–1139).

**Malingering and Factitious Disorder** Somatoform disorders are real *psychological* problems, even though the physical symptoms are not real. As such, somatoform disorders must be distinguished from **malingering**, pretending to have a physical illness in order to achieve some external gain, such as a





Some people suspect that Michael Jackson suffered from body dysmorphic disorder given his multiple plastic surgeries to change his appearance.

disability payment. Because there is no objective way to test for somatoform disorders, detecting malingering is extremely difficult. Besides searching for an obvious reason for feigning an illness, one clue to malingering can be when, like Kenneth Bianchi, the Hillside Strangler, a patient presents symptoms that are more, not less, dramatic than is typical.

A related diagnostic concern is **factitious disorder**, a feigned condition that, unlike malingering, is motivated primarily by a desire to assume the sick role rather than by a desire for external gain. People with factitious disorder pretend to be ill or make themselves appear to be ill, for example, by taking drugs to produce a rapid heart rate. They will undergo extensive and often painful medical procedures in order to garner attention from healthcare professionals. A rare, repetitive pattern of factitious disorder is sometimes called *Munchausen syndrome*, named after Baron Karl Friedrich Hieronymus von Munchausen, an eighteenth-century writer known for his tendency to embellish the details of his life.

## FREQUENCY OF SOMATOFORM DISORDERS

No one knows how prevalent conversion disorders were during the time of Charcot, Janet, and Freud, but the literature of the period suggests that they were common (Shorter, 1992). Today, conversion disorders are rare, perhaps as infrequent as 50 cases per 100,000 population (Akagi & House, 2001). Ironically, the unusual disorders treated by Freud and Janet have been less enduring than the theories developed to explain them! The lower prevalence today may be a result of improved

diagnostic practices—cases now are correctly diagnosed as real physical or psychological illnesses, or perhaps of Western society's greater acceptance of the expression of feelings (Shorter, 1992). A very different—and controversial—viewpoint is that conversion disorders *are* prevalent today, but they take the form of conditions like chronic fatigue syndrome, fibromyalgia, irritable bowel syndrome, and similar puzzling maladies (Johnson, 2008; Showalter, 1997).

Most other somatoform disorders also are relatively rare. One study found a 0.7 percent prevalence of body dysmorphic disorder (Otto et al., 2001). The lifetime prevalence of somatization disorder is estimated to be only 0.4 percent (Creed & Barsky, 2004). Hypochondriasis also is quite rare, although less severe worrying about physical illness and isolated physical complaints are quite common (Ladwig et al., 2001; Looper & Kirmayer, 2001). The high prevalence of somatic symptoms but low prevalence of patients meeting current diagnostic criteria is a major reason for proposals to combine somatization disorder, hypochondriasis, and pain disorder into a single diagnosis perhaps called “complex somatic symptom disorder” (APA, 2010). “Illness anxiety disorder” is another possible diagnosis for those who worry excessively about their health but have few, if any, physical symptoms.

**Gender, SES, and Culture** With the exception of hypochondriasis, somatoform disorders are more common among women. This is particularly true of somatization disorder, which may be as much as 10 times more common among women than men (Swartz et al., 1990). Why women? Some feminist writers attribute women's hysteria during the time of Freud and Janet to the sexual repression of the Victorian era. Today's disproportionate prevalence among women often is blamed on widespread sexual abuse. Feminist Elaine Showalter (1997) criticizes both of these views. Instead, she argues, “Women still suffer from hysterical symptoms not because we are essentially irrational or because we're all victims of abuse but because, like men, we are human beings who will convert feelings into symptoms when we are unable to speak” (p. 207).



Children often describe their anxiety in somatic terms, “My stomach hurts!” Cultural and historical differences in somatoform disorders sometimes are attributed to a similar lack of insight into emotion.



Socioeconomic status and culture also are thought to contribute to somatization disorder. In the United States, somatization is more common among lower socioeconomic groups and people with less than a high school education. It is four times more common among African Americans than among Americans of European heritage and considerably higher in Puerto Rico than on the U.S. mainland (Canino et al., 1987). However, expected differences between industrialized and nonindustrialized countries were not found in a study sponsored by the World Health Organization. The one notable cultural difference was the high prevalence of somatization in Latin America (Gureje et al., 1997). Some speculate that this is due to a Latin view of emotional expression as a sign of weakness, while others hypothesize that it is due to the stigma associated with mental illness.

In addition to affecting prevalence, culture can influence when and how somatoform symptoms are experienced. An example is *hwa-byung*, a Korean folk syndrome that is attributed to unexpressed anger. (The open expression of anger is frowned upon in Korea.) The symptoms of *hwa-byung* include fatigue, insomnia, indigestion, and various aches and pains.

**Comorbidity** Somatoform disorders typically occur with other psychological problems, particularly depression and anxiety (Creed & Barsky, 2004; Otto et al., 2001; Smith et al., 2005). The link between depression and somatoform disorders has several possible explanations. Either condition may cause the other, or both could be caused by a third variable, such as life stress. One possibility that primary care physicians must consider carefully is that some patients may express depression indirectly through their somatic complaints (Lipowski, 1988).

There also are several possible explanations for the comorbidity between somatoform disorders and anxiety, including the fact that anxiety often is experienced physically and may be misreported in terms of physical symptoms (upset stomach, dizziness, weakness, sweating, dry mouth). A particular concern is the accurate, differential diagnosis of panic disorder. Some symptoms of panic, such as dizziness, numbness, and fears about dying, may be dismissed by physicians, or misdiagnosed as either hypochondriasis or somatization disorder (Lipowski, 1988).

Finally, somatization disorder has frequently been linked with *antisocial personality disorder*, a lifelong pattern of irresponsible behavior that involves habitual violations of social rules. The two disorders do not typically co-occur in the same individual, but they often are found in different members of the same family (Lilienfeld, 1992). Because antisocial personality disorder is far more common among men, while somatoform disorders have the opposite pattern, some have speculated that the two problems are flip sides of the same coin. Antisocial personality disorder may be the male expression of high negative emotion and the absence of inhibition, whereas somatization disorder is the female expression of the same characteristics (Lilienfeld, 1992).

## CAUSES OF SOMATOFORM DISORDERS

Despite their historical and medical significance, surprisingly little systematic research has been conducted on somatoform disorders. We integrate emerging findings with some theoretical considerations in the context of the biopsychosocial model.

**Biological Factors—The Perils of Diagnosis by Exclusion** An obvious—and potentially critical—biological consideration in somatoform disorders is the possibility of misdiagnosis. A patient may be incorrectly diagnosed as suffering from a somatoform disorder when, in fact, he or she actually has a real physical illness that is undetected or is perhaps unknown. The diagnosis of a somatoform disorder requires that there is no *known* organic cause of the symptom. This is very different from the positive identification of a psychological cause of the symptom.

The identification of somatoform disorders involves a process called *diagnosis by exclusion*. The physical complaint is assumed to be a part of a somatoform disorder only when various known physical causes are ruled out. Indeed, experts

**What is “diagnosis by exclusion”?**

increasingly refer to somatoform disorders as *medically unexplained syndromes* (Johnson, 2008; Smith et al., 2005). The possibility always remains that an incipient somatic disease has been overlooked. Some of the problems with diagnosis by exclusion can be appreciated by way of analogy. Consider the difference in certainty between two police lineups, one in which a victim positively identifies a criminal—“That’s him!”—versus a second where the identification is made by ruling out alternatives—“It isn’t him or him or him, so I guess it must be that one.”

The possibility of misdiagnosis is more than a theoretical concern. Follow-up studies of patients diagnosed as suffering from conversion disorders show that somatic illnesses are later detected in some cases (Escobar et al., in press; Kroenke et al., 2007). Typically, a neurological disease such as epilepsy or multiple sclerosis is the eventual diagnosis. In one classic study, a *quarter* of patients diagnosed as having a conversion symptom later developed a neurological disease (Slater, 1965). Fortunately, recent research has found a much smaller percentage (5 percent



Diagnosis by exclusion is like identifying a criminal by ruling out other suspects. “It isn’t the guy in the flowered shirt, he didn’t have a mustache, and the two guys on the left are too stocky. It must be the guy on the right.” But the real criminal might not be in the lineup, and the real disease might go undetected when using diagnosis by exclusion.



or less) of undetected physical illnesses when following up cases of somatoform disorder several years later (Crimlisk et al., 1998; Schuepbach, Adler, & Sabbioni, 2002). We attribute the new findings to the improved detection of real physical illnesses, and again wonder how many of the “hysterics” treated by Charcot, Freud, and Janet would be diagnosed as real physical conditions today.

Consider the case presented in the November 11, 2009, “Diagnosis” column, a regular feature in the *New York Times Magazine*. A 46-year-old woman suffered from a variety of mysterious physical symptoms. Over the years, she received multiple diagnoses, including that her problems were psychological. At the age of 23, she developed intermittent attacks of abdominal pain, fever, and vomiting that continued to the present day. Recently, her hands and feet had become numb, so much so that she could barely hold a pen or walk without stumbling. The woman was hospitalized dozens of times and had 13 surgeries, including the removal of her appendix, ovaries, and most of her colon.

Classic somatoform disorder? Janet may have thought so, and at least some contemporary physicians apparently reached that conclusion using diagnosis by exclusion. Yet, a neurologist finally diagnosed the problem as the very rare condition, *porphyria*, a genetically transmitted disease of the nervous system that affects red blood cells. Porphyria causes multiple physical and mental symptoms, sometimes including hallucinations and paranoia. The disease cannot be cured, but it at least can be understood and managed.

To avoid problems with diagnosis by exclusion, some experts recommend limiting the diagnosis of “functional neurological symptoms” (a proposed replacement term for conversion disorders) to cases where neurological tests clearly show inconsistent results (Friedman & LaFrance, 2010). An example would be when a patient has a “seizure,” but an EEG indicates normal brain activity (APA, 2010). Perhaps the use of such a more circumspect definition of somatoform disorder will help us to better understand how psychological stress can cause physical symptoms—and avoid telling patients with real physical illnesses that the problem is “all in your head.”

## Psychological Factors—Imagined or Real Trauma

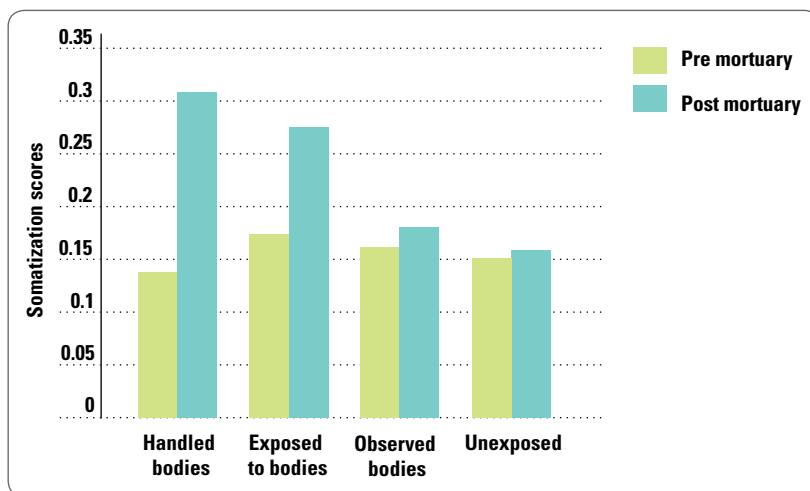
Initially, both Freud and Janet assumed that conversion disorders were caused by a trauma, particularly sexual abuse. However, Freud later questioned the accuracy of his patients’

reports. Instead, he decided that their sexual memories were fantasized, not real. This led him to develop his theory of childhood sexuality (Freud, 1924/1962). He came to view dissociation as protecting people from unacceptable sexual impulses, not from intolerable memories (Freud, 1924/1962). Sadly, we now know that childhood sexual abuse is all too common. Freud’s initial position may have been the accurate one.

Recent evidence shows that the somatization can be triggered by traumatic stress. Exposure to dead bodies, for example, has been tied to increased somatic symptoms. A study of 358 people who worked in the mortuary during the first Gulf War found an increase in somatization from before to after the experience. Somatic symptoms included faintness, pains in the chest, nausea, trouble breathing, hot or cold spells, numbness, and feeling weak. Importantly, somatization increased more among workers with greater exposure to death (see Figure 7.5). Although it is not clear why trauma leads to somatization, likely contributors include an increased awareness of one’s own body, the somatic consequences of stress, and the expression of psychological distress through complaints about somatic symptoms.

Freud also suggested that the *primary gain* of hysterical symptoms was the expression of unconscious conflicts. He also indicated that conversion could produce **secondary gain**, for example, avoiding work or gaining attention. This latter view has more support than Freud’s ideas about primary gain, although cognitive behavior therapists call this process *reinforcement*, not secondary gain. In addition to positive reinforcement (extra attention) or negative reinforcement (avoidance of work), *learning the sick role* through modeling may contribute to somatoform disorders (Lipowski, 1988). Cognitive factors also may play a role, especially (1) a tendency to amplify somatic symptoms (Brown, 2004; Kirmayer, Robbins, & Paris, 1994); (2) *alexithymia*—a deficit in one’s capacity to recognize and express the emotions signaled by physiological arousal (Bankier, Aigner, & Bach, 2001); (3) the misattribution of normal somatic symptoms (Brown, 2004; Rief, Hiller, & Margraf, 1998); and (4) memory biases (Pauli & Alpers, 2002). Figure 7.6 summarizes how these and other factors may contribute to the development of somatoform disorders.

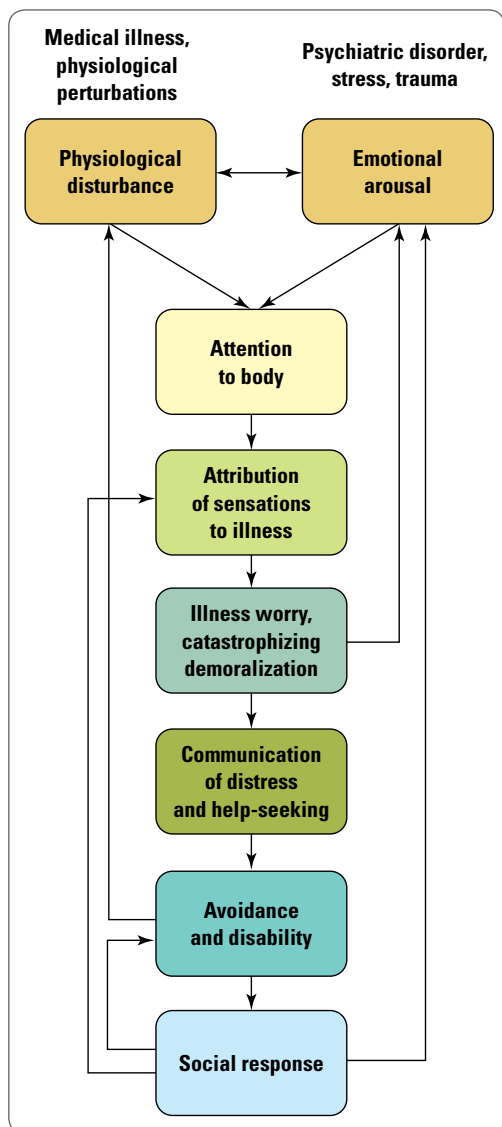
**Social Factors** A widely held social theory of somatoform disorders argues that, when people in certain cultures experience



**FIGURE 7.5** Somatic complaints, including faintness, chest pains, nausea, trouble breathing, hot or cold spells, numbness, and feeling weak, increased from before to after exposure to death among the first Gulf War mortuary workers. Workers exposed more directly to death showed a more notable increase in somatization.

Source: J. E. McCarroll, R. J. Ursano, C. S. Fullerton, X. Liu, and A. Lundy, 2002, “Somatic Symptoms in Gulf War Mortuary workers,” *Psychosomatic Medicine*, 64, pp. 29–33. Copyright © 2002. Reprinted by permission of Lippincott Williams & Wilkins.





**FIGURE 7.6**

Minor physical symptoms may develop into a somatoform disorder when combined with emotional arousal, excessive attention to physical symptoms, misattributions, and other psychological tendencies and social reactions.

Source: Copyright © 2002, American Psychological Association.

psychological distress, they describe and experience their emotions as physical symptoms. Why? The theory assumes that some cultures do not teach or allow open emotional expression. A simple analogy for this theory is a child who complains about an upset stomach, not fear of failure, before giving a piano recital. Presumably, increasing psychological awareness explains both a decline in somatoform disorders over time and a lower prevalence compared to other cultures today (Shorter, 1992). As noted earlier, however, unusual physical illnesses may have been misdiagnosed as somatoform disorders 100 years ago, and the disorders do *not* appear to be more prevalent in nonindustrialized than industrialized countries today. In fact, many suggest that

contemporary, Western psychological “awareness” has become more than a little overdone. The Western focus on emotion may have moved beyond “open” into the realm of “obsessed.”

## TREATMENT OF SOMATOFORM DISORDERS

Charcot, Janet, and Freud encouraged their patients to recall and recount psychologically painful events as a way of treating conversion disorders. In the century or more since they refined their techniques, however, no systematic research was conducted on any “cathartic” therapies for somatoform disorders, or for that matter, on any treatment. While research is still limited, accumulating evidence indicates that cognitive behavior therapy can reduce physical symptoms in somatization disorder (Woolfolk, Allen, & Tiu, 2007), hypochondriasis (Clark et al., 1998), and body dysmorphic disorder (Rosen, Reiter, & Orosan, 1995).

The most extensive studies focus on pain disorders. Operant approaches to chronic pain alter contingencies that reward “pain behavior” and the sick role. The goal is to reward successful coping and life adaptation instead (Kroenke, 2007). Cognitive behavior therapy also uses cognitive restructuring to address the emotional and cognitive components of pain. Research demonstrates the effectiveness of both approaches in treating chronic lower back pain (Blanchard, 1994).

Antidepressants also may be helpful in treating somatoform disorders, although less research has been conducted on their effectiveness (Kroenke, 2007). SSRIs produce more improvement in comparison to placebo for body dysmorphic disorder (Phillips, Albertini, & Rasmussen, 2002) and pain disorder (Fishbain et al., 1998). Both medication and cognitive behavior therapy may be effective, in part, because the treatments alleviate the depression and anxiety that often are comorbid with somatoform disorders (Looper & Kirmayer, 2002; Simon, 2002).

One reason for the limited psychological research is that primary care physicians treat most somatoform disorders (Bass et al., 2001). Patients typically consult physicians about their ailments, and they often insist that their problems are physical despite negative test results. Such patients are likely to refuse a referral to a mental health professional. As a result, primary care physicians often must learn how to manage hypochondriasis, somatization disorder, and related problems in the medical setting.

This can be difficult. The absence of a clear physical problem can frustrate primary care physicians, who may be unsympathetic toward “hypochondriacs” when so many patients with “real” problems need medical treatment. Not surprisingly, such reactions weaken the physician–patient relationship, and this can intensify the problem. In fact, the major recommendation for the medical management of patients with somatization disorder is to establish a strong and consistent physician–patient relationship. Physicians are urged to schedule routine appointments with these patients every month or two and to conduct brief medical exams during this time (Allen et al., 2002). This approach not only provides consistent emotional support and medical reassurance but also helps to reduce unnecessary medical care. Patients who feel misunderstood are likely to recruit a new, more understanding physician (Allen et al., 2002). On the other hand, a physician who knows the patient can recognize the psychological origin of the physical complaints and order fewer unnecessary medical tests or treatments.



# Getting Help

The disorders discussed in this chapter are fascinating, and the controversies about them are intellectually exciting—unless you or someone you know is suffering from PTSD or a dissociative or somatoform disorder. In this case, the unusual symptoms can be extremely frightening, the lack of acceptance can be isolating, and the controversy surrounding the disorders can seem callous.

The controversies and limited scientific information make it difficult to make clear recommendations for getting help. However, you can review the treatment sections of the three categories of disorders to get some specifics on the best approaches based on current research. These treatments generally involve some type of cognitive behavior therapy and/or antidepressant medication.

We also can readily offer a strong suggestion: If you have been the victim of trauma, for example, rape, abuse, or disaster, or a victim or witness of some other form of violence, talk to someone about it. You may find it difficult to trust anyone, but trying to “forget about it” is exactly the wrong thing to do. Confronting fear,

embarrassment, or others’ lack of understanding is far better than keeping it all inside. If you are not willing to consider therapy, start by confiding in a friend, a family member, even a stranger.

We are particularly concerned about the trauma of rape, including acquaintance rape, an all-too-frequent occurrence among college students. If you or someone you know has been raped, the first step may be to get to a hospital emergency room or to call the police. You also may want to contact a rape crisis center in your area. The Rape Abuse and Incest Network National hotline, (800)-656-4673, can provide you with the telephone number of the rape crisis center closest to you. You also may want to visit its website: <http://www.rainn.org>. A good self-help book on rape is *Free of the Shadows: Recovering from Sexual Violence*, by Caren Adams and Jennifer Fay.

There are many other resources available for victims of rape, disasters like September 11, and other types of traumas. If you are surfing the Web for information, we suggest that you begin your Internet exploration with the National Institute of Mental

Health. You will find much helpful information there, as well as links to other useful websites.

Another reason why we recommend that you begin with the NIMH website is that you need to be extremely cautious about information on PTSD and dissociative and somatoform disorders. The controversies discussed in this chapter are not just theoretical ones. There are many self-help resources—and professionals—who claim that one side or the other of a given controversy is fact, not theory or opinion. We urge you to be wary if a professional or resource fails to acknowledge the uncertain state of scientific information and the range of opinion about such things as the long-term consequences of childhood trauma, the prevalence of multiple personality disorder, or the nature of recovered memories. A dramatic illustration of the havoc that can be created by those who are supposed to help can be found in the book, *Remembering Satan*, Lawrence Wright’s journalistic account of the consequences of one episode of false “recovered memories” of satanic ritual abuse.

## SUMMARY

- **Dissociation** is the disruption of the normally integrated mental processes involved in memory or consciousness.
- **Traumatic stress** involves exposure to some event that involves actual or threatened death or serious injury to self or others and creates intense fear, helplessness, or horror.
- **Acute stress disorder (ASD)** is a short-term reaction to trauma that is characterized by symptoms of dissociation, reexperiencing, avoidance, and increased anxiety or arousal.
- **Posttraumatic stress disorder (PTSD)** is characterized by very similar symptoms as ASD—reexperiencing, numbed responsiveness or avoidance, and increased autonomic arousal—but the symptoms either last for longer than one month or have a delayed onset.
- Trauma is distressingly common and often leads to PTSD, especially rape for women and combat exposure for men.
- Trauma is the central cause of PTSD, but other factors contribute to its development, including level of exposure, social support, genetics, pretrauma personality, avoidance, and emotional processing.
- Targeted and naturalistic early intervention can prevent future PTSD, but some interventions like *critical incident stress debriefing* may actually increase risk.
- Resilience is the most common response to trauma, although perhaps one-third of cases of PTSD become chronic.
- **Dissociative disorders** are persistent, maladaptive disruptions in the integration of memory, consciousness, or identity.



- **Somatoform disorders** are identified by unusual physical symptoms that occur in the absence of a known physical illness.
- **Dissociative identity disorder (DID)**, also known as **multiple personality disorder**, is a dramatic problem characterized by the existence of two or more distinct personalities in a single individual, but the diagnosis is rare and very controversial.
- The term **conversion disorder** accurately conveys the central assumption of the diagnosis—the idea that psychological conflicts are converted into physical symptoms. The disorder is a *diagnosis by exclusion*, raising important concerns that some real but rare physical illness has been overlooked.

## The Big Picture

### CRITICAL THINKING REVIEW

- **What kinds of experiences count as being traumatic?**  
Earlier versions of DSM defined trauma as an event “outside the range of usual human experience.” . . . (see p. 167)
- **Does trauma always cause PTSD?**  
Because not every traumatized person develops a disorder, trauma is a necessary but not a sufficient cause. What increases risk or resilience in the face of trauma? . . . (see p. 171)
- **What is the unconscious mind?**  
Both Janet and Freud were eager to explain hysteria, and both developed theories of unconscious mental processes to do so . . . (see p. 176)
- **Can therapy help people recover memories of child abuse?**  
Our concern about so-called recovered memories extends well beyond the Franklin case . . . (see p. 179)
- **Is multiple personality disorder real?**  
Some experts even doubt the very existence of dissociative identity disorder, arguing that DID is created by the power of suggestion . . . (see p. 181)
- **Were conversion disorders common in Freud’s time but uncommon today?**  
No one knows how prevalent conversion disorders were during the time of Charcot, Janet, and Freud, but the literature of the period suggests that they were common . . . (see p. 188)

## KEY TERMS

acute stress disorder (ASD)  
body dysmorphic disorder  
conversion disorder  
depersonalization disorder

dissociation  
dissociative amnesia  
dissociative disorders  
dissociative fugue  
dissociative identity disorder (DID)  
factitious disorder

flashbacks  
hypnosis  
hypochondriasis  
hysteria  
iatrogenesis  
malingering

multiple personality disorder  
pain disorder  
posttraumatic stress disorder (PTSD)  
retrospective reports  
secondary gain

somatization disorder  
somatoform disorders  
traumatic stress



# Stress and Physical Health



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◀ *RENT* portrays the lives of a group of friends living in New York City, and struggling with money, relationships, sex, drugs, and AIDS.

**H**ow do you feel when you are “stressed out”? Different people feel jittery, tired, down, preoccupied, vigilant, defeated, angry, sick, or just plain lousy. How do you cope? Some people try to eliminate stress by solving the problem; others calm themselves by writing or talking about the stress;

and still other people distract themselves in healthy ways (exercise) or unhealthy ones (smoking, alcohol, or overeating). What are the consequences of stress and different ways of coping with it? Can stress *really* make you sick? How?



## The Big Picture

- How can stress make you physically ill?
- What are some good ways of coping with stress?
- What does it mean to say people are resilient?
- Does stress really play a role in diseases like cancer and AIDS?
- What is a “lifestyle disease”?
- What is “Type A” behavior and can it cause heart attacks?

## OVERVIEW

Scientists define *stress* as any challenging event that requires physiological, cognitive, or behavioral adaptation. Stress may involve minor, daily hassles, like taking an exam, or major events, such as going through a divorce. The most common daily stressors involve interpersonal arguments and tensions (Almeida, 2005). As we saw in Chapter 7, *traumatic stress* involves actual or threatened death or serious injury to oneself or others and a reaction of intense fear, helplessness, or horror.



Stress is a part of life, whether you are taking the SAT exam or even celebrating life-changing, positive events like getting married.

This chapter is about more normal stress, how we cope with it, and how stress affects our physical health.

Scientists once thought that stress contributed to only a few physical diseases. Ulcers, migraine headaches, hypertension (high blood pressure), asthma, and a few other illnesses were thought to be *psychosomatic disorders*,<sup>1</sup> a product of both the *psyche* (mind) and the *soma* (body) (Harrington, 2008). Today, the term is outdated. Medical scientists now view *every* physical illness—from colds to cancer to AIDS—as a product of the interaction between the mind and body. Thus, there is no list of “psychosomatic disorders” in the DSM-IV-TR or elsewhere.

This holistic view of health and disease has brought about major changes in medicine. Of particular note is the rapid development of **behavioral medicine**, a multidisciplinary field that includes both medical and mental health professionals who investigate psychological factors in the symptoms, cause, and treatment of physical illnesses. Psychologists who specialize in behavioral medicine often are called *health psychologists*.

Learning more adaptive ways of dealing with the burden of stress can limit the recurrence or improve the course of many physical illnesses (Lazarus, 2000; Snyder, 1999). In order to promote health, specialists in behavioral medicine therefore study and encourage healthy coping through stress management, proper diet, regular exercise, and avoidance of tobacco use. In treating diseases, behavioral medicine includes interventions such as educating parents of chronically ill children, teaching strategies for coping with chronic pain, and running support groups for people with terminal cancer.

In this chapter, we discuss innovations in behavioral medicine and review evidence on the link between stress and some major physical illnesses. In order to illustrate the challenges in studying stress, we also include an extended discussion of the number-one killer in the United States today, cardiovascular disease. We begin with a case study.

<sup>1</sup>In everyday language, we sometimes use the term *psychosomatic* to imply that an illness is imagined or not real. But unlike conversion disorders (Chapter 7), psychosomatic disorders involve very real physical damage or dysfunction.



One Thursday afternoon, Bob Carter, a salesman for a beer and liquor wholesaler, was completing his route, calling on customers. Throughout the morning, he had felt a familiar discomfort in his chest and left arm. As had been happening on occasion for at least a year, that morning he experienced a few fleeting but sharp pains in the center and left side of his chest. This was followed by a dull ache in his chest and left shoulder and a feeling of congestion in the same areas. Breathing deeply made the pain worse, but Bob could manage it as long as he took shallow breaths. He continued on his route, alternately vowing to see a doctor soon and cursing his aging body.

After grabbing a hamburger for lunch, Bob called on a customer who was behind in his payments. At first, Bob shared a cigarette with the customer and chatted with him in a friendly way. He was a salesman, after all. Soon it was time to pressure him about the bill. As Bob raised his voice in anger, a crushing pain returned to his chest and radiated down his left arm. This was much worse than anything he had experienced before. The pain was so intense that Bob was unable to continue speaking. He slumped forward against the table, but with his right arm he waved away any attempt to help him. After sitting still for about 10 minutes, Bob was able to drag himself to his car and drive to his home 30 miles away. When his wife saw him shuffle into the house looking haggard and in obvious pain, she called for an ambulance. The Carters soon discovered that Bob had suffered a *myocardial infarction* (a heart attack).

Bob was 49 years old at the time. His home life was happy, but it also put a lot of pressure on him. His 24-year-old daughter was living at home while her husband was

serving in combat duty overseas. Naturally, the entire family was anxious about the son-in-law's well-being. More stress came from Bob's 21-year-old daughter, who had just graduated from college and was getting married in three weeks. Finally, Bob's 19-year-old son was home from his first year of college, full of rebellion and ideas that challenged Bob's authority. There was no shortage of family stress.

Bob also put plenty of stress on himself. A former high school athlete, he had always been competitive and hard-driving. He wanted to be the best at whatever he did, and right now his goal was to be the best salesman in his company. Bob used his charm, humor, and some not-so-gentle pressure to sell his products, and it worked. But once he had become the best salesman in his wholesaling company, Bob wanted to be the best salesman for the producers whose products he sold. No matter what he accomplished, Bob drove himself hard to meet a new goal.

Bob maintained his drive and competitiveness from his youthful days as a star athlete, but he had not maintained his physical condition. The only exercise he got was playing golf, and he usually rode in a cart instead of walking the course. He was at least 30 pounds overweight, smoked a pack and a half of cigarettes a day, ate a lot of fatty red meat, and drank heavily. Bob was a good candidate for a heart attack.

Bob recuperated quickly in the hospital. He was tired and in considerable pain for a couple of days, but he was telling jokes before the end of a week. His cardiologist explained what had happened and gave Bob a stern lecture about changing his lifestyle. He wanted Bob to quit smoking, lose weight, cut down on his drinking,

and gradually work himself back into shape with a careful program of exercise. He urged Bob to slow down at work and told him to quit worrying about his children—they were old enough to take care of themselves.

To underscore these messages, the cardiologist asked a psychologist from the hospital's behavioral medicine unit to consult with Bob. The psychologist reviewed information on coronary risk and gave Bob several pamphlets to read. The psychologist also explained that the hospital ran several programs that might interest Bob, including workshops on stress management, weight reduction, and exercise. Fees were minimal, because the hospital offered them as a community service. The psychologist also offered to talk to Bob, because cardiac patients and their families sometimes have trouble adjusting to the sudden reminder of the patient's mortality. But Bob waved off the offer of assistance much as he had waved off help in the middle of his heart attack.

Bob was discharged from the hospital five days after being admitted. Against his doctor's advice, he walked his daughter down the aisle at her wedding the following weekend, and he was back to work within a month. At his six-week checkup, Bob admitted that he was smoking again. His weight was unchanged, and his exercise and drinking were only a "little better." When the cardiologist chastised Bob, he promised to renew his efforts. However, he thought to himself that giving up these small pleasures would not make him live any longer. It would just seem that way. Clearly, one heart attack was not going to get Bob Carter to slow down.

The case of Bob Carter illustrates how stress can contribute to coronary heart disease, but it also raises a number of questions about the link. What is the physiological mechanism that transforms psychological stress into coronary risk? Is stress the problem, or is the real culprit the unhealthy behaviors that result from stress—smoking, drinking, and overeating? What is the role of personality in stress? Can someone like Bob change his lifestyle, and, if so, does this lower the risk for future heart attacks? We consider these and related questions in this chapter. First, though, we need to consider more carefully exactly what we mean by "stress."

## Defining Stress

We define **stress** as a challenging event that requires physiological, cognitive, or behavioral adaptation. However, we need to examine this definition closely. Is stress the event itself? Some people would relax after becoming the top salesman, but Bob Carter viewed this achievement as another challenge. Perhaps stress should be defined in terms of the individual's reactions to an event. However, we want to learn if stress causes problems. If we define stress in terms of the reactions it causes, is



TABLE 8.1 Change Caused by Different Life Events

Life Event	Life Change Units	Life Event	Life Change Units
Death of one's spouse	100	Son or daughter leaving home	29
Divorce	73	Trouble with in-laws	29
Marital separation	65	Outstanding personal achievement	28
Jail term	63	Wife beginning or stopping work	26
Death of a close family member	63	Beginning or ending school	26
Personal injury or illness	53	Change in living conditions	25
Marriage	50	Revision of personal habits	24
Being fired at work	47	Trouble with one's boss	23
Marital reconciliation	45	Change in work hours or conditions	20
Retirement	45	Change in residence	20
Change in the health of a family member	44	Change in schools	20
Pregnancy	40	Change in recreation	19
Sex difficulties	39	Change in church activities	19
Gain of a new family member	39	Change in social activities	18
Business readjustment	39	Mortgage or loan of less than \$10,000	17
Change in one's financial state	38	Change in sleeping habits	16
Death of a close friend	37	Change in number of family get-togethers	15
Change to a different line of work	36	Change in eating habits	15
Change in number of arguments with one's spouse	35	Vacation	13
Mortgage over \$10,000	31	Christmas	12
Foreclosure of a mortgage or loan	30	Minor violations of the law	11
Change in responsibilities at work	29		
The SRRS rates different stressors as causing more or less life change for people. More difficult stressors have a higher number of "life change units."			
Source: Reprinted from <i>Journal of Psychosomatic Research</i> , (1967), 11, T. H. Holmes, and R. H. Rahe, "The Social Readjustment Rating Scale," 213–218, Copyright © 1967, with permission from Elsevier.			

this merely circular logic? In fact, scientists continue to debate whether stress is best defined as a life event itself or an *appraisal* of life events, the event plus the individual's reaction to it.

## STRESS AS A LIFE EVENT

Researchers often define stress as a life event—a difficult circumstance regardless of the individual's reaction to it. An example that contributed greatly to the development of stress research, and still widely used, is Holmes and Rahe's (1967) Social Readjustment Rating Scale (SRRS), a measure that assigns stress values to life events based on the judgments of a large group of normal adults. The SRRS views stressors that produce more *life change units* as causing more stress (see Table 8.1).

Ratings on the SRRS and similar instruments are correlated with a variety of physical illnesses (Dohrenwend, 2006; Miller,

1989). Critics note, however, that stress checklists (1) rely on retrospective reports; (2) contain stressors that do not apply to people of different ages and ethnic backgrounds (Contrada et al., 2001) (Is the SRRS a good measure of college student stress?); (3) treat both positive and negative events as stressors (Would you equate getting married with getting fired?); (4) fail to distinguish between short-lived and chronic stressors; and (5) most importantly, treat the same event as causing the same amount of stress for everyone (Is getting pregnant just as stressful for an unwed teenager as it is for a married couple who want a baby?).

Dohrenwend and colleagues (1990) demonstrated the importance of this last point. They found, for example, that an assault caused a *large* change for nearly 20 percent of respondents, but it caused *no* change for the same percentage of people (see Table 8.2). Because of this variability, many experts define stress as the combination of an event plus each individual's reaction to it.



TABLE 8.2 Different Reactions to the Same Life Event

Type of Event	Percentage of Subjects Reporting Each Amount of Change			
	Large	Moderate	Little	None
Serious physical illness	47.2%	27.8%	8.3%	16.7%
Relations with mate got worse	41.2	47.1	0.0	11.8
Relative died (not child/spouse)	8.3	8.3	29.2	54.2
Close friend died	5.3	15.8	29.8	49.1
Financial loss (not work related)	16.3	44.2	18.6	20.9
Assaulted	18.5	22.2	40.7	18.5
Broke up with a friend	0.0	26.1	37.0	37.0
Laid off	13.3	63.3	13.3	10.0
Had trouble with a boss	17.5	35.0	32.5	15.0
Got involved in a court case	9.5	9.5	28.6	52.4

Large percentages of people rate the same life event as causing large, moderate, little, or no change in their lives. This illustrates a key problem with assigning a set level of stress to any given life event, and more generally, of defining stress in terms of a stimulus alone.

Source: Adapted from B. P. Dohrenwend et al., 1990, "Measuring Life Events: The Problem of Variability Within Event Categories," *Stress Medicine*, 6, p. 182. Copyright © John Wiley & Sons, Inc. Reprinted by permission.

## STRESS AS APPRAISAL OF LIFE EVENTS

One influential example is Richard Lazarus's (1966) definition of stress as the individual's *appraisal* of a challenging life event. An impending exam is stressful when you feel inadequately prepared, but less so when you are confident. Lazarus also distinguished between people's *primary appraisal*, our evaluation of the challenge, threat, or harm posed by an event, and people's *secondary appraisal*, our assessment of our abilities and resources for coping with that event (Lazarus & Folkman, 1984). Thus, even if you feel unprepared, the impending exam causes less stress if you have the time and the ability to study.

The appraisal approach recognizes that the same event is more or less stressful for different people but runs the risk of circular reasoning. What is stress? Stress is an event that causes us to feel threatened and overwhelmed. What causes us to feel threatened and overwhelmed? Stress. Logically, such a definition would be a *tautology*, a redundant statement that means nothing. Because of the potential tautology, researchers must carefully distinguish independent variables (stressors) from hypothesized dependent variables (adverse outcomes).

## Symptoms of Stress

Stress is a part of life. In fact, stress is an *adaptive* response to many aspects of living. If you had no stress response, you would not jump out of the way of a cement truck barreling down on you, let alone to study for your exams!

The renowned American physiologist Walter Cannon (1871–1945), one of the first and foremost stress researchers, recognized the adaptive, evolutionary aspects of stress. Cannon (1935) viewed stress

as the activation of the **fight-or-flight response**,<sup>2</sup> the reaction you witness when a cat is surprised by a barking dog. The cat can either scratch at the dog or flee to safety. The fight-or-flight response has obvious survival value. Cannon observed, however, that fight or flight is a *maladaptive* reaction to much stress in the modern world. Fight or flight does not work as a response to being reprimanded by your boss or giving a speech before a large audience. In other words, the human environment may have evolved more rapidly than our physiological reactions to it. (Some psychologists think that fight or flight is a *male* reaction to stress.) (See Tend and Befriend.)

## PSYCHOPHYSIOLOGICAL RESPONSES TO STRESS

Physiologically, the fight-or-flight response activates the *sympathetic nervous system*: Your heart and respiration rates increase, your blood pressure rises, your pupils dilate, your blood sugar levels elevate, and your blood flow is redirected in preparation for muscular activity (Baum et al., 1987; Koranyi, 1989). These physiological reactions heighten attention, provide energy for quick action, and prepare the body for injury (Sapolsky, 1992, 2003). This physiological reaction is adaptive if a truck is headed your way, and presumably it also was an adaptive response to many threats over the course of human evolution. When your boss is yelling—or you worry that your boss *might* yell—the response only leaves your body racing and you feeling nervous and agitated.

<sup>2</sup> Ethologists now view mammals' responses to threat as more nuanced: freeze-flight-fight-fright. Mammals' first response to threat is to freeze (hide); if that fails, they flee; and fighting is the third option. Fright or *tonic immobility*, also known as "playing dead," is the final option when a threat is imminent and mortal. Future stress research surely will incorporate freeze-flight-fight-fright (Bracha et al., 2004), but we use the fight-or-flight dichotomy, which dominates in current efforts.



## TEND AND BEFRIEND: THE FEMALE STRESS RESPONSE?

**H**ealth psychologist Shelly Taylor and her colleagues (2006) suggest that fight or flight may be a particularly *male* response to stress. Females, particularly primate females, may tend and befriend instead. *Tending* involves caring for offspring, especially protecting them from harm. *Befriending* involves social affiliation, finding safety in numbers, and sharing resources.

Theoretically, tend and befriend, like fight or flight, is a product of evolution. Inclusive fitness may be increased by caretaking and blending into the environment in response to threat. Attachment is the mechanism hypothesized to underlie tending and befriending, but Taylor (2006) focuses on the benefits for the caretaker rather than the infant. She argues

that evolution selected for caretaking tendencies in adult females.

Taylor and her colleagues (2000) suggested that, unlike male aggression, female aggression is activated less by sympathetic nervous system arousal due to the lack of *testosterone* (the male sex hormone). This limits the female's fight response. Flight tendencies, in turn, are countered by *oxytocin* released by the pituitary and by the female sex hormone, *estrogen*. Theoretically, the result is the activation of the parasympathetic nervous system, which has a calming effect.

Tend and befriend is a speculative hypothesis, but it focuses attention on important issues, for example, including more females in studies of

stress. Prior to 1995, males made up 83 percent of the participants in laboratory studies of stress. Moreover, evidence repeatedly shows major differences between women and men in response to stress, susceptibility to different diseases, and longevity, as women outlive men by five to 10 years in industrialized countries

### How does "tend and befriend" differ from "fight or flight"?

(Kajantie, 2008). Critics might see sexism in Taylor's assertions about female-male sex differences, but Taylor carefully acknowledges cultural influences on gender roles. And under the right conditions, or through learning, males may also respond to stress by tending and befriending.

**Adrenal Hormones** How does the stress response work physiologically? When a perceived threat registers in the cortex, it signals the *amygdala*, the brain structure primarily responsible for activating the stress response, which secretes *corticotrophin-releasing factor* (CRF). CRF stimulates the brainstem to activate the sympathetic nervous system. In response to the sympathetic arousal, the *adrenal glands* release two key hormones. One is *epinephrine* (commonly known as *adrenaline*), which acts as a neuromodulator and leads to the release of *norepinephrine* and more *epinephrine* into the bloodstream (see Figure 8.1). This familiar "rush of adrenaline" further activates the sympathetic nervous system.

The second key adrenal hormone is **cortisol**, often called the "stress hormone" because its release is so closely linked with stress. Cortisol has a less rapid action than adrenaline, yet it functions quickly to help the body make repairs in response to injury or infection. One function of cortisol is "containment" of pathogens in the body—the same function performed by the steroids that you may take for inflammation and skin irritation. Like externally administered steroids, however, cortisol can promote healing in the short run, but an excess of cortisol can harm the body by damaging the hippocampus, causing muscular atrophy, and producing hypertension (Song & Leonard, 2000; Yehuda, 2002).

**Immune System Responses** The release of cortisol and CRF also cause *immunosuppression*, the decreased production of immune agents. In fact, a whole field of study, **psychoneuroimmunology** (PNI), investigates the relation

between stress and immune function (Adler, 2001; Song & Leonard, 2000). PNI research shows that *T cells*, one of the two major types of *lymphocytes*, and white blood cells that fight off *antigens*, foreign substances like bacteria that invade the body, are particularly vulnerable to stress. Decreased T cell production makes the body more susceptible to infectious diseases during times of stress (Adler, 2001; Song & Leonard, 2000).

Why would stress inhibit immune function? From an evolutionary perspective, *heightened* immune functioning might seem to better prepare the body for the infection that may follow injury. However, the immune response creates inflammation, maintains fever, and intensifies pain—all of which impair immediate action (Maier, Watkins, & Fleshner, 1994). Thus, immunosuppression may actually be an adaptive short-term reaction to stress.

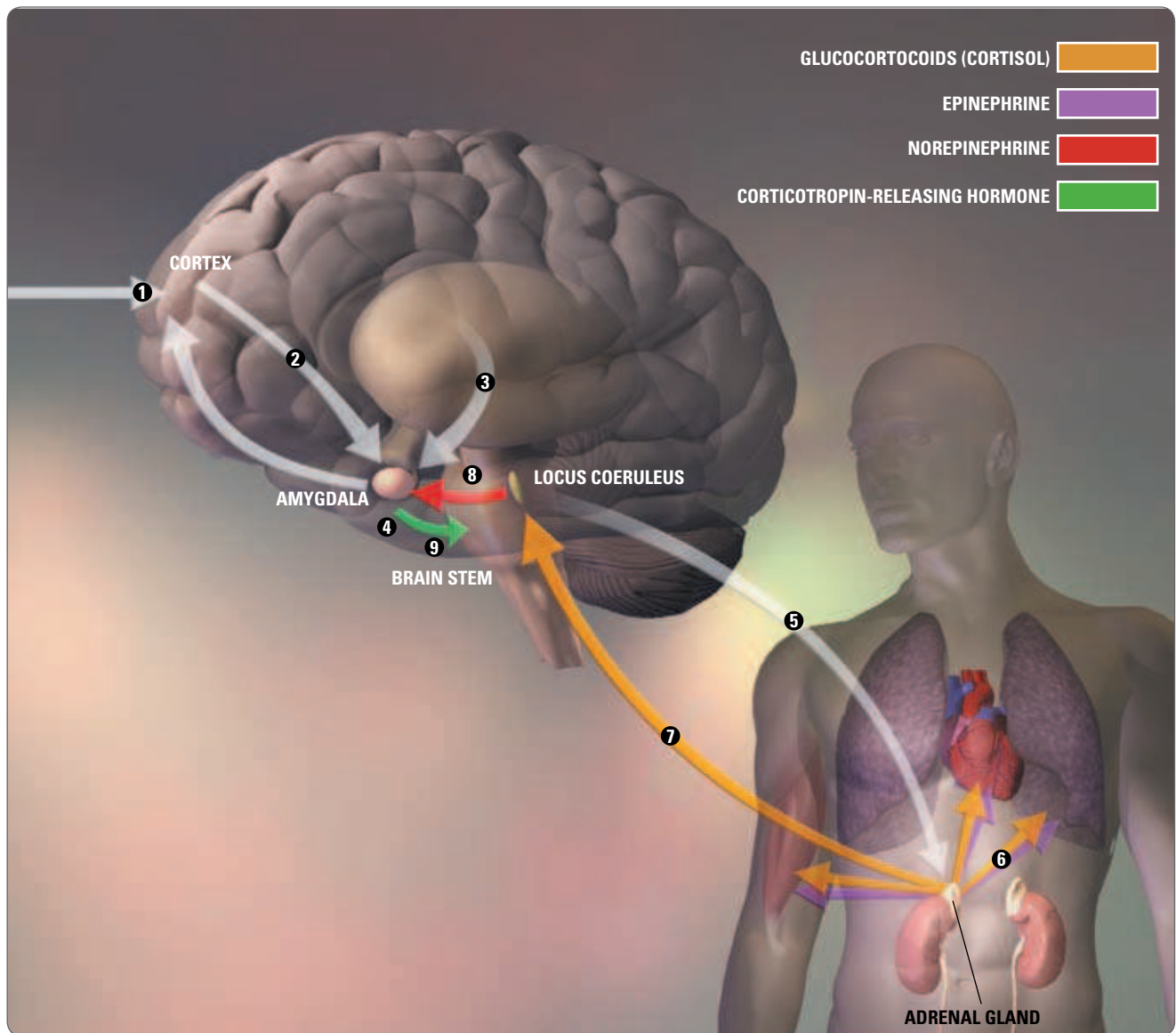
Current evidence suggests a response to stress that is more nuanced than blanket immunosuppression. Short-term stressors and physical threats *enhance* immune responses that are quick, require little energy, and contain infection due to an injury. However, stress *impairs* immune responses that drain energy from the fight-or-flight response. Chronic stressors and losses (as opposed to threats) also create immunosuppression (Segerstrom, 2007; Segerstrom & Miller, 2004).

**Illness and Chronic Stress** When repeated over time, physiological reactions to stress can leave you susceptible to illness. Cannon (1935) hypothesized that this occurs because intense or chronic stress overwhelms the body's **homeostasis** (a term he coined), the



A white blood cell called a *macrophage* (colored yellow) attacks bacteria (blue).





**FIGURE 8.1**

Stress pathways are diverse and involve many regions of the brain in feedback loops that can sometimes greatly amplify a response. The process—simplified somewhat in this diagram—begins when an actual or perceived threat activates the sensory and higher reasoning centers in the cortex (1). The cortex then sends a message to the amygdala, the principal mediator of the stress response (2). Separately, a preconscious signal may precipitate activity in the amygdala (3). The amygdala releases corticotropin-releasing hormone, which stimulates the brain-stem (4) to activate the sympathetic nervous system via the spinal cord (5). In response, the adrenal glands produce the stress hormone epinephrine; a different pathway simultaneously triggers the adrenals to release glucocorticoids. The two types of hormones act on the muscle, heart, and lungs to prepare the body for “fight or flight” (6). If the stress becomes chronic, glucocorticoids induce the locus caeruleus (7) to release norepinephrine that communicates with the amygdala (8), leading to the production of more CRH (9)—and to ongoing reactivation of stress pathways.

Source: Figures by Alfred Kamajian from “Taming Stress” written by R. Sapolsky, *Scientific American*, 286, (September 2003), p. 89. Reproduced by permission of Alfred Kamajian.

tendency to return to a steady state of normal functioning. He suggested that, over time, the prolonged arousal of the sympathetic nervous system eventually damages the body, because it no longer returns to its normal resting state.

Canadian physiologist Hans Selye (1907–1982), another very influential stress researcher, offered a different

hypothesis based on his concept of the **general adaptation syndrome (GAS)**. Selye’s GAS consists of three stages: alarm, resistance, and exhaustion. The stage of *alarm* occurs first and involves the mobilization of the body in reaction to threat. The stage of *resistance* comes next and is a period of time during which the body is physiologically activated and prepared



to respond to the threat. *Exhaustion* is the final stage, and it occurs if the body's resources are depleted by chronic stress. Selye viewed the stage of exhaustion as the key in the development of physical illness from stress. At this stage, the body is damaged by continuous, failed attempts to reactivate the GAS (Selye, 1956).

Although similar, Selye's theory differs from Cannon's in important ways. An analogy for Cannon's theory is a car in which the engine continues to race instead of idling down after running fast. In contrast, an analogy for Selye's theory is a car that has run out of gas and is damaged because stress keeps turning the key, trying repeatedly and unsuccessfully to restart the engine.

Stress may create physical illness in both ways, but a third mechanism may be as important. Because the stress response uses so much energy, the body may not be able to perform many routine functions, such as storing energy or repairing injuries (Sapolsky, 1992). The result is greater susceptibility to illness. An automotive analogy for this third model is a car running constantly at such high speeds that the cooling and lubricant systems cannot keep up, making a breakdown likely.

## COPING

People cope with stress in many ways, good and bad. Two very important, alternative strategies are problem-focused and emotion-focused coping (Lazarus & Folkman, 1984). **Problem-focused coping** involves attempts to change a stressor. If your job is stressful, you look for a new one. **Emotion-focused coping** is an attempt to alter internal distress. Before taking a big exam, you sit quietly and breathe deeply to calm yourself.

We all face a big problem in deciding how to cope: What will work? What if you are stressed out by poor grades in a difficult class? Should you redouble your efforts, drop the course, or accept that this is not your best subject? Culturally, Americans prefer change over acceptance. Asian cultures, in contrast, emphasize acceptance over change. What works best? We think that flexibility is the key. There is much truth in Reinhold Niebuhr's "Serenity Prayer":

God, give me the serenity to accept the things I cannot change;  
The courage to change the things I cannot accept;  
And the wisdom to know the difference.

**Predictability and Control** Events are less stressful when we are better prepared to cope with them. Studies of animals and humans show that *predictability* and *control* both dramatically reduce stress. For example, when a flash of light signals an impending shock, rats show a smaller stress response than when the shock is unsignaled (Sapolsky, 1992). The predictability apparently allows animals (and humans, too) to begin to cope even before the onset of a stressor.

Animal research also shows the benefits of control. When they can stop a shock by pressing a bar, rats have a smaller stress response than when they have no control (Sapolsky, 1992). Even the *illusion* of control can help to alleviate stress. However, the perception of control *increases* stress when people believe they could have exercised control but failed to do so, or when they lose control over a formerly controllable stressor (Mineka & Kihlstrom, 1978). Control lessens stress when we have it, even when it is illusory, but failed attempts at control intensify stress.

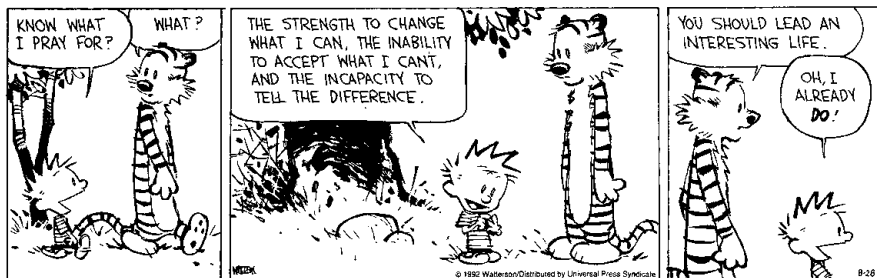
**Outlets for Frustration** Physical activity also reduces physiological reactions to stress, even when the effort does not include problem-focused coping. For example, rats secrete less cortisol following an electric shock if they can attack another rat or run on a running wheel (Sapolsky, 1992). Sound like you at the gym—or dumping on your roommates? Having *outlets for frustration* does reduce stress.

**Repression** *Repression* is a generally maladaptive form of emotion-focused coping (Cramer, 2000; Somerfield & McCrae, 2000). Bob Carter kept his feelings bottled up. Did his repression contribute to his risk for a heart attack? Apparently. People who report positive mental health but whom clinicians judge to have emotional problems (so-called "defensive deniers") show greater psychophysiological reactions to stress (Shedler, Mayman, & Manis, 1993). On the flip side, stress is reduced when people talk about their stressful experiences (Frattaroli, 2006; Harris, 2006; Pennebaker, 1990).

**Optimism** In contrast to repression, *optimism* is a healthy coping style. Optimists have a positive attitude about dealing with stress, even when they cannot control it. Pessimists are defeated from the outset (see Table 8.3). Positive thinking is linked with better health habits and less illness (Carver & Scheier, 1999; Kubzansky et al., 2001). In fact, optimism about school predicts better immune functioning among law students (Segerstrom & Sephton, 2010). Stress is taxing, but less so if we approach it as a challenge instead of as an obstacle (see Critical Thinking Matters).

## Calvin and Hobbes

by Bill Watterson



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**Religion** Surprisingly, psychologists have only recently begun to study the health benefits of religious coping (Hill & Pargament, 2003). Evidence demonstrates that mortality risk is lower among those who attend church services, probably as a result of improved health behavior (Powell, Shahabi, & Thoresen, 2003; Schnall et al., 2008). Forgiveness, a religious and philosophical virtue, apparently also offers earthly benefits; it improves health (Witvliet, Ludwig, & Vander Laan, 2001).

Forgiveness can be healthful, as can finding meaning in life either through or outside of religion (Yanez et al., 2009). Other research shatters some misconceptions about religious coping, which often is thought to only promote acceptance of God's will. A study of 200 Latinos with arthritis found that religion encouraged *active*, not passive, coping—and led to less pain, less depression, and improved psychological

### What are some positive coping techniques?

**TABLE 8.3** Coping Tendencies of Optimists and Pessimists

Optimists	Pessimists
Information seeking	Suppression of thoughts
Active coping and planning	Giving up
Positive reframing	Self-distraction
Seeking benefit	Cognitive avoidance
Use of humor	Focus on distress
Acceptance	Overt denial

Source: From C. S. Carver and M. F. Scheier, 1999, "Optimism," in C. R. Snyder, Ed., *Coping: The Psychology of What Works*, p. 194. New York: Oxford University Press. Used by permission of Oxford University Press, Inc.

## Critical Thinking Matters

### RESILIENCE

Popular culture, and much psychological research, tells us that stress is bad, something to be avoided. Stress will make us tense, irritable, and unhappy. Stress makes us sick.

Stress *can* make us more susceptible to illness, but a little critical thinking leads us to ask: Are we really so vulnerable to stress? After all, humans evolved in stressful, often dangerous environments. Evolution *must* have selected for successful strategies for coping with stress, not crumbling in the face of it. And stress is a part of everyday life, often a good part—a challenge. We typically expect to rise to the challenge of a sporting event, a difficult class, even a crisis in our lives. Does it make sense that humans are fragile in the face of stress?

The answer is "No" according to proponents of *positive psychology*, an approach that highlights human psychological strengths (Linley & Joseph, 2005). Positive psychologists instead see pervasive human **resilience**, the ability to cope successfully with the challenges of life, including very stressful ones. Most people overcome not only normal stress but traumatic stress too. For example, most people do *not* develop PTSD following

trauma; most people who lose a loved one are *not* overcome by depression in their grief (Bonanno, 2004).

To be sure, successful coping is not the same as the absence of inner distress (Litz, 2005). One study found that among resilient young people whose parents divorced—college students doing well in school and free from emotional problems—nearly half still reported they had a harder childhood than most other kids. Almost one-third agreed that they sometimes wondered if their father even loved them (Laumann-Billings & Emery, 2000). These young people bounced back from the stress of their parents' divorce, but the bounce apparently still hurt.

Not only are most people resilient, but some people also grow—they get stronger—as a result of stress (Linley & Joseph, 2005). For example, bicyclist Lance Armstrong's battle with cancer only spurred him on to win after win in the Tour de France.

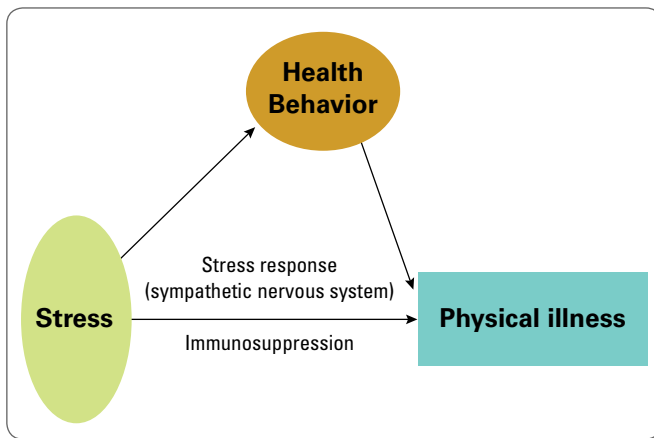
Resilience lies partly within the individual—for example, positive affect is related to many indices of health (Cohen & Pressman, 2006).

Resilience also is partly attributable to social support and other aspects of environments (Roisman, 2005). One fascinating theory suggests that individual traits and environmental characteristics interact in unexpected ways. According to this perspective, some people are "dandelions," while others are "orchids." Dandelions may not be beautiful, but they survive in most any environment. Dandelions are the epitome of resilience. In contrast, orchids perish in harsh environments. They may not survive even in ordinary environments. But in just the right environment, orchids explode with beauty (Ellis & Boyce, 2008). Although largely untested, the analogy and the concept offer a new, challenging perspective on resilience.

### What makes someone resilient?

Whatever resilience is, it is a quality that most people possess in most circumstances. Stress can make us weaker, or it can make us stronger. While chronic, uncontrollable stress can break us down, most people find the strength they need to cope when confronted by stress.





**FIGURE 8.2** Direct and Indirect Effects of Stress on Physical Illness

Stress may affect physical illness directly—primarily through suppression of immune function and repeated or prolonged activation of the sympathetic nervous system (see Figure 8.1). Stress also may affect physical illness indirectly by altering health behavior, for example, by leading to an increase in smoking or drinking, a poor diet, and less exercise.

Source: Timothy W. Smith, "Personality as Risk and Resilience in Physical Health," *Current Directions in Psychological Science* (15,5), P. 229, Copyright © 2006, Association for Psychological Science. Reprinted by Permission of SAGE Publications.

well-being (Abraído-Lanza, Vásquez, & Echeverría, 2004). Religious beliefs can help sufferers to gain control *with* God, not just to accept control *by* God (Pargament & Park, 1995). This distinction is critical, since passive religious coping may worsen health while active religious coping enhances it (Edwards et al., 2009).

## HEALTH BEHAVIOR

Stress can affect health directly, but stress also contributes to illness *indirectly* by disrupting health behavior (Cohen & Williamson, 1991; see Figure 8.2). **Health behavior** is any action that promotes good health. It includes healthy habits like a balanced diet, regular sleep, and exercise, as well as avoiding unhealthy activities like cigarette smoking, excessive alcohol consumption, and drug use. Poor health habits, not stress per se, may be responsible for much of the relation between stress and illness (Bogg & Roberts, 2004). In thinking about the importance of health behavior, consider this: Basic and public health behaviors—personal hygiene, sanitation, and an adequate diet—are more responsible for our vastly increased health and life expectancy than are scientific advances like the discovery of penicillin (Ray, 2004).

**Medical Advice** One very important health behavior is following medical advice, something that as many as 93 percent of all patients *fail* to do fully (Taylor, 1990). This is a particular problem for illnesses like hypertension (high blood pressure) that usually have no obvious symptoms. Patients may discontinue their medication, for example, because it offers no noticeable relief, even though it may control a dangerous underlying condition. Stress also can interfere with treatments that *do* affect symptoms. For example, family conflict makes

children with insulin-dependent diabetes less likely to adhere to medical advice about exercise, diet, and testing blood sugars (Miller-Johnson et al., 1994).

**Illness Behavior** *Illness behavior*—behaving as if you are sick—also is stress-related. Increased stress is correlated with such illness behaviors as making more frequent office visits to physicians or allowing chronic pain to interfere with everyday activities (Taylor, 1990). Effective coping involves ignoring of some physical discomfort and living life as normally as possible, particularly when coping with chronic illness.

**Social Support** *Social support* both encourages positive health behavior and has direct, physical benefits (Uchino, 2009). Even stressed monkeys exhibit less immunosuppression when they interact more with other monkeys (Cohen et al., 1992). Stressed rabbits develop clogged arteries more slowly if they affiliate with other rabbits (McCabe et al., 2002). Increased social support in humans predicts improved immune, cardiovascular, and endocrine functioning (Schneiderman, Ironson, & Siegel, 2004).

People seek social support in different ways, however, and cultural differences can be important too. For example, Asians and Asian Americans benefit from *implicit* social support such as focusing on valued social groups during times of stress. *Explicit* social support such as seeking advice and emotional solace does not buffer stress for Asians, but it does for European Americans (Taylor et al., 2007). And it sometimes is better to give than to receive. *Providing* social support promotes good health at least as much as receiving it does (Brown et al., 2003).

Of all potential sources of social support, a good marriage can be critical (Kiecolt-Glaser & Newton, 2001). One fascinating study admitted 90 newlyweds to a hospital research ward where the couples discussed marital problems for 30 minutes. Partners who were hostile or negative had more immunosuppression over the next 24 hours, and their blood pressure remained elevated, too (Kiecolt-Glaser et al., 1993). And a follow-up study found that epinephrine levels were 34 percent higher for couples who got divorced in the



The real-life Patch Adams inspired the film in which Robin Williams played the title role. Adams was a rebellious medical student in the 1960s who wanted to provide holistic care and instill optimism in his patients.



next 10 years (Kiecolt-Glaser et al., 2003). A conflicted marriage is bad for your health, and too much stress is bad for your marriage!

ILLNESS AS A CAUSE OF STRESS

Stress can cause illness, but illness also causes stress. For example, consider the effects of the diagnosis of insulin-dependent diabetes on a 10-year-old boy and his family. In order to maintain a normal range of blood sugar, the child and his parents must frequently test his blood, adjust to giving and receiving one, two, or three injections of insulin daily, and carefully monitor exercise and diet because of their effects on blood sugar. In addition, the child and his family must somehow cope with the stigma of being “different.” Finally, they have to learn to cope with the possibility of him suffering long-term side effects from hyperglycemia (high blood sugar), including kidney dysfunction or blindness. As this example suggests, helping children, adults, and families cope with the stress of chronic illness is an important part of behavioral medicine (Martire & Schulz, 2007).

Diagnosis of Stress and Physical Illness

The DSM-IV-TR does not distinguish “psychosomatic disorders” from other physical illnesses. Instead, when stress and a physical illness is a focus of treatment, the diagnosis of *psychological factors affecting medical condition* is coded on Axis I (see Table 8.4). Any physical illness can then be coded on Axis III, *general medical conditions*. The psychological factor affecting medical condition may be a mental disorder or psychological symptoms, personality traits, maladaptive health behaviors, or stress-related physiological responses.

DSM-IV-TR also has a separate axis for coding stressors, Axis IV, psychosocial and environmental problems. Earlier versions of DSM asked clinicians to rate the amount of stress using an approach similar to the SRRS, but this proved to be unreliable (Skodol et al., 1990). Now, DSM-IV-TR simply asks clinicians to rate the presence or absence of difficulties such as social, educational, or economic problems.

Psychological Factors and Some Familiar Illnesses

At the beginning of the twentieth century, infectious diseases, specifically influenza, pneumonia, and tuberculosis, were the most common causes of death in the United States (Taylor, 1995). Thanks to advances in medical science, and especially in public health, far fewer people die of infectious diseases now (see Figure 8.3). Today, most of the leading causes of death are *lifestyle diseases* that are affected by stress and health behavior (Human Capital Initiative, 1996).

In the following sections we briefly review evidence on stress and lifestyle in the etiology, course, and treatment of cancer, HIV infection, chronic pain, and sleep disorders. After this, we consider the relation between stress and today’s number-one killer, cardiovascular disease, in some detail.

CANCER

Cancer is the second leading cause of mortality in the United States today, accounting for 23 percent of all deaths. In contrast to the declining rate of death due to heart disease, cancer deaths were increasing until recent years (Jemal et al., 2006). At first glance, cancer may seem to be a purely biological illness, but the importance of psychological factors quickly becomes apparent. For example, health behavior such as cigarette smoking contributes to exposure to various *carcinogens*, cancer-causing agents.

Psychological factors also are at least modestly associated with the course of cancer (McKenna et al., 1999). Not surprisingly, cancer patients often are anxious or depressed, and commonly suffer “cancer-related fatigue,” a condition attributable to both emotional factors and the physical side effects of cancer treatments like chemotherapy (Kangas et al., 2008). Negative emotions can lead to increases in poor health behavior such as alcohol consumption and decreases in positive health behavior such as exercise. PTSD among cancer patients also is quite common (Kangas, Henry, & Bryant, 2005).

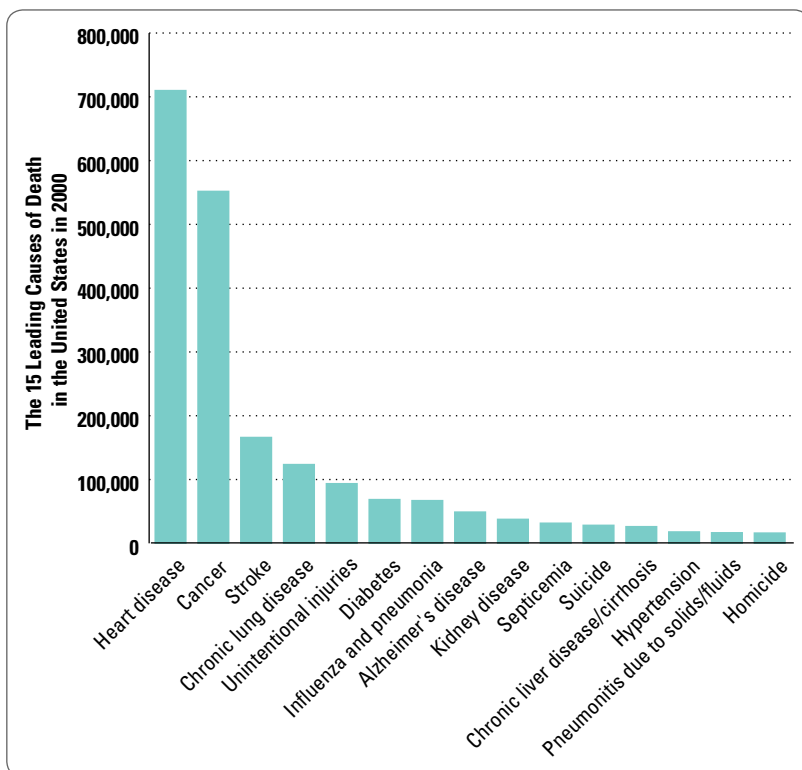
The absence of social support also can undermine compliance with unpleasant but vitally important medical treatments (Anderson, Kiecolt-Glaser, & Glaser, 1994). Cancer patients who are more emotionally expressive miss fewer

TABLE 8.4 DSM-IV-TR Diagnostic Criteria for Psychological Factors Affecting Medical Condition

- A. A general medical condition (coded on Axis III) is present.
- B. Psychological factors adversely affect the general medical condition in one of the following ways:
  - 1. The factors have influenced the course of the general medical condition as shown by a close temporal association between the psychological factors and the development or exacerbation of, or delayed recovery from, the general medical condition.
  - 2. The factors interfere with the treatment of the general medical condition.
  - 3. The factors constitute additional health risks for the individual.
  - 4. Stress-related physiological responses precipitate or exacerbate symptoms of the general medical condition.

Source: Reprinted with permission from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*, (Copyright © 2000). American Psychiatric Association.





**FIGURE 8.3**

Stress and health behavior play a central role in most of the major causes of death in the United States today.

Source: A. M. Minino and B. L. Smith, 2001, "Deaths: Preliminary Data for 2000." *National Vital Statistic Report*, 49, no. 12, Hyattsville, MD: National Center for Health Studies.

medical appointments, report a better quality of life, and maintain a better health status (Stanton et al., 2000). And in facing the specter of cancer, the encouragement and physical assistance of family and friends can boost patients' resolve to bear side effects such as hair loss and intense nausea. Of course, a diagnosis of cancer is a source of considerable emotional distress to loved ones, as well as to victims (Hagedoorn et al., 2008). For example, partners' reactions to breast cancer predict relationship quality a year later (Wimberly et al., 2005).



Social support helps cancer patients cope with uncomfortable treatments and side effects, while improving their quality of life.

Stress also may directly affect the course of cancer. In animal analogue studies, rats exposed to inescapable shock are less able to reject implanted cancer tumors than rats exposed to escapable shock or no stress at all (Visintainer, Seligman, & Volpicelli, 1982). Immunity plays an important role in limiting the spread of cancerous tumors, and immunosuppression due to stress may disrupt this protective function (Anderson, Kiecolt-Glaser, & Glaser, 1994).

**How do stress and health behavior affect even cancer and AIDS?**

Can psychological treatment alter the course of cancer? One early study found that six years after treatment, significantly fewer patients who participated in a support group died (9 percent) in comparison to patients who received no psychosocial treatment (29 percent) (Fawzy et al., 1993). Sadly, hopes have been dashed by repeated failures to replicate this optimistic result (Coyne et al., 2009). Still, the benefits of support groups for quality of life, if not longevity, are important, and include less social disruption, greater well-being, and more positive affect (Antoni et al., 2006; Brothers et al., 2011).

## ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

**Acquired immune deficiency syndrome (AIDS)** is caused by the **human immunodeficiency virus (HIV)**, which attacks the immune system and leaves the patient susceptible to infection, neurological complications, and cancers that rarely affect people with normal immune function. HIV-positive patients vary widely in how rapidly they develop AIDS. Some develop



## HIV



## JULIA

*"HIV was the absolute prism through which I began to see the world . . ."*

Watch the video "HIV: Julia" on MyPsychLab. As you watch the video, pay attention to the critical role health behavior plays in illness. Also, consider how HIV made Julia stronger, not weaker.

AIDS within months; others remain symptom-free for 10 years or more.

HIV and AIDS have reached epidemic proportions throughout the world, with a notably high prevalence in Africa. In the United States, over 1 million cases of HIV/AIDS have been reported to the Centers for Disease Control and Prevention (CDC) (CDC, 2008). In 1981, AIDS was diagnosed for the first time; in 1996, it was the eighth leading cause of death in the United States (Peters, Kochanek, & Murphy, 1998). Fortunately, death due to AIDS has declined rapidly since the middle of the 1990s due to treatments that do not cure the illness but do promote a longer, healthier life. As a result, AIDS no longer is among the 15 leading causes of death in the United States (Minino & Smith, 2001).

Behavioral factors play a critical role in the transmission of HIV. Scientists have yet to determine precisely how HIV is transmitted, but researchers have isolated a number of high-risk behaviors. Contact with bodily fluids, particularly blood and semen, is very risky. The CDC report that the highest incidence of new cases of HIV are among men who have unprotected sex with men and individuals who participate in high-risk heterosexual sexual intercourse, such as unprotected anal and vaginal intercourse (CDC, 2008). The use of condoms greatly reduces the risk of the sexual transmission of HIV. Other factors that increase the risk for HIV infection include intravenous drug use and mothers infected with HIV who transmit the infection to their unborn children (U.S. Department

of Health and Human Services, 1993). A tricky problem for HIV-positive mothers is telling growing children about their HIV status. Fortunately, recent evidence shows that focused psychological intervention encourages disclosure—with benefits for both mothers and school-aged children (Murphy et al., 2011).

Scientists and policymakers have launched large-scale media campaigns to educate the public about HIV and AIDS and to change risky behavior. Are they effective? Evidence indicates that prevention efforts produce significant but small changes in behavior (for example, condom use). Knowledge and attitudes change more, and more rapidly, than behavior (Albarracín, Durantini, & Earl, 2006). The most effective programs focus on changing specific behaviors and attitudes; the least effective programs use fear tactics (Albarracín et al., 2005). Unfortunately, but perhaps not surprisingly, the people most interested in participating in HIV change programs are the ones already engaged in less risky behavior (Earl et al., 2009).

Stress is linked with a more rapid progression of HIV, while social support is associated with a more gradual onset of symptoms (Evans et al., 1997; Leserman et al., 1999). Support groups lower distress among treated patients, but no benefits for longevity have been found. Broader social support also is extremely important to the AIDS patient's social and psychological well-being. Unfortunately, misunderstanding and fear cause many people, including many health professionals, to distance themselves from AIDS rather than offering understanding, acceptance, and support.

## PAIN MANAGEMENT

Pain can be useful. Pain signals that something is wrong, and it motivates people to seek treatment for acute injuries and illnesses. But pain is not always adaptive. In many cases, pain is *not* a sign of an underlying condition that can be treated. Examples of maladaptive pain include recurrent acute problems like headaches or chronic ones like lower back problems.

Pain can take a huge toll on the sufferer, family members, and financial resources. In a typical day, 28.8 percent of American men and 26.6 percent of women report feeling some pain (Krueger & Stone, 2008; see Figure 8.4). The past year prevalence of chronic neck or back pain is 19 percent of the U.S. population (Von Korff et al., 2005). Perhaps 50 million Americans experience some type of dysfunctional pain, costing society \$70 billion in annual healthcare (Gatchel et al., 2007).

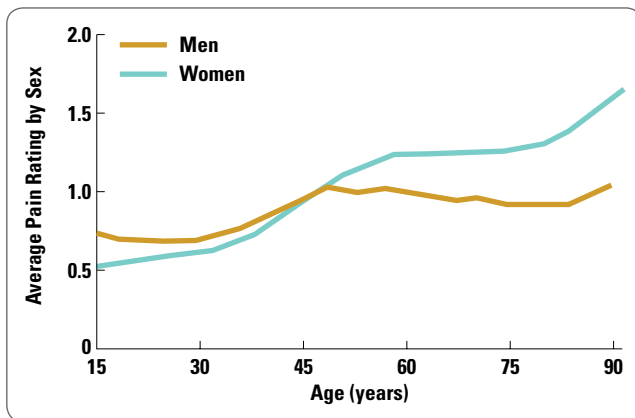
Pain is subjective. This makes pain difficult to evaluate, particularly when there is no identifiable injury or illness, as is common with headaches and lower back pain. Reports of greater pain are associated with depression and anxiety (Gatchel et al., 2007), and, conversely, higher levels of positive affect predict lower levels of reported pain (Zautra, Johnson, & Davis, 2005). People who are anxious or depressed may be more sensitive to pain, less able to cope with it, and simply more willing to complain (Pincus & Morley, 2001).

Many experts view emotion—or insight-focused psychotherapy as counterproductive and potentially damaging in treating pain (Keefe et al., 2001). More direct treatments include relaxation training and cognitive therapy. Each approach has some research support, but pain reduction typically is modest (Patterson, 2004). Most current efforts therefore focus on the *pain management*, not pain reduction. The goal of pain management is to help people to cope with pain in a way that minimizes its impact on their lives, even if the pain cannot be eliminated or controlled entirely. Programs typically include education about



Basketball superstar Ervin (Magic) Johnson became a spokesman for increasing awareness of HIV and AIDS after he tested HIV positive.





**FIGURE 8.4**

Reports of routine pain intensity increase with age but are not strongly associated with gender in this nationally representative U.S. sample. 0 = no pain and 2 = slight pain.

Source: Reprinted from *The Lancet*, 371, A. B. Krueger and A. A. Stone, "Assessment of Pain: A Community-Based Diary Survey in the USA," pp. 1519–1525, Copyright © 2008, with permission from Elsevier.

pain and its consequences, pain control methods such as relaxation or exercise, attempts to change maladaptive expectations about pain, and interventions with families or support groups.

Pain management programs have been shown to help with a wide variety of problems, including headaches, lower back pain, and facial pain. Following treatment, patients report greater satisfaction with their life and relationships, improved employment status, and less reliance on medication. Once they are better able to function in their lives, patients also often say that their pain has lessened (Gatchel et al., 2007). Improved life functioning may alter patients' awareness of discomfort, but emerging research suggests that treatment may directly alter the experience of pain. Techniques like distraction, relaxation, and reappraisal (e.g., labeling a shot as pressure instead of pain) not only lead to reduced reports of pain but also to less activation of pain processing circuitry in the brain (Edwards et al., 2009).

## SLEEP DISORDERS

Historically, sleep disturbances were of concern to mental health professionals only as a symptom of a mental disorder such as depression or anxiety. In 1994, however, DSM for the first time included a diagnostic category for **primary sleep disorder**, a condition where difficulty in sleeping is the principal complaint. Two types of primary sleep disorders are listed in DSM-IV-TR. *Dyssomnias* are difficulties in the amount, quality, or timing of sleep. *Parasomnias* are characterized by abnormal events that occur during sleep, for example, nightmares.

The dyssomnias include primary insomnia, primary hypersomnia, narcolepsy, breathing-related sleep disorder, and circadian rhythm sleep disorder. *Primary insomnia* involves difficulties initiating or maintaining sleep, or poor quality of sleeping (e.g., restless sleep). Primary insomnia is a common problem that is associated with lower ratings of subjective well-being even after controlling for social characteristics, and mental and physical health (Hamilton et al., 2007). Fortunately, effective treatments are available. Treatment includes stimulus control techniques (only staying in bed during sleep) and resetting circadian rhythms (going to bed and getting up at set times), as well

## MyPsychLab VIDEO CASE

### Sleep Disorder: Narcolepsy



**MALI**

"I never knew when I fell asleep. All I know is that I would lift my head and say, 'I fell asleep again.'"

Watch the video, "Sleep Disorder: Narcolepsy: Mali" on MyPsychLab. As you watch the video, note how Mali initially thought her problems were normal despite the disruptions they caused. Also, see how surprised—and relieved—she was to receive a diagnosis for something she had never heard about before, and now has become an expert on.

as not napping, regardless of the length of sleep (Morin et al., 2006). There is even evidence that Internet-based programs alleviate insomnia (Ritterband et al., 2010). *Primary hypersomnia* is excessive sleepiness characterized by prolonged or daytime sleep, lasting at least a month and significantly interfering with life functioning. Primary hypersomnia is similar to *narcolepsy*, irresistible attacks of refreshing sleep that occur over the course of at least three months. However, narcolepsy also is characterized by the sudden loss of muscle tone for brief periods of time (usually



Nightmares and other sleep disorders are common problems, but scientists only recently have begun to study sleep disorders systematically.



following intense emotion) and/or intrusive periods of dreaming just before awakening. The “sleep-attacks” in narcolepsy are also less resistible than is the general desire to sleep in primary hypersomnia (APA, 2000).

*Breathing-related sleep disorder* involves the disruption in sleep due to breathing problems such as *sleep apnea*, the temporary obstruction of the respiratory airway. People with sleep apnea typically snore loudly due to an airway that is partially obstructed as a result of obesity or other conditions. Sleep apnea patients will stop breathing for 20 to 30 seconds when the obstruction becomes complete. This is followed by gasping, body movements, or even louder snoring. Not surprisingly, sleep apnea disrupts both the patient’s sleep and the sleep of others in their vicinity. *Circadian rhythm sleep disorder* is a mismatch between the patients’ 24-hour sleeping patterns and their 24-hour life demands that causes significant life distress. The disorder is found more commonly among adolescents and people who work night shifts (APA, 2000).

Parasomnias include nightmare disorder, sleep terror disorder, and sleepwalking disorder. People with *nightmare disorder* are frequently awakened by terrifying dreams. *Sleep terror disorder* also involves abrupt awakening from sleep, typically with a scream, but it differs from nightmare disorder in important respects. People with nightmare disorder recall their dreams and quickly orient to being awake; people with sleep terror disorder recall little of their dreams, show intense autonomic arousal, and are difficult to soothe. Moreover, a person with sleep terror typically returns to sleep fairly quickly and recalls little, if anything, about the episode the following morning.

Finally, *sleepwalking disorder* involves rising from the bed during sleep and walking about in a generally unresponsive state. In extreme cases, the person may use the bathroom, talk (with a minimum of meaningful dialogue), eat, or even run in a frantic attempt to escape some threat. Upon awakening, however, the person cannot remember the episode. Occasional episodes of sleepwalking are fairly common, especially among children. Like all sleep disorders, sleepwalking disorder tends to be diagnosed only if it causes significant distress or impairs the person’s ability to function (APA, 2000).

## Cardiovascular Disease

The number-one killer in the United States today is cardiovascular disease, and we focus on this disease as a more detailed example of stress research and treatment. **Cardiovascular disease (CVD)** is a group of disorders that affect the heart and circulatory system. The most important of these illnesses are *hypertension* (high blood pressure) and **coronary heart disease (CHD)**. The most deadly and well-known form of coronary heart disease is *myocardial infarction (MI)*, commonly called a heart attack. Hypertension increases the risk for CHD, as well as for other serious disorders, such as strokes.

Cardiovascular disorders are the leading cause of mortality not only in the United States, where they account for over one-third of all deaths (Minino & Smith, 2001), but also in most industrialized countries. About two-thirds of the deaths due to cardiovascular disorders are caused by coronary heart disease. Mortality due to CHD is of particular concern because victims of the disease tend to be relatively young. About half of all Americans with CHD and about a quarter of all stroke victims are under the age of 65 (Jenkins, 1988).

An individual’s risk for developing CVD, and particularly CHD, is associated with a number of health-related conditions, including weight, diet, exercise, and cigarette smoking. In addition, personality styles, behavior patterns, and forms of emotional expression appear to contribute directly to the development of CVD (Rozanski, Blumenthal, & Kaplan, 1999).

### SYMPTOMS OF CVD

Hypertension is often referred to as the “silent killer” because it produces no obvious symptoms. For this reason, high blood pressure often goes undetected, and routine blood pressure monitoring is extremely important. The measurement of blood pressure includes two readings. *Systolic* blood pressure is the highest pressure that the blood exerts against the arteries. This occurs when the heart is pumping blood. *Diastolic* blood pressure is the lowest amount of pressure that the blood creates against the arteries.



Over half of all victims of sudden death following myocardial infarction (heart attack) have no previous history of treatment for CHD.



This occurs between heartbeats. Generally, hypertension is defined by a systolic reading above 140 and/or a diastolic reading above 90 when measured while the patient is in a relaxed state.

The most notable symptom of CHD is chest pain. Typically, the pain is centralized in the middle of the chest, and it often extends through the left shoulder and down the left arm. In less severe forms of the disorder, the pain is mild, or it may be sharp but brief. The pain of myocardial infarction typically is so intense, however, that it is crippling. Two-thirds of all deaths from CHD occur within 24 hours of a coronary event (Kamarck & Jennings, 1991). In over half of these sudden deaths, the victim received no previous treatment for CHD, an indication that either there were no warning symptoms or the symptoms were mild enough to ignore. Research using portable electrocardiogram monitoring and diary recordings indicates that patients are unaware of many episodes of inadequate oxygen supply to the heart (Krantz et al., 1993; Schneiderman, Chesney, & Krantz, 1989).

## DIAGNOSIS OF CVD

Myocardial infarction and angina pectoris are the two major forms of coronary heart disease. *Angina pectoris* involves intermittent chest pains that are usually brought on by some form of exertion. Attacks of angina do not damage the heart, but the chest pain can be a sign of underlying pathology that puts the patient at risk for a myocardial infarction. MI (heart attack) does involve damage to the heart, and, as noted, it often causes *sudden cardiac death*, which is usually defined as death within 24 hours of a coronary episode.

Hypertension can be primary or secondary. *Secondary hypertension* results from a known problem such as a diagnosed kidney or endocrine disorder. It is called secondary hypertension because the high blood pressure is secondary to—that is, a consequence of—the principal physical disorder. Primary or *essential hypertension* is diagnosed when the high blood pressure is the principal or only disorder. There is no single, identifiable cause of essential hypertension, which accounts for approximately 85 percent of all cases of high blood pressure. Instead, multiple physical and behavioral risk factors contribute to the elevated blood pressure, which is why it is a concern in behavioral medicine and health psychology.

## FREQUENCY OF CVD

Cardiovascular disease has been the leading killer in the United States since the 1920s, but the death rate due to CVD has declined by 25 percent or more in the United States, Japan, and many Western European countries. At the same time, mortality rates attributed to CVD have increased in many eastern European countries. Some but not all of these trends are attributable to changes in diet, cigarette smoking, and blood pressure (Jenkins, 1988). Another part of the explanation may be increased awareness of the negative effects of stress in the West—and the increased industrialization and increased stress in Eastern Europe.

**Risk Factors for CHD** Epidemiologists have identified several risk indicators for CHD. Men are twice as likely to suffer from CHD as are women, and sex differences are even greater with more severe forms of the disorder. Age is another major risk factor. For men, risk for CHD increases in a linear fashion with increasing age after 40. For women, risk for

CHD accelerates more slowly until they reach menopause and increases sharply afterwards. Rates of CHD also are higher among low-income groups, a finding that likely accounts for the higher rates of CHD among black than among white Americans. Finally, a positive family history is also linked to an increased risk for CHD, due at least in part to genetic factors (Jenkins, 1988).

**Risk Factors for Hypertension** About 30 percent of all U.S. adults suffer from hypertension, and many of the same risk factors that predict CHD also predict high blood pressure, including genetic factors, a high-salt diet, health behavior, and lifestyle. Hypertension is more common in industrialized countries. In the United States, high blood pressure is more common among men, African Americans, low-income groups, and people exposed to high levels of chronic life stress. Although many of these risk factors are interrelated, they appear to have independent effects in increasing the prevalence of hypertension. For example, one study found that hypertension was twice as common among blacks as whites, but among black men who lived in high-stress neighborhoods, the risk was four times as great (Roberts & Rowland, 1981).

**Behavior and CHD** Several health behaviors are linked to CHD, which is why it is called a “lifestyle disease.” Hypertension increases the risk for CHD by a factor of two to four. The risk for CHD also is two to three times greater among those who smoke a pack or more of cigarettes a day. Obesity, a fatty diet, elevated serum cholesterol levels, heavy alcohol consumption, and lack of exercise also increase the risk for CHD. Specific risk ratios are difficult to identify for each of these factors, however, because weight, diet, cholesterol, alcohol consumption, and exercise all are highly correlated (Jenkins, 1988).

CHD also is associated with psychological characteristics, including depression (Frasure-Smith & Lespérance, 2005). However, researchers are still sorting out how much specific psychological factors increase risk. For example, in 1981, the National Heart, Lung, and Blood Institute officially concluded that the *Type A behavior pattern* (a competitive, driven personality) increased the risk for CHD. However, recent research has challenged this conclusion, as we discuss shortly.

**Why is coronary heart disease a lifestyle disease?**



Heart disease is a lifestyle illness. Obesity, lack of exercise, and a fatty diet all are risk factors for CHD.



## CAUSES OF CVD

**Biological Factors** The immediate cause of CHD is the deprivation of oxygen to the heart muscle. No permanent damage is caused by the temporary oxygen deprivation (*myocardial ischemia*) that accompanies angina pectoris, but part of the heart muscle dies in cases of myocardial infarction. Oxygen deprivation can be caused by temporarily increased oxygen demands on the heart, for example, as a result of exercise. More problematic is when atherosclerosis causes the gradual deprivation of the flow of blood (and the oxygen it carries) to the heart. *Atherosclerosis* is the thickening of the coronary artery wall that occurs as a result of the accumulation of blood lipids (fats) with age, and which also may be caused by inflammation resulting from stress (Black & Garbutt, 2002). The most dangerous circumstance is when oxygen deprivation is sudden, as occurs in a *coronary occlusion*. Coronary occlusions result either from arteries that are completely blocked by fatty deposits or from blood clots that make their way to the heart muscle.

The immediate biological causes of hypertension are less well understood, as are the more distant biological causes of both hypertension and CHD. A positive family history is a risk factor for both hypertension and CHD, and most experts interpret this as a genetic contribution. However, research using animal models of CVD suggests a gene-environment interaction. For example, rats prone to develop hypertension do so only when exposed to salty diets or environmental stress (Schneiderman et al., 1989).

**Psychological Factors in CVD** The most important psychological contributions to CVD are health behaviors that (1) have a well-documented association with heart disease; (2) decrease the risk for CVD when they are modified; and (3) often are difficult to change. These health behaviors include avoiding or quitting smoking, maintaining a proper weight, following a low-cholesterol diet, exercising frequently, monitoring blood pressure regularly, and taking antihypertensive medication as prescribed.

Stress also contributes to CVD in at least two ways. First, over the long run, the heart may be damaged by constant stress. Second, stress immediately taxes the cardiovascular system, increasing the heart rate and blood pressure, which can precipitate sudden symptoms or even an MI. A dramatic example of the immediate effects of stress was observed during the Los Angeles earthquake of 1994. Cardiac deaths on the day of the earthquake rose to 24 from an average of 4.6 the preceding week (Leor, Poole, & Kloner, 1996). Below we consider four areas of research on long-term effects: cardiovascular reactivity, job strain, Type A behavior, and depression and anxiety (Krantz et al., 1988; Rozanski et al., 1999).

**Cardiovascular Reactivity to Stress** Increased blood pressure and heart rate are normal reactions to stress, but researchers have long observed that different people exhibit different *cardiovascular reactivity to stress*, greater or lesser increases in blood pressure and heart rate when exposed to stress in the laboratory. Are people who show greater cardiovascular reactivity to stress more likely to develop CVD?

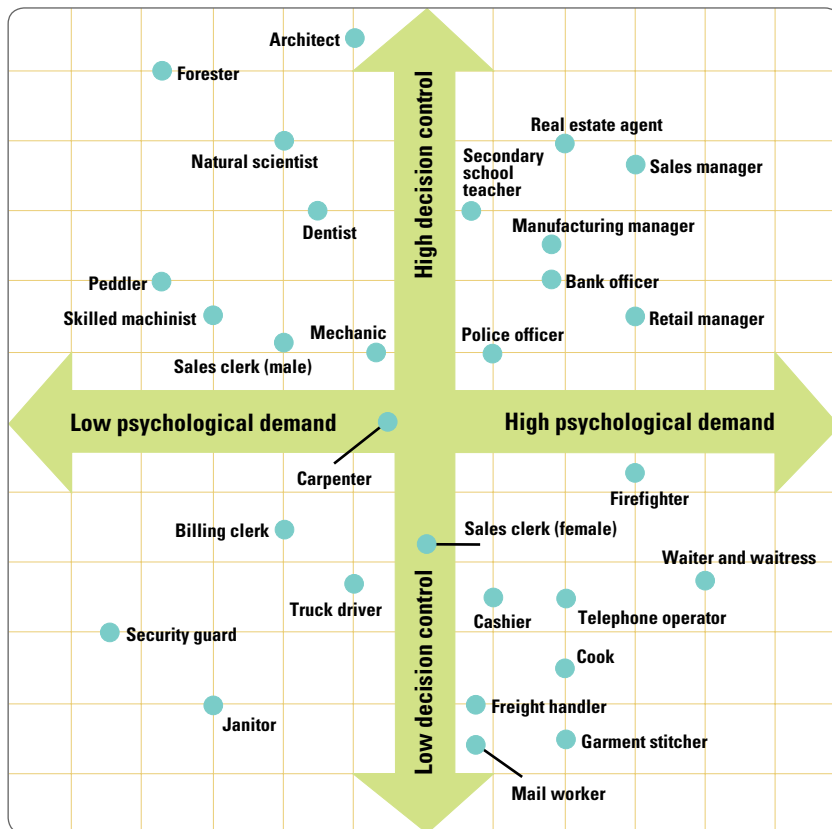
Yes. In a study of patients with coronary artery disease, patients who reacted to mental stress in the laboratory with greater myocardial ischemia (oxygen deprivation to the heart) had a higher rate of fatal and nonfatal cardiac events over the next five years in comparison to their less reactive counterparts. In fact, mental stress was a better predictor of subsequent cardiac events than was physical stress (exercise testing) (Jiang et al., 1996).

**Life Stressors: Job Strain** High-level cardiovascular reactivity will have little effect on people who experience little stress. Thus, exposure to real-life stress also must be part of the equation predicting CVD, and research shows that chronic stress does increase the risk (Krantz et al., 1988; Schneiderman et al., 2004). For example, increased rates of CHD are found among people with high-stress occupations. What appears to be most damaging is *job strain*, a situation that pairs high psychological demands with a low degree of decisional control (Karasek et al., 1982). A waitress has relatively high demands and low control, for instance, whereas a



Air traffic controllers perform a job with high demands, limited control, and lives at stake, a recipe for stress.





**FIGURE 8.5**

Occupations classified according to the degree of demand and control that are associated with them. Jobs with low control and high demands cause more job strain and increased cardiovascular risk.

Source: From R. A. Karasek, 1988. Cited in D. S. Krantz, R. J. Contrada, D. R. Hill, and E. Friedler, "Environmental Stress and Biobehavioral Antecedents of Coronary Heart Disease," *Journal of Consulting and Clinical Psychology*, 56, p. 334. Copyright © 1988, American Psychological Association. Reprinted by permission.

forest ranger has relatively few demands and a high degree of control. Figure 8.5 portrays a number of occupations and how they vary in terms of psychological demands and decisional control.

Several studies have found a relationship between job strain and CHD (Krantz et al., 1988; Rozanski et al., 1999). For example, the risk for CHD was one and one-half times higher among women who had high job strain based on objective evaluations of their occupations in the Framingham Heart Study, a major *longitudinal study* of the development of coronary heart disease (see the Research Methods box). The risk was three times higher among women whose self-reports indicated high job strain (LaCroix & Haynes, 1987).

Work strain is not limited to employment but also includes work that is performed in other life roles. In an earlier analysis of the Framingham study, women who were employed for more than half of their adult lives were no more likely to develop CHD than were homemakers. However, employed women with children were more likely to suffer from heart disease. In fact, the risk increased with the number of children for employed women but not for homemakers (Haynes

& Feinleib, 1980). Women (and men) encounter strain not only in their occupations, but also in the competition between their various life roles.



Employed women with children are more likely to suffer from heart disease than employed women without children or homemakers. Job strain includes conflict between work and family life.

### **Type A Behavior and Hostility**

Characteristic styles of responding to stress may also increase the risk for CVD, particularly the **Type A behavior pattern**—a competitive, hostile, time urgent, impatient, and achievement-striving style of responding to challenge. As originally identified by cardiologists Meyer Friedman and Ray Rosenman (1959), the Type A individual is a “superachiever” who, like Bob Carter, knows no obstacle to success and who may sacrifice everything for the sake of achievement (Jenkins, 1988). Type B individuals, in contrast, are more calm and content.

In 1981, the National Blood, Heart, and Lung Institute concluded that Type A behavior was a risk factor for CHD, independent of other risks such as diet. This official sanction stimulated a great deal of additional research, but many studies conducted since 1980 failed to support earlier findings (Rozanski et al., 1999). Why? Research methods may have contributed to the conflicting



# RESEARCH METHODS

## LONGITUDINAL STUDIES: LIVES OVER TIME

**A longitudinal study** involves studying people repeatedly over time. The approach contrasts with the **cross-sectional study** in which people are studied at only one time point. One goal of a longitudinal study can be to learn whether the effects of an experiment (such as a treatment outcome study) grow smaller, perhaps stronger, or stay the same over time. When a longitudinal study involves a correlational design, a common goal is to determine whether hypothesized causes come before their assumed effects. We know that causes must precede effects in time. The bat is swung before the ball flies over the fence. If we demonstrate that stress precedes heart disease in longitudinal research, this helps scientists rule out the alternative interpretation (reverse causality) that the illness caused the stress.

A major liability of a longitudinal study is higher cost. It is much less expensive to study stress and heart disease at one point in time than to assess stress now and CHD as it develops over

the next 10 years. One way around the expense is to use a retrospective study (sometimes called a follow-back study). In this research design, scientists look backward in time either by asking people to recall past events or by examining records from the past. The retrospective method is less expensive, but it is of limited value because of distorted memories and limited records (see the Research Methods box in Chapter 7).

The **prospective design** (sometimes called a follow-forward study) is a more effective but more expensive alternative. In prospective research, supposed causes are assessed in the present, and subjects are followed longitudinally to see if the hypothesized effects develop over time. Using the follow-up method, scientists can assess a range of predictions more thoroughly and more objectively than in follow-back studies.

Researchers use both methods in studying health and illness (and ab-

normal psychology generally). When a finding is supported in prospective longitudinal research, you can have greater confidence in an investigator's causal hypothesis than in cross-sectional research. However, correlation does not mean causation, even in a longitudinal study. The supposed "cause" and the "effect" could both result from some third variable. For example, a researcher might find that Type A behavior measured at one point in time predicts CHD several years later. But chronic job stress may cause

### *How can longitudinal studies distinguish causes from effects?*

both Type A behavior and later heart disease. Scientists need many studies using many different research methods to establish causation. And you need to understand the strengths and weaknesses of research methods in order to be an informed consumer of scientific information.

results. Some researchers used self-report measures of Type A, but prediction is better when Type A is assessed in a structured interview (during which the interviewer provokes Type A behavior) (Miller et al., 1991). Also, *hostility* predicts future CHD better than other aspects of Type A behavior (Miller et al., 1996; Smith & Ruiz, 2002). A Finnish investigation found that three items reliably predicted death among men who had a history of CHD or hypertension: ease with which anger was aroused, argumentativeness, and irritability (Koskenvuo et al., 1988). This aspect of Type A behavior may be more critical than the pattern as a whole.

**Depression and Anxiety** Depression is three times more common among patients with CHD than in the general population, and depression doubles the risk for future cardiac events (Frasure-Smith & Lespérance, 2005). Is depression a reaction to heart disease? Or does depression increase CHD, and if so, how? A study of over 2,400 depressed or isolated heart attack patients supports the first interpretation. A major randomized trial of cognitive behavior therapy, sometimes combined with antidepressant medication, alleviated depression somewhat, but the

treatment group had no better coronary outcome than untreated controls (ENRICH, 2003).

Anxiety seems to be associated with one crucial aspect of CHD: sudden cardiac death (Rozanski et al., 1999). *Heart-focused anxiety*, preoccupation with heart and chest sensations, is another important concern (Eifert, Zvolensky, & Lejuez, 2000).

**Social Factors in CVD** Social factors can influence the risk for CVD in many ways. Friends and family members can encourage a healthy—or an unhealthy—lifestyle. Interpersonal conflict can create anger and hostility, which increase the risk for coronary heart disease. Economic resources, being married, and/or having a close confidant all are related to a more positive prognosis (Williams et al., 1992). In fact, a *spouse's* confidence in coping with heart disease predicts *patients'* increased survival over four years (Rohrbaugh et al., 2004). In one study, the more the well spouse used the pronoun "we" when talking about his or her loved one's health, the more the heart failure patient improved in the next six months (Rohrbaugh et al., 2008). More broadly, societal values (for example, about smoking) and cultural





These stock traders illustrate the Type A behavior pattern. Type A is a personality style characterized by competitiveness, hostility, urgency, impatience, and achievement striving in response to challenge.

norms (for example, about job stress) also can affect the risk for CVD.

Recognizing the importance of interpersonal and societal influences, many efforts have been directed toward structuring the *social ecology*—the interrelations between the individual and the social world—to promote health (Stokols, 1992). As a child, you were exposed to many of these efforts, such as antismoking campaigns or the awards given in school for physical fitness. Good health is commonly promoted in the media, and more employers also are encouraging positive health behavior. Do these broad-scale efforts work? We address this question shortly.

**Integration and Alternative Pathways** CVD is an excellent example of the value of the systems approach. For the purpose of integration, we return to the analogy between the functioning of the cardiovascular system and an automobile. Some cars are built for high performance, some for economy. Some are defective when they leave the factory. Whatever its original condition, a car's state of repair is affected by how it is driven and how it is maintained. Similarly, CVD is caused by a combination of genetic makeup, an occasional structural defect, maintenance in the form of health behavior, and how

hard the heart is driven by stress, depression, coping, and societal standards.

Much progress has been made in identifying biological, psychological, and social risk factors for CVD. An important goal for future research is to integrate knowledge across risk factors (Kop, 1999). Numerous questions need to be addressed. For example, how do we distinguish the effects of stress as an immediate, precipitating cause of CHD from its cumulative effects on health over long periods of time? To what extent are the risks associated with stress caused by poor health behavior and not by stress itself? What protects those individuals who do not become ill, even when they are exposed to multiple risk factors?

## PREVENTION AND TREATMENT OF CVD

Several medications known as *antihypertensives* are effective treatments for reducing high blood pressure. Other drugs, called *beta blockers*, reduce the risk of myocardial infarction or sudden coronary death following a cardiac episode (Johnston, 1989). Still other biomedical interventions reduce the risk factors associated with CVD. For example, serum cholesterol can be lowered with medication. Because many of the risk factors for CVD are linked with health behavior, it also may be possible to prevent heart disease with psychological intervention.

**Primary Prevention** Numerous public service efforts attempt to prevent CVD by encouraging people to quit smoking, eat well, exercise, monitor their blood pressure, and otherwise improve their health behavior. Few of these familiar efforts have been evaluated systematically, although researchers have conducted a handful of careful studies. One of the most important took place in three small California communities near Stanford University (Farquhar et al., 1977). Media campaigns designed to improve knowledge and change behavior were offered in two towns that formed the experimental groups, whereas no intervention was given in one town that was used as a control group. The media campaigns were supplemented with face-to-face interviews in one of the two towns receiving the intervention.

*Do public service efforts to promote good health lower the risk of CHD?*

Findings indicated that the media campaigns increased the public's knowledge about CHD, particularly in the community where face-to-face interviews took place. Did this increased knowledge lead to changes in behavior? The answer appears to be yes—up to a point. People in the experimental communities improved their diet and lowered their serum cholesterol, but they made only minor changes in smoking (Farquhar et al., 1977). The study could not determine whether the interventions helped reduce the incidence of heart disease. Recall, however, that the rates of CVD have declined in Western countries as health behavior has improved. Increasing public awareness can slowly improve health behavior and eventually may lower the risk of heart disease.





*"Once upon a time, there was a frozen pizza, and inside the pizza some very bad monsters lived. Their names were refined white flour, reconstituted tomato, and processed cheese. But the worst monster of all was called pepperoni!"*



A graphic health warning on a pack of cigarettes sold in Canada. In 2000, the Canadian government approved such warnings, the first country in the world to take such an aggressive anti-smoking stance.

**Secondary Prevention** The treatment of essential hypertension is one of the most important attempts at the secondary prevention of CHD. Treatments of hypertension fall into two categories. One focuses on improving health behavior, and the other emphasizes *stress management*, attempts to teach more effective coping skills.

Improvements in health behavior—including weight reduction, decreased alcohol consumption, and reduced intake of dietary salt—can help lower blood pressure. For many patients these behavioral changes eliminate the need for taking antihypertensive medication (Johnston, 1989). But can experts help people make the necessary lifestyle changes? Many efforts are only minimally effective, in part because they are weak or poorly constructed. For example, a physician may simply encourage a patient to lose weight or give him educational pamphlets to read. More intensive treatments appear to be more effective (Dusseldorp et al., 1999).

The major form of stress management used to treat hypertension is behavior therapy, particularly relaxation training and biofeedback. **Biofeedback** uses laboratory equipment to monitor physiological processes that generally occur outside conscious awareness and to provide the patient with



conscious feedback about these processes. Blood pressure may be displayed on a video screen, for example, so that increases or decreases are readily apparent to the patient. The patient can then experiment with various coping strategies, for example, imagining lying on a beach, to see whether the technique reduces his or her blood pressure.

Biofeedback produces reliable reductions in blood pressure, as does relaxation training. Unfortunately, the reductions are small, often temporary, and considerably less than those produced by antihypertensive medications (Andrews et al., 1984). Overall, stress management appears to improve quality of life but has little effect on disease (Claar & Blumenthal, 2003). Biofeedback is a particularly dubious treatment for hypertension, one that some well-respected investigators suggest should be abandoned (Johnston, 1989).

The Trials of Hypertension Prevention (TOHP) is an important study of whether stress management and health behavior interventions can lower high blood pressure (TOHP Collaborative Research Group, 1992). More than 2,000 women and men with hypertension were randomly assigned to one of seven different treatments, three lifestyle interventions—weight reduction, sodium (salt) reduction, and stress management—plus four nutritional supplement conditions. Group meetings were held over several weeks for the three lifestyle interventions. In the nutrition conditions, the patient's ordinary diet was supplemented with dietary agents hypothesized to lower blood pressure: calcium, magnesium, potassium, or fish oil. Results from Phase I of the study indicated that only the weight reduction and the salt reduction programs lowered blood pressure over a follow-up period of up to one and one-half years. Neither stress management nor any of the dietary supplements produced benefits. Findings from Phase II of the TOHP underscored the importance of weight loss. Even a modest reduction in weight produced clinically significant reductions in blood pressure (Stevens et al., 2001).

The Multiple Risk Factor Intervention Trial (MRFIT), another major investigation, included over 12,000 men at risk for CHD. Participants were assigned at random to intervention programs, including both education and social support. Treatment caused improved health behavior, specifically reduced smoking and lower serum cholesterol. However, the treatment groups did not have a lower incidence of heart disease than controls seven years later (MRFIT, 1982). An encouraging interpretation of this discouraging outcome is that men in the control group also improved their health behavior. The control group had a lower disease rate than expected based on their risk indicators, and the study was conducted during a time when the public's concern with health increased dramatically.

**Tertiary Prevention** Tertiary prevention of CHD targets patients who have already had a cardiac event, typically a myocardial infarction. The hope is to reduce the incidence of recurrence of the illness. Exercise programs are probably the most common treatment recommended for cardiac patients, but evidence of their effectiveness is limited (Johnston, 1989). The most effective programs are both structured and individualized for each patient (Blanchard, 1992; Frasure-Smith & Prince, 1985). One patient may benefit from a smoking reduction program, a second by a stress reduction workshop, and a third by exercise classes. Handing

out pamphlets or delivering stern lectures does little to alter health behavior.

More optimistic evidence on preventing the recurrence of CHD comes from efforts to alter the Type A behavior pattern (Friedman et al., 1986), a somewhat surprising circumstance given the controversies about Type A. Successful intervention is multifaceted. For example, it includes *role playing*—improvisational play acting—to teach patients how to respond to stressful interactions with reduced hostility. The cardiac patient might act out his usual response to a bothersome subordinate, for example. In subsequent role plays, the patient tries out a new, less hostile way of responding. Cognitive therapy designed to alter faulty thought patterns also is a part of these interventions (Thoresen & Powell, 1992). For example, Bob Carter believed that he must be the best at everything. Cognitive therapy helps patients like Bob to develop beliefs and goals that are more realistic—and healthy.

Type A behavior can be modified, and this may reduce the subsequent risk for CHD (Nunes, Frank, & Kornfeld, 1987; Thoresen & Powell, 1992). One study of nearly 600 patients found that stress management training reduced the annual incidence of cardiac events by almost 50 percent in comparison to 300 patients who received standard medical care (Friedman et al., 1986). Importantly, subjects who showed the greatest reduction in Type A behavior were four times less likely to experience a myocardial infarction during the following two years.

Finally, we should note that some treatments focus on the effects of heart disease on life stress rather than the other way around. These treatments teach cardiac patients and their families to cope more effectively with the psychological consequences of having a heart attack, including depression, anxiety, and changes in sexuality, marriage, and family relationships (Johnston, 1985). Since depression is a risk factor for future cardiac illness (Carney et al., 1995), such interventions may, in turn, help improve the patient's physical health. The link between stress and physical health clearly is a reciprocal one.



Exercise and maintaining a healthy weight can help prevent heart disease and also lower the risk for recurrence.



# Getting Help

Stressed out? We all are at times—when we face exams, have to deal with difficult relationships, or just have too much to do and not enough time to do it.

If there is too much stress in your life, a helpful first step is to analyze it. One great way to begin is to write about the situations that stress you out, your responses, and your attempts at coping. You could start a journal; you could write someone a letter (that you may or may not mail); or you could just jot down a few notes. Writing can help you get some things off your chest—and off your mind. Writing can also help you to sort things out. Writing takes thoughts and feelings from inside your head and puts them out there, where you can look at them. Sometimes just putting your thoughts down on paper can help: “Whew! I don’t

have to think about that anymore!”

Another benefit is that you can go back and read what you wrote and correct and organize your thoughts and feelings. An engaging, research-based account of the benefits of writing is James Pennebaker’s *Opening Up: The Healing Power of Expressing Emotions*.

Another way to analyze stress in your life is to complete some stress-rating forms. You can find one commonly used form in Table 8.1 (page 197), or you can complete a stress rating measure online. A quick Internet search will pull up several sites that allow you to complete stress rating measures. Some are designed specifically for college students.

What about coping with stress? If your usual strategies aren’t working, a useful resource about relaxation is Herbert Benson’s book *The Relax-*

*ation Response*. Exercise is another healthy coping technique. If you have troubling physical symptoms linked with stress, you should consult your family physician. A mental health professional may be more appropriate to contact if your problems with stress are emotional.

Finally, if you are suffering from the stress of having a physical illness and want to know about the latest research, the place to start online is the homepage of the National Institutes of Health (NIH). If your illness is chronic, particularly difficult, or rare, you might find it helpful to communicate online with others who suffer from the same disease. Because there are so many resources on the Internet, most search engines contain a category specifically for “health.” As you browse, remember to be skeptical and cautious in evaluating information.

## SUMMARY

- Scientists now view every physical illness as a product of the interaction between the psyche and soma, mind and body.
- **Behavioral medicine** is a multidisciplinary field that investigates psychological factors in physical illness.
- **Stress** is a challenging event that requires physiological, cognitive, or behavioral adaptation.
- Stress activates the **fight-or-flight response**, an evolved reaction to threat that leads to the intense arousal of the sympathetic nervous system.
- In response to stress, the *adrenal glands* release two key hormones, epinephrine (adrenaline), which leads to the familiar “rush of adrenaline,” and **cortisol** (the “stress hormone”), which helps the body make repairs similar to steroids.
- **Psychoneuroimmunology (PNI)** is the study of how stress also impairs immune functioning.
- **Problem-focused coping** is an attempt to change the stressor, while **emotion-focused coping** involves altering internal distress.
- **Health behavior** includes positive actions like exercise and negative ones like cigarette smoking.
- Lifestyle is central to the top causes of death in the United States today.
- The number-one killer is **cardiovascular disease (CVD)**, disorders that affect the heart and circulatory system. Psychological factors contributing to CVD include health behavior, cardiovascular reactivity, chronic stressors like job strain, the hostility that is part of the **Type A behavior pattern**, and depression and anxiety.
- The primary prevention of CHD includes efforts to improve health behavior. Treating hypertension by encouraging improved health behavior and stress management are efforts at the secondary prevention of CHD. Tertiary prevention of CHD targets patients who have already had a cardiac event, for example, attempting to modify their Type A behavior.



# The Big Picture

## CRITICAL THINKING REVIEW

- **How can stress make you physically ill?**

When repeated over time, physiological reactions to stress can leave you susceptible to illness . . . (see p. 199)

- **What are some good ways of coping with stress?**

People cope with stress in many ways, good and bad. Two very important, alternative strategies are problem-focused and emotion-focused coping . . . (see p. 201)

- **What does it mean to say people are resilient?**

Positive psychologists instead see pervasive human resilience, the ability to cope successfully with the challenges of life, including very stressful ones . . . (see p. 202)

- **Does stress really play a role in diseases like cancer and AIDS?**

At first glance, cancer may seem to be a purely biological illness, but the importance of psychological

factors quickly becomes apparent. For example, health behavior such as cigarette smoking contributes to exposure to various *carcinogens*, cancer-causing agents . . . (see p. 204)

- **What is a lifestyle disease?**

Several health behaviors are linked to CHD, which is why it is called a “lifestyle disease.” . . . (see p. 209)

- **What is “Type A” behavior and can it cause heart attacks?**

Characteristic styles of responding to stress may also increase the risk for CVD, particularly the Type A behavior pattern—a competitive, hostile, time urgent, impatient, and achievement-striving style of responding to challenge . . . (see p. 211)

## KEY TERMS

acquired immune  
deficiency  
syndrome (AIDS)  
behavioral medicine  
biofeedback  
cardiovascular dis-  
ease (CVD)

coronary heart disease  
(CHD)  
cortisol  
cross-sectional study  
emotion-focused  
coping  
fight-or-flight response

general adaptation  
syndrome (GAS)  
health behavior  
homeostasis  
human immunodef-  
iciency virus  
(HIV)

longitudinal study  
primary sleep disorder  
problem-focused  
coping  
prospective design  
psychoneuroimmunology  
(PNI)

resilience  
stress  
tend and befriend  
Type A behavior  
pattern



# Personality Disorders



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◀ In this award-winning 1948 film, Humphrey Bogart plays a prospector whose pervasive paranoia leads to serious problems as he and his partners search for gold in central Mexico.

People are social organisms. Reproduction and survival depend on successful, cooperative interactions with other people. We form social alliances for many purposes, such as raising families, doing our jobs, and living in a community. We also compete with others, and in some cases we have to protect ourselves from others. These relationships are governed by a variety of psychological mecha-

nisms that, taken together, constitute our personalities. **Personality** refers to enduring patterns of thinking and behavior that define the person and distinguish him or her from other people. Included in these patterns are ways of expressing emotion as well as patterns of thinking about ourselves and other people. For the most part, personality serves as the glue that anchors and facilitates interactions



with other people. But it can also go awry. When enduring patterns of behavior and emotion bring the person into repeated conflict with others, and when they prevent the person from maintaining close relationships with others, an individual's personality may be considered disordered.

Of course, the dividing line between eccentricity and personality pathology is difficult to define. We all have our quirks and idiosyncrasies, and there are many different ways to manage relationships with other people. For example, it is often helpful to be skeptical of the things that other people do and say. When does a tendency to be suspicious

of other people's motives cross the line into paranoia? Self-confidence is another admirable quality, but it can lead to problems if it escalates into full-blown grandiosity. In many ways, the distinctions among healthy traits, eccentricity, and personality pathology depend on the person's ability to adapt to the demands of different situations. Variety and flexibility in interpersonal behavior are undoubtedly helpful. People with personality disorders can make their own social problems worse (often unwittingly) by persistently responding in ways that do not suit the social challenges that they face.

## The Big Picture

- Why are the personality disorders more controversial than other forms of mental disorder?
- Which aspects of normal personality are involved in the definition of disordered personality?
- Is a diagnosis of personality disorder influenced by gender bias?
- Are personality disorders really stable over the entire lifespan?
- What does it mean to say that someone is a "psychopath"?
- Can personality disorders be treated successfully?

## OVERVIEW

Personality disorders are considered separately from other forms of psychopathology in DSM-IV-TR. Most clinical disorders are listed on Axis I, whereas the personality disorders are listed on Axis II. All of the personality disorders are based on exaggerated personality traits that are frequently disturbing or annoying to other people. For example, in the first case study of this chapter, you will meet a young man whose consistently impulsive and deceitful behavior brought him into repeated conflicts with other people and with legal authorities.

In order to qualify for a personality disorder diagnosis in DSM-IV-TR, a person must fit the *general definition* of personality disorder (which applies to all 10 subtypes) and must also meet the *specific criteria* for a particular type of personality disorder. The specific criteria consist of a list of traits and behaviors that characterize the disorder. The general definition of **personality disorder** presented in DSM-IV-TR emphasizes the duration of the pattern and the social impairment associated with the traits in question. The problems must be part of "an enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual's culture" (APA, 2000). The pattern must be evident in two or more of the following domains: cognition (such as ways of thinking about the self and other people), emotional responses,

interpersonal functioning, or impulse control. This pattern of maladaptive experience and behavior must also be

- Inflexible and pervasive across a broad range of personal and social situations.
- The source of clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- Stable and of long duration, with an onset that can be traced back at least to adolescence or early adulthood.

The concept of social dysfunction plays an important role in the definition of personality disorders. It provides a large part of the justification for defining these problems as mental disorders. If the personality characteristics identified in DSM-IV-TR criterion sets typically interfere with the person's ability to get along with other people and perform social roles, they become more than just a collection of eccentric traits or peculiar habits. They can then be viewed as a form of harmful dysfunction (Wakefield, 1999). In fact, most of the clusters of pathological personality traits that are described on Axis II do lead to impaired social functioning or occupational impairment (Ro & Clark, 2010; Skodol et al., 2007).



Personality disorders are among the most controversial categories in the diagnostic system for mental disorders (Kendell, 2002; Tyrer et al., 2007). They are difficult to identify reliably, their symptoms are extremely heterogeneous, and their etiology is poorly understood. For all of these reasons, you should

***What is the difference between being eccentric and having a personality disorder?***

think critically about the validity of these categories.

Although they are difficult to define and measure, personality disorders are also crucial concepts in the field of psychopathology. Several observations support this argument. First, personality disorders are associated with significant social and occupational impairment. They disrupt interpersonal relationships, including those involving friends and coworkers. Personality disorders also play an important role in many cases of marital discord and violence (South, Turkheimer, & Oltmanns, 2008; Whisman, Tolejko, & Chatav, 2007). Second, the presence of pathological personality traits during adolescence is associated with an increased risk for the subsequent development of other mental disorders (Cohen

et al., 2007). Negative emotionality (high neuroticism) often predicts the later onset of major depression or an anxiety disorder. Impulsivity and antisocial personality increase the person's risk for alcoholism. Third, in some cases, personality disorders actually represent the beginning stages of the onset of a more serious form of psychopathology. Paranoid and schizoid personality disorders, for example, sometimes precede the onset of schizophrenic disorders. Finally, the presence of a comorbid personality disorder can interfere with the treatment of a disorder such as depression (Fournier et al., 2008).

The following cases illustrate several of the most important features of personality disorders. Our first case is an example of antisocial personality disorder, which is defined in terms of a pervasive and persistent disregard for, and frequent violation of, the rights of other people. This 21-year-old man was described by Hervey Cleckley (1976) in his classic treatise on this topic. The man had been referred to Cleckley by his parents and his lawyer after his most recent arrest for stealing. The parents hoped that their son might avoid a long prison sentence if Cleckley decided that he was suffering from a mental disorder.

## **CASE STUDY** A Car Thief's Antisocial Personality Disorder

Tom looks and is in robust physical health. His manner and appearance are pleasing. In his face a prospective employer would be likely to see strong indications of character as well as high incentive and ability. He is well informed, alert, and entirely at ease, exhibiting a confidence in himself that the observer is likely to consider amply justified. This does not look like the sort of man who will fail or flounder about in the tasks of life, but like someone incompatible with all such thoughts.

[In childhood, Tom] appeared to be a reliable and manly fellow but could never be counted upon to keep at any task or to give a straight account of any situation. He was frequently truant from school. No advice or persuasion [deterred] him [from] his acts, despite his excellent response in all discussions. Though he was generously provided for, he stole some of his father's chickens from time to time, selling them at stores downtown. Pieces of table silver would be missed. These were sometimes recovered from those to whom he had sold them for a pittance or swapped them for odds and ends which seemed to hold no particular interest or value for him. He resented and seemed eager to avoid punishment, but no modification in his behavior resulted from it. He did not seem wild or particularly impulsive, a victim of high temper or uncontrollable drives. There was nothing to indicate

he was subject to unusually strong temptations, lured by definite plans for high adventure and exciting revolt.

He lied so plausibly and with such utter equanimity, devised such ingenious alibis, or simply denied all responsibility with such convincing appearances of candor that for many years his real career was poorly estimated.

Among typical exploits with which he is credited stand these: prankish defecation into the stringed intricacies of the school piano, the removal from his uncle's automobile of a carburetor for which he got 75 cents, and the selling of his father's overcoat to a passing buyer of scrap materials.

At 14 or 15 years of age, having learned to drive, Tom began to steal automobiles with some regularity. Often his intention seemed less that of theft than of heedless misappropriation. A neighbor or friend of the family, going to the garage or to where the car was parked outside an office building, would find it missing. Sometimes the patient would leave the stolen vehicle within a few blocks or miles of the owner, sometimes out on the road where the gasoline had given out. After he had tried to sell a stolen car, his father consulted advisors and, on the theory that he might have some specific craving for automobiles, bought one for him as a thera-

peutic measure. On one occasion while out driving, he deliberately parked his own car and, leaving it, stole an inferior model which he left slightly damaged on the outskirts of a village some miles away.

***He lied so plausibly and with such utter equanimity that for many years his real career was poorly estimated.***

Private physicians, scoutmasters, and social workers were consulted. They talked and worked with him, but to no avail. Listing the deeds for which he became ever more notable does not give an adequate picture of the situation. He did not every day or every week bring attention to himself by major acts of mischief or destructiveness. He was usually polite, often considerate in small, appealing ways, and always seemed to have learned his lesson after detection and punishment. He was clever and learned easily. During intervals in which his attendance was regular, he impressed his teachers as outstanding in ability. Some charm and apparent modesty, as well as his very convincing way of seeming sincere and to have taken resolutions that would count, kept not only the parents but all who encountered him clinging to hope. Teachers, scoutmasters, the school principal, and others recognized that in some very important respects he differed from the



ordinary bad or wayward youth. (They) made special efforts to help him and to give him new opportunities to reform or readjust.

When he drove a stolen automobile across a state line, he came in contact with federal authorities. In view of his youth and the wonderful impression he made, he was put on probation. Soon afterward he took another automobile and again left it in the adjoining state. It was a very obvious situ-

ation. The consequences could not have been entirely overlooked by a person of his excellent shrewdness. He admitted that the considerable risks of getting caught had occurred to him but felt he had a chance to avoid detection and would take it. No unusual and powerful motive or any special aim could be brought out as an explanation.

Tom was sent to a federal institution in a distant state where a well-organized

program of rehabilitation and guidance was available. He soon impressed authorities at this place with his attitude and in the way he discussed his past mistakes and plans for a different future. He seemed to merit parole status precociously and this was awarded him. It was not long before he began stealing again and thereby lost his freedom (Cleckley, 1976, pp. 64–67).

Notice that the fundamental features of Tom's problems were clearly evident by early adolescence, and they were exhibited consistently over an extended period of time. The stable, long-standing nature of personality disorders is one of their most characteristic features. In this way, they are distinguished from many other forms of abnormal behavior that are episodic in nature.

This case is an excellent example of the senseless nature of the illegal and immoral acts committed by people who meet the diagnostic criteria for antisocial personality disorder. Another puzzling feature of this disorder is the person's apparent lack of remorse and the inability to learn from experience that accompanies such a history of delinquent behavior. It is difficult to understand why someone would behave in this manner. Mental health professionals appeal to the notion of personality disorder to help them understand these irrational behaviors.

The case of Tom also illustrates some other important features of personality disorders. Most other forms of mental disorder, such as anxiety disorders and mood disorders, are ego-dystonic; that is, people with these disorders are distressed by their symptoms and uncomfortable with their situations. Personality disorders are usually *ego-syntonic*—the ideas or impulses with which they are associated are acceptable to the person. People with personality disorders frequently do not see themselves as being disturbed. We might also say that they do not have insight into the nature of their own problems. Tom did not believe that his repeated antisocial behavior represented a problem. The other people for whom he created problems were suffering, but he was not. Many forms of personality disorder are defined primarily in terms of the problems that these people create for others rather than in terms of their own subjective distress.

The ego-syntonic nature of many forms of personality disorder raises important questions about the limitations of self-report measures—interviews and questionnaires—for their assessment. Many people with personality disorders are unable to view themselves realistically and are unaware of the effect that their behavior has on others. Therefore, assessments based exclusively on self-report may have limited validity (Oltmanns & Turkheimer, 2009). They may underestimate the frequency and severity of certain aspects of personality pathology, particularly those problems associated with narcissism. The development of alternative assessment methods, such as collecting information from peers, family members, or mental health professionals, remains an important challenge for future research studies (Clark, 2007).

## Symptoms

The specific symptoms that are used to define personality disorders represent maladaptive variations in several of the building blocks of personality (see Chapter 2). These include motives, cognitive perspectives regarding the self and others, temperament, and personality traits. We have organized our description of typical symptoms around these issues, which run through the broad mixture of specific symptoms that define the 10 types of personality disorder included in DSM-IV-TR.

### SOCIAL MOTIVATION

The concept of a motive refers to a person's desires and goals (Emmons, 1997). Motives (either conscious or unconscious) describe the way that the person would like things to be, and they help to explain *why* people behave in a particular fashion. For example, a man might have neglected to return a telephone call because he wanted to be alone (rather than because he forgot that someone had called). Two of the most important motives in understanding human personality are *affiliation*—the desire for close relationships with other



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people—and *power*—the desire for impact, prestige, or dominance (Winter et al., 1998). Individual differences with regard to these motives have an important influence on a person's health and adjustment.

Many of the symptoms of personality disorders can be described in terms of maladaptive variations with regard to needs for affiliation and power. One particularly important issue is the absence of motivation for affiliation. While most people enjoy spending time with other people and want to develop intimate relationships with friends and family members, some people do not. They prefer isolation. Severely diminished or absent motivation for social relationships is one pervasive theme that serves to define certain kinds of personality disorder.

Exaggerated motivation for power (and achievement) also contributes to the picture that describes personality disorders. For example, some people are preoccupied with a need for admiration and the praise of others. They think of themselves as privileged people and insist on special treatment. In some cases, excessive devotion to work and professional accomplishment can lead a person to ignore friends and family members as well as the pursuit of leisure activities. This lack of balance can have a serious disruptive effect on the person's social adjustment.

## COGNITIVE PERSPECTIVES REGARDING SELF AND OTHERS

Our social world also depends on mental processes that determine knowledge of ourselves and other people (Baumeister, 1997; Kihlstrom & Hastie, 1997). Distortions of these mechanisms are associated with personality disorders. For example, one central issue involves our image of ourselves. When you are able to maintain a realistic and stable image of yourself, you can plan, negotiate, and evaluate your relationships with other people. Knowing (and having confidence in) your own values and opinions is a necessary prerequisite for making independent decisions without the assistance or reassurance of others. Self-image is also intimately connected to mood states. If you vacillate back and forth between unrealistically positive and negative views of yourself, your mood will swing dramatically. You may also need constant reassurance from others and be too dependent on their opinions as a means of maintaining your own self-esteem. We have to be able to evaluate our own importance. Of course, it's useful to think of yourself in positive terms (and many maintain a positive "halo"), but extreme grandiosity can be disruptive. Perhaps even more damaging is a pattern in which people see themselves as socially inept or inferior to other people.

When we misperceive the intentions and motives and abilities of other people, our relationships can be severely disturbed. Paranoid beliefs are one example. Some people believe, without good reason, that other people are exploiting, deceiving, or otherwise trying to harm them. Unreasonable fears of being abandoned, criticized, or rejected are also examples of distorted perception of others' intentions. Working effectively in a group of people also requires realistic appraisal of the talents and abilities of others. In order to cooperate with other people, we must be able to appreciate their competence. People with personality disorders run into problems because they misperceive other people in many different ways (as being either threatening, or uncaring, or incompetent).

Many elements of social interaction also depend on being able to evaluate the nature of our relationships with other

people and then to make accurate judgments about appropriate and inappropriate behaviors. A successful relationship with a sexual partner involves knowing when intimacy is expected and when it should be avoided. Some people with personality disorders experience persistent problems in social distance (either becoming too intimate or maintaining too much distance from others). Finally, another important element of interpersonal perception is the ability to empathize with others—to anticipate and decipher their emotional reactions and use that knowledge to guide our own behavior. Deficits in the ability to understand the emotions of other people represent one of the core features of personality disorders.

## TEMPERAMENT AND PERSONALITY TRAITS

If motivation helps to explain *why* people behave in certain ways, temperament and personality traits describe *how* they behave. *Temperament* refers to a person's most basic, characteristic styles of relating to the world, especially those styles that are evident during the first year of life (Caspi & Roberts, 1999; Mervielde et al., 2005). Definitions of temperament typically include dimensions such as activity level and emotional reactivity (see Chapter 2). These factors vary considerably in level or degree from one infant to the next and have important implications for later development, such as social and academic adjustment when the child eventually enters school. For example, children who demonstrate a "lack of control" when they are very young are much more likely than their peers to experience problems with hyperactivity, distractibility, and conduct disorder when they are adolescents (Caspi et al., 1995). Young children who are extremely shy are more likely to be anxious and socially inhibited in subsequent years (Eisenberg et al., 1998; see Chapter 16).

Experts disagree about the basic dimensions of temperament and personality. Some theories are relatively simple, using only three or four dimensions. Others are more complicated and consider as many as 30 or 40 traits. One point of view that has come to be widely accepted is known as the five-factor model of personality (Digman, 2002; Trull & McCrae, 2002). The basic traits (also known as domains) included in this model have already been summarized in Chapter 2. They are neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. Each of the five principal domains can be subdivided into six more specific elements or facets (see Table 9.1, on page 223). Taken as a whole, the five-factor model provides a relatively comprehensive description of any person's behavior.

Many personality disorders are defined in terms of maladaptive variations on the kinds of traits listed in Table 9.1 (Widiger & Simonsen, 2005). Problems may arise in association with extreme variations in either direction (high or low). Dramatically elevated levels of anger–hostility, impulsiveness, and excitement seeking are particularly important, as are extremely low levels of trust, compliance, and tendermindedness. Although some forms of personality disorder are associated with high levels of anxiousness and vulnerability, people with antisocial personality disorder frequently exhibit unusually low levels of anxiety and concern about danger. We return to these dimensions in the next section of this chapter.



**TABLE 9.1 Domains and Facets of the Five-Factor Model of Personality**

	People with High Scores Are	People with Low Scores Are
<b>Neuroticism</b>		
Anxiety	extremely nervous	lacking appropriate anxiety
Anger–Hostility	hypersensitive; easily angered	unable to express anger
Depression	continually depressed	unable to appreciate losses
Self-Consciousness	very easily embarrassed	indifferent to opinions of others
Impulsiveness	extremely impulsive	restrained or restricted; dull
Vulnerability	easily overwhelmed by stress	oblivious to danger
<b>Extraversion</b>		
Warmth	inappropriately affectionate	unable to develop intimate relations
Gregariousness	unable to tolerate being alone	socially isolated
Assertiveness	domineering, pushy	resigned and ineffective
Activity	driven, frantic, distractible	sedentary and passive
Excitement-Seeking	reckless, careless	dull, monotonous
Positive Emotions	giddy, lose control of emotions	solemn, unable to enjoy things
<b>Openness to Experience</b>		
Fantasy	preoccupied with daydreams	unimaginative
Aesthetics	obsessed with unusual interests	don't appreciate culture or art
Feelings	governed by strong emotionality	seldom have strong feelings
Actions	unpredictable	avoid change, stick to routine
Ideas	preoccupied with strange ideas	reject new ideas
Values	lack guiding belief systems	dogmatic and closed-minded
<b>Agreeableness</b>		
Trust	gullible	paranoid and suspicious
Straightforwardness	too self-disclosing	dishonest and manipulative
Altruism	often exploited or victimized	lacking regard for rights of others
Compliance	acquiescent, docile, submissive	argumentative, defiant
Modesty	meek and self-denigrating	conceited, arrogant, pompous
Tendermindedness	overwhelmed by others' pain	callous, coldhearted, ruthless
<b>Conscientiousness</b>		
Competence	overly perfectionistic	lax, incapable of work
Order	preoccupied with rules, order	disorganized, sloppy
Dutifulness	places duty above morality	not dependable, unreliable
Achievement Striving	workaholic	aimless, no clear goals
Self-Discipline	single-minded pursuit of goals	hedonistic, self-indulgent
Deliberation	ruminate to excess	careless making decisions

Source: Adapted from T. A. Widiger, P. T. Costa, Jr., and R. R. McCrae, 2002, "A Proposal for Axis II: Diagnosing Personality Disorders Using the Five-Factor Model," in P. T. Costa, Jr., and T. A. Widiger, Eds., *Personality Disorders and the Five-Factor Model of Personality*, 2nd ed, pp. 431–456. Copyright © 1993, American Psychological Association. Reprinted by permission.

## CONTEXT AND PERSONALITY

Two important qualifications must be made about the development and persistence of individual differences in temperament and personality. First, these differences may not be evident in all situations. Some important personality features may be expressed only under certain challenging circumstances that

require or facilitate a particular response. For example, Tom did not always appear to be impulsive and irresponsible. He was usually polite when he was with adults, and he went through intervals in which he followed rules and attended school regularly.

The second qualification involves the consequences of exhibiting particular traits. Social circumstances frequently determine



whether a specific pattern of behavior will be assigned a positive or negative meaning by other people. Difficult temperament, for example, may serve an adaptive function when it is beneficial for an infant to be demanding and highly visible—for example, during a famine or while living in a large institution. On the other hand, in some circumstances, difficult temperament can be associated with an increased risk for certain psychiatric and learning disorders.

Consider the traits that Tom exhibited, especially impulsivity and lack of fear. These characteristics might be maladaptive under normal circumstances, but they could be useful—indeed, admirable—in certain extraordinary settings. War is one extreme example. People in combat situations have to act quickly and decisively, often at great risk to their own physical health. A disregard for personal safety might be adaptive under these circumstances. Tom’s ability to lie in a calm and convincing fashion was another interesting trait. Again, this might have been a valuable adaptive skill if Tom had been an espionage agent. The meanings that are assigned to particular traits depend on the environment in which they are observed.

## Diagnosis

The authors of DSM-IV-TR have organized 10 specific forms of personality disorder into three clusters on the basis of broadly defined characteristics. The specific disorders in each cluster are listed in Table 9.2. In the following pages we give brief descriptions of these personality disorder subtypes. These descriptions provide an overview that will be useful when we review the epidemiology of personality disorders. Later in the chapter we describe in considerably more detail three disorders that are relatively frequent and have been studied extensively: schizotypal, borderline, and antisocial personality disorders.

## CLUSTER A: PARANOID, SCHIZOID, AND SCHIZOTYPAL PERSONALITY DISORDERS

Cluster A includes three disorders: paranoid, schizoid, and schizotypal forms of personality disorder. The behavior of people who fit the subtypes in this cluster is typically odd, eccentric, or asocial. All three types share similarity with the symptoms of schizophrenia (see Chapter 13). One implicit assumption in the DSM-IV-TR system is that these types of personality disorders may represent behavioral traits or interpersonal styles that precede the onset of full-blown psychosis. Because of their close association with schizophrenia, they are sometimes called *schizophrenia spectrum disorders*.

**Paranoid personality disorder** is characterized by the pervasive tendency to be inappropriately suspicious of other people’s motives and behaviors. People who fit the description for this disorder are constantly on guard. They expect that other people are trying to harm them, and they take extraordinary precautions to avoid being exploited or injured. Although we can all benefit from being cautious and skeptical, paranoid thinking is much more than that. The pattern is so stable and wide-ranging that it interferes with the person’s social and occupational adjustment. People who are paranoid are completely inflexible in the way that they view the motives of other people, and they are unable to choose situations in which they can trust other people (see Critical Thinking Matters).

Because paranoid people do not trust anyone, they have trouble maintaining relationships with friends and family members. They frequently overreact in response to minor or ambiguous events to which they attribute hidden meaning. When they overreact, people with paranoid personality disorder often behave aggressively or antagonistically. These actions can easily create a self-fulfilling prophesy. In other words, thinking (incorrectly) that he or she is being attacked by others,

TABLE 9.2 Personality Disorders Listed in DSM-IV-TR

**Cluster A Includes People Who Often Appear Odd or Eccentric**

Paranoid	Distrust and suspiciousness of others.
Schizoid	Detachment from social relationships and restricted range of expression of emotions.
Schizotypal	Discomfort with close relationships, cognitive and perceptual distortions, eccentricities of behavior.

**Cluster B Includes People Who Often Appear Dramatic, Emotional, or Erratic**

Antisocial	Disregard for and frequent violation of the rights of others.
Borderline	Instability of interpersonal relationships, self-image, emotions, and control over impulses.
Histrionic	Excessive emotionality and attention seeking.
Narcissistic	Grandiosity, need for admiration, and lack of empathy.

**Cluster C Includes People Who Often Appear Anxious or Fearful**

Avoidant	Social inhibition, feelings of inadequacy, and hypersensitivity to negative evaluation.
Dependent	Excessive need to be taken care of, leading to submissive and clinging behavior.
Obsessive–Compulsive	Preoccupation with orderliness and perfectionism at the expense of flexibility.



# Critical Thinking Matters

## CAN PERSONALITY DISORDERS BE ADAPTIVE?

Andrew Grove, former chairman of the board of Intel Corporation, has written a popular book about business management entitled *Only the Paranoid Survive*. He argues that successful corporate leaders must be vigilant; they have to anticipate negative events in the business world as well as future problems with their competitors. Grove's title raises an interesting point about the nature of personality disorders. Their definition does reflect a tension between adaptive personality traits and more extreme, maladaptive ways of thinking about oneself and other people. It can be useful to be suspicious, vigilant, skeptical, or even jealous (in some circumstances), but we should not confuse these traits with paranoid thought. By promoting an informal and misleading use of the word "paranoia," Grove's title does the field of psychopathology a disservice. In order to make progress toward understanding the nature of mental disorders, we have to be precise in our use of terms.

How can we distinguish between a cautious approach to the motives of other people and pathological

paranoia? The difference depends, in part, on emotional reactions—such as irritability and hostility—that are associated with chronic suspicion and vigilance (Franceset et al., 1995). Because they believe that others are causing problems for them, paranoid people are angry (Clifton, Turkheimer, & Oltmanns, 2004). Paranoid people can also become anxious and withdrawn. Their fear is based on the conviction that others intend to cause them harm, and they try to protect themselves by avoiding other people. The exaggerated negative emotions that accompany paranoid thinking are not likely to foster survival in the business world or in other social circumstances.

Another way to distinguish between normal suspicions and paranoia involves the amount of time that the person spends thinking about threats posed by other people. While most people become suspicious from time to time, paranoid people are *preoccupied* with the notion that others are out to get them. They are unable to think otherwise (Shapiro, 1965). Paranoid people are also impaired in their ability

to consider information from another person's point of view. Most of us are able to seek and consider another person's perception or interpretation of uncertain events; paranoid people cannot. For all of these reasons, paranoia will promote failure rather than survival in the business world.

One of the most important elements of critical thinking involves the careful definition of terms. Sloppy talk

### **What is the difference between skepticism and paranoia?**

leads to sloppy thinking. People who suggest that "a little paranoia can be useful" or "only the paranoid survive" are engaging in a misleading use of terms. It is clearly useful to be skeptical and cautious when considering the motives of other people. But the rigid and maladaptive patterns of thought that are characteristic of paranoid personality disorder are clearly pathological. The failure to appreciate the complexity and extent of these phenomena represents a distraction from, rather than a contribution to, serious scholarship.

the paranoid person strikes. The other person is, naturally, surprised, annoyed, and perhaps frightened by this behavior and begins to treat the paranoid person with concern and caution. This response serves to confirm the original suspicions of the paranoid individual, who does not comprehend how his or her own behavior affects others.

Paranoid personality disorder must be distinguished from psychotic disorders, such as schizophrenia and delusional disorder. The pervasive suspicions of people with paranoid personality disorder do not reach delusional proportions. In other words, they are not sufficiently severe to be considered obviously false and clearly preposterous. In actual practice, this distinction is sometimes quite subtle and difficult to make.

**Schizoid personality disorder** is defined in terms of a pervasive pattern of indifference to other people, coupled with a diminished range of emotional experience and expression. These people are loners; they prefer social isolation to interactions with friends or family. Other people see them as

being cold and aloof. By their own report, they do not experience strong subjective emotions, such as sadness, anger, or happiness.

**Schizotypal personality disorder** centers around peculiar patterns of behavior rather than on the emotional restriction and social withdrawal that are associated with schizoid personality disorder. Many of these peculiar behaviors take the form of perceptual and cognitive disturbance. People with this disorder may report bizarre fantasies and unusual perceptual experiences. Their speech may be slightly difficult to follow because they use words in an odd way or because they express themselves in a vague or disjointed manner. Their affective expressions may be constricted in range, as in schizoid personality disorder, or they may be silly and inappropriate.

In spite of their odd or unusual behaviors, people with schizotypal personality disorder are not psychotic or out of touch with reality. Their bizarre fantasies are not delusional, and their unusual perceptual experiences are not sufficiently real or compelling to be considered hallucinations.



## CLUSTER B: ANTISOCIAL, BORDERLINE, HISTRIONIC, AND NARCISSISTIC PERSONALITY DISORDERS

Cluster B includes antisocial, borderline, histrionic, and narcissistic personality disorders. According to DSM-IV-TR, these disorders are characterized by dramatic, emotional, or erratic behavior, and all are associated with marked difficulty in sustaining interpersonal relationships. The rationale for grouping these disorders together is less compelling than that for Cluster A. In particular, antisocial personality disorder clearly involves something more than just a dramatic style or erratic behavior.

### MyPsychLab

#### VIDEO CASE

#### Borderline Personality Disorder



##### LIZ

*"I have problems with anger management. In the past it has meant suicide attempts."*

Watch the video "Borderline PD: Liz" on MyPsychLab. Pay careful attention to the description of her thoughts immediately prior to her suicide attempt.

**Antisocial personality disorder** is defined in terms of a persistent pattern of irresponsible and antisocial behavior that begins during childhood or adolescence and continues into the adult years. The case study of Tom, with which we opened this chapter, illustrates this pattern of behavior. The



Ted Bundy was executed in 1989 for killing at least 22 women. He was charming, intelligent, and self-assured.

DSM-IV-TR definition is based on features that, beginning in childhood, indicate a pervasive pattern of disregard for, and violation of, the rights of others. Once the person has become an adult, these difficulties include persistent failure to perform responsibilities that are associated with occupational and family roles. Conflict with others, including physical fights, is also common. These people are irritable and aggressive with their spouses and children as well as with people outside the home. They are impulsive, reckless, and irresponsible.

We have all read newspaper accounts of famous examples of antisocial personality disorder. These often include people who have committed horrendous acts of violence against other people, including genocidal war crimes and serial murders. You should not be misled, however, into thinking that only serious criminals meet the criteria for this disorder. Many other forms of persistently callous and exploitative behavior could lead to this diagnosis.

**Borderline personality disorder** is a diffuse category whose essential feature is a pervasive pattern of instability in mood and interpersonal relationships. People with this disorder find it very difficult to be alone. They form intense, unstable relationships with other people and are often seen by others as being manipulative. Their mood may shift rapidly and inexplicably from depression to anger to anxiety over a pattern of several hours. Intense anger is common and may be accompanied by temper tantrums, physical assault, or suicidal threats and gestures.

Many clinicians consider identity disturbance to be the diagnostic hallmark of borderline personality disorder. People with this disturbance presumably have great difficulty maintaining an integrated image of themselves that simultaneously incorporates their positive and negative features. Therefore, they alternate between thinking of themselves in unrealistically positive terms and then unrealistically negative terms at different moments in time. When they are focused on their own negative features, they have a deflated view of themselves and may become seriously depressed. They frequently express uncertainty about such issues as personal values, sexual preferences, and career alternatives. Chronic feelings of emptiness and boredom may also be present.

### BRIEF CASE STUDY

#### Borderline Personality Disorder

A single woman of 35 had worked with four (therapists) over a period of 11 years, before the last of these referred her to me. Since Beatrice had graduated from college at age 22, she had seemed to circulate in a holding pattern. She saw herself as an executive-to-be in the corporate world but in actuality had held just a few entry-level jobs, and those only briefly. Once or twice she quit in a huff because the job was "not interesting enough" or because "they weren't promoting me fast enough." She had no distinct career goals, nor had she taken any special courses to prepare herself for some particular path. The work problem did not pose a threat to her well-being, since she lived off a large trust fund that her family had set up for her.



On the relational side her situation was not much better. Beatrice had never been “serious” with anyone and had little interest in men apart from their ability to pay compliments on her appearance. Her self-image was contradictory: She alternated between seeing herself as “model pretty” or else ugly. While buying an ice cream, she would feel devastated if the counterperson did not make eyes at her; if he did, she would feel “insulted.”

She had no hobbies or sustaining interests and found evenings with nothing to do intolerable. On such evenings she would usually engage her mother in long phone conversations (her parents lived in a different city), demanding that her mother come and visit. If this were not possible, she would slam the phone down, only to then call her mother back half an hour later to apologize.

During the time I worked with Beatrice, her most noticeable personality traits were those of anger, argumentativeness, scornfulness, irritability, and vanity. Her intensity and demand- ingness made her troublesome in her family; her parents and siblings were mostly good-natured and got on well when she was not in their midst (Stone, 1993, pp. 250–251).

**Histrionic personality disorder** is characterized by a pervasive pattern of excessive emotionality and attention seeking behavior. People with this disorder thrive on being the center of attention. They want the spotlight on them at all times. They are self-centered, vain, and demanding, and they constantly seek approval from others. When interacting with other people, their behavior is often inappropriately sexually seductive or provocative. Their emotions tend to be shallow and may vacillate erratically. They frequently react to situations with inappropriate exaggeration.

The concept of histrionic personality disorder overlaps extensively with other types of personality disorders, especially borderline personality disorder. People with both disorders are intensely emotional and manipulative. Unlike people with borderline personality disorder, however, people with histrionic personality disorder have an essentially intact sense of their own identity and a better capacity for stable relationships with other people.

There may also be an etiological link between histrionic and antisocial personality disorders. Both may reflect a common, underlying tendency toward lack of inhibition. People with both types of disorders form shallow, intense relationships with others, and they can be extremely manipulative. Family history studies indicate that this predisposition to disinhibition may be expressed as histrionic personality disorder in women and as antisocial personality disorder in men (Cale & Lilienfeld, 2002).

The essential feature of **narcissistic personality disorder** is a pervasive pattern of grandiosity, need for admiration, and inability to empathize with other people. Narcissistic people have a greatly exaggerated sense of their own importance. They are preoccupied with their own achievements and abilities. Because they consider themselves to be very special, they cannot empathize with the feelings of other people and are often seen as being arrogant or haughty.

There is a considerable amount of overlap between narcissistic personality disorder and borderline personality disorder. Both types of people feel that other people should



Since 1981, this successful artist has painted more than 1,500 self-portraits. He says he will never paint anything other than his own image because it is the only subject that holds his interest. Self-absorption is one central feature of narcissistic personality disorder.

recognize their needs and do special favors for them. They may also react with anger if they are criticized. The distinction between these disorders hinges on the inflated sense of self-importance that is found in narcissistic personality disorder and the deflated or devalued sense of self found in borderline personality disorder (Ronningstam & Gunderson, 1991).

## CLUSTER C: AVOIDANT, DEPENDENT, AND OBSESSIVE–COMPULSIVE PERSONALITY DISORDERS

Cluster C includes avoidant, dependent, and obsessive–compulsive personality disorders. The common element in all three disorders is presumably anxiety or fearfulness. This description fits most easily with the avoidant and dependent types. In contrast, obsessive–compulsive personality disorder is more accurately described in terms of preoccupation with rules and with lack of emotional warmth than in terms of anxiety.

**Avoidant personality disorder** is characterized by a pervasive pattern of social discomfort, fear of negative evaluation, and timidity. People with this disorder tend to be socially isolated when outside their own family circle because they are afraid of criticism. Unlike people with schizoid personality disorder, they want to be liked by others, but they are extremely shy—easily hurt by even minimal signs of disapproval from other people. Thus they avoid social and occupational activities that require significant contact with other people.

Avoidant personality disorder is often indistinguishable from generalized social phobia (see Chapter 6). In fact, some experts have argued that they are probably two different ways

*In what ways are borderline and narcissistic personality disorders similar?*





This cartoon refers to the enormously popular 2005 movie, *March of the Penguins*, which won the Academy Award for Best Documentary Feature.  
© Donald Reilly/The New Yorker Collection/  
www.cartoonbank.com

of defining the same condition (Frances et al., 1995). Others have argued that people with avoidant personality disorder have more trouble than people with social phobia in relating to other people (Millon & Martinez, 1995). People with avoidant personality disorder are presumably more socially withdrawn and have very few close relationships because they are so shy. People with social phobia may have a lot of friends, but they are afraid of performing in front of them. This distinction is relatively clear when social phobia is defined narrowly in terms of a particular kind of situation, such as public speaking. It is much more difficult to make if the social phobia becomes more generalized.

The essential feature of **dependent personality disorder** is a pervasive pattern of submissive and clinging behavior. People with this disorder are afraid of separating from other people on whom they are dependent for advice and reassurance. Often unable to make everyday decisions on their own, they feel anxious and helpless when they are alone. Like people with avoidant personality disorder, they are easily hurt by criticism, extremely sensitive to disapproval, and lacking in self-confidence. One difference between avoidant and dependent personality disorders involves the point in a relationship at which they experience the most difficulty. People who are avoidant have trouble initiating a relationship (because they are fearful). People who are dependent have trouble being alone or separating from other people with whom they already have a close relationship. For example, a person with dependent personality disorder might be extremely reluctant to leave home in order to attend college.

**Obsessive-compulsive personality disorder (OCPD)** is defined by a pervasive pattern of orderliness, perfectionism, and mental and interpersonal control, at the expense of flexibility,

openness, and efficiency. People with this disorder set ambitious standards for their own performance that frequently are so high as to be unattainable. Many would be described as “workaholics.” In other words, they are so devoted to work that they ignore friends, family members, and leisure activities. They are so preoccupied with details and rules that they lose sight of the main point of an activity or project. Intellectual endeavors are favored over feelings and emotional experience. These people are excessively conscientious, moralistic, and judgmental, and they tend to be intolerant of emotional behavior in other people.

The central features of this disorder may involve a marked need for control and lack of tolerance for uncertainty (Gibbs, South, & Oltmanns, 2003). At modest levels, these traits can represent an adaptive coping style, particularly in the face of the demands of our complex, technological society. Very high levels of these characteristics begin to interfere with a person’s social and occupational adjustment. For example, people with OCPD find it difficult to delegate responsibilities to others, and their perfectionism makes it extremely difficult for them to finish projects within established deadlines.

Obsessive-compulsive personality disorder should not be confused with obsessive-compulsive disorder (OCD), a type of anxiety disorder (see Chapter 6). A pattern of intrusive, unwanted thoughts accompanied by ritualistic behaviors is used to define OCD. The definition of obsessive-compulsive personality disorder, in contrast, is concerned with personality traits, such as excessively high levels of conscientiousness.

## A DIMENSIONAL PERSPECTIVE ON PERSONALITY DISORDERS

DSM-IV-TR treats personality disorders as discrete categories, and it assumes that there are sharp boundaries between normal and abnormal personalities. In fact, there are a lot of people with serious personality problems who do not fit the official DSM-IV-TR subtypes. The categorical approach to diagnosis forces clinicians to employ an arbitrary threshold that has been set to distinguish between normal and abnormal personality types.

Another frequent complaint about the description of personality disorders is the considerable overlap among categories.



Anger and hostility are important symptoms of several forms of personality disorder, including paranoid, antisocial, borderline, and narcissistic PDs.



Many patients meet the criteria for more than one type (Grant et al., 2005). It is cumbersome to list multiple diagnoses, especially when the clinician is already asked to list problems on both Axis I and Axis II. In fact, many clinicians are reluctant to make more than one diagnosis on Axis II; consequently, much information is frequently left out.

For these reasons, many experts favor the development of an alternative classification system for PDs, one that would be based on a dimensional view of personality pathology that is grounded in extensive research on the basic elements of personality (Skodol & Bender, 2009). A dimensional system might provide a more complete description of each person, and it would be more useful with patients who fall on the boundaries between different types of personality disorders. It might also be easier to use than the DSM-IV-TR approach. One proposal is to use the five-factor model as the basic structure for a comprehensive description of personality problems (Widiger & Trull, 2007). This approach would require the clinician to consider information regarding the 30 personality facets listed in Table 9.1. This system would be economical compared to making a judgment regarding the presence of nearly 80 PD features in DSM-IV-TR (approximately eight features for each of the 10 PD categories). An example of a description based on the five-factor dimensional approach to PDs is provided in the following brief case study.

## BRIEF CASE STUDY

### Narcissism from the Perspective of the Five-Factor Model

Patricia was a 41-year-old married woman who presented at an outpatient mental health clinic complaining of interpersonal difficulties at work and recurring bouts of depression. [She] reported a long history of banking jobs in which she had experienced interpersonal discord. Shortly before her entrance into treatment, Patricia was demoted from a supervisory capacity at her current job because of her inability to interact effectively with those she was supposed to supervise. She described herself as always feeling out of place with her coworkers and indicated that most of them failed to adequately appreciate her skill or the amount of time she put in at work. She reported that she was beginning to think that perhaps she had something to do with their apparent dislike of her. However, even during the initial treatment sessions, her descriptions of her past and current job situations quickly and inevitably reverted to defensive statements concerning others' mistreatment and lack of appreciation of her. Despite her stated goal of changing her own behavior to be better liked, it quickly became clear that her actual wish was to cause her coworkers and supervisors to realize her superiority and to treat her accordingly.

Patricia often made condescending remarks about coworkers working under her, indicating that they were inferior to her in intelligence and abilities and thus had little or nothing to offer her. Patricia pretended to have a back injury as an excuse to avoid sales work, thus forcing the other employees to do this

less pleasant job while she was given more prestigious loan accounts. [She] also reported one incident in which a friend had agreed to meet her for dinner but was late because her child was ill. Patricia was highly offended and irritated by what she referred to as her friend's "lack of consideration" in being late. She felt no compassion for her friend or the child.

Patricia's tendency toward suspiciousness was exemplified by her belief that others did not like her and conspired against her to make her job harder (e.g., by "purposely" failing to get necessary paperwork to her on time). Finally, her uncooperativeness was illustrated by her tendency not to follow instructions at work and to refuse to cooperate with her husband at home. For example, although her boss had asked Patricia not to stay at the bank after hours because of security considerations, she often stayed late to work, saying that the boss's request was "stupid and restrictive."

Patricia described herself as both depressed and anxious. She also tended to become enraged when criticized or "treated badly." Although Patricia denied feelings of humiliation and insecurity, when criticized [she] would blush and either defensively make excuses for her behavior or negate the criticism ("She's just envious of me because I'm smarter than she is").

Other people seldom called or visited with her to talk about their problems; when they did, she responded with intellectual advice usually delivered in a condescending manner, such as, "When you're older, you'll understand better how things are." Her solitary nature in having few friends and keeping to herself at work may in fact have resulted in part from actual rebuffs from others in response to her antagonistic behavior.

Finally, Patricia perceived herself as accomplished, persistent, and strongly committed to the highest standards of conduct. These impressions may indicate a classic narcissistic inflation of self-image, especially given that she was, even by her own report, having considerable difficulties at work (Corbitt, 2002, pp. 294–297).

**How are normal personality traits related to personality disorders?**

This woman's interpersonal difficulties could be succinctly described in terms of a combination of low agreeableness (trust, modesty, altruism, and compliance), low extraversion (warmth and gregariousness), high neuroticism (anger–hostility, anxiety, and depression), and high conscientiousness (competence, dutifulness, and achievement striving). Based on DSM-IV-TR, she would meet the criteria for narcissistic personality disorder. If the categorical approach were used, however, a complete description of her personality problems would also require that the clinician note the presence of some features of paranoid PD (such as unjustified doubts about the loyalty of coworkers; reacting with rage to perceived attacks on her character or reputation) and obsessive–compulsive PD (excessive devotion to work to the exclusion of leisure activities and friendships), even though she did not exhibit enough features of these other disorders to meet their diagnostic threshold. A dimensional approach like the one illustrated in this case may eventually replace the 10 PD categories on Axis II when the next version of DSM is published.



# Frequency

Personality disorders are generally considered to be among the most common forms of psychopathology, when they are considered as a general category. Several epidemiological studies in the United States and in Europe have used semistructured diagnostic interviews to assess personality disorders in samples of people living in the community.

## PREVALENCE IN COMMUNITY AND CLINICAL SAMPLES

How many people in the general population would meet the criteria for at least one personality disorder if they were given a diagnostic interview? In studies that have examined community-based samples of adults, the overall lifetime prevalence for having at least one personality disorder (any type) is approximately 10 percent (Lenzenweger et al., 2007; Trull et al., 2010). While this figure tends to be relatively consistent from one study to the next, prevalence rates for specific types of personality disorders vary quite a bit. The highest prevalence rates are usually found to be associated with obsessive-compulsive personality disorder, antisocial personality disorder, and avoidant personality disorder, which may affect 3 or 4 percent of adults.

The most precise information that is available regarding the prevalence of personality disorders in community samples is concerned specifically with the antisocial type. In two large-scale epidemiological studies of mental disorders, structured interviews were conducted with several thousand participants. The overall lifetime prevalence rate for antisocial personality disorder (men and women combined) was 3 percent in both studies (Kessler et al., 1994; Robins & Regier, 1991).

The prevalence rates for other specific types tend to be approximately 1 or 2 percent of the population. The most obvious exception is narcissistic personality disorder, which appears to be the least common form, affecting much less than 1 percent of the population.

One final issue regarding prevalence rates involves comorbidity. There is considerable overlap among categories in the personality disorders. At least 50 percent of people who meet the diagnostic criteria for one personality disorder also meet the criteria for another disorder (Coid et al., 2006). To some extent, this overlap is due to the fact that similar symptoms are used to define more than one disorder. For example, impulsive and reckless behaviors are part of the definition of both antisocial and borderline PDs. Social withdrawal is used to define schizoid, schizotypal, and avoidant PD.

There is also extensive overlap between personality disorders and disorders that are diagnosed on Axis I of DSM-IV-TR. Approximately 75 percent of people who qualify for a diagnosis on Axis II also meet criteria for a syndrome such as major depression, substance dependence, or an anxiety disorder (Dolan-Sewell, Krueger, & Shea, 2001). This overlap may also be viewed from the other direction: Many people who are treated for a mental disorder listed on Axis I, such as depression or alcoholism, would also meet the criteria for a personality disorder (Thomas, Melchert, & Banken, 1999). Borderline personality disorder appears to be the most common

personality disorder among patients treated at mental health facilities (both inpatient and outpatient settings). Averaged across studies, the evidence suggests that this disorder is found among slightly more than 30 percent of all patients who are treated for psychological disorders (Lyons, 1995).

## GENDER DIFFERENCES

The overall prevalence of personality disorders is approximately equal in men and women (Lenzenweger, 2007). There are, however, consistent gender differences with regard to at least one specific disorder: Antisocial personality disorders is unquestionably much more common among men than among women, with rates of approximately 5 percent reported for men and 2 percent for women (Trull et al., 2010). Thus, antisocial personality disorder is actually an alarmingly common problem among adult males in the United States.

Epidemiological evidence regarding gender differences for the other types of personality disorders is much more ambiguous. Borderline personality disorder and dependent personality disorder may be somewhat more prevalent among women than men, but the evidence is not strong (Skodol & Bender, 2003). There has been some speculation that paranoid and obsessive-compulsive personality disorders may be somewhat more common among men than women (Coid et al., 2006).

**Gender Bias and Diagnosis** One of the controversies surrounding the diagnosis of personality disorders involves the issue of gender bias (Widiger, 1998). Critics contend that the definitions of some categories are based on sex role stereotypes and therefore are inherently sexist. The dependent type, for example, might be viewed as a reflection of certain traditionally feminine traits, such as being unassertive or putting the needs of others ahead of one's own. It has been suggested that DSM-IV-TR arbitrarily labels these traits as maladaptive. Traditionally masculine traits, such as being unable to identify and express a wide range of emotions, are presumably not mentioned in the manual. This practice arbitrarily assigns responsibility for interpersonal difficulties to the women themselves. Therefore, these definitions may turn traditional sex role behaviors into "disorders" and minimize the extent to which women may simply be trying to cope with unreasonable or oppressive environmental circumstances, including discrimination and sexual abuse (Bjorklund, 2006; Caplan, 1995).

This argument leads to a number of interesting and important questions. One is concerned with the presence of bias within the criterion sets themselves. If the criteria for certain categories are based on stereotypes of feminine traits, is it relatively easy for a woman to meet the criteria for that diagnosis even if she is not experiencing significant distress or impairment in other areas of her life? The answer to that question is, tentatively, no (Funtowicz & Widiger, 1999). In other words, the threshold for assigning a diagnosis of personality disorder does not appear to be lower for those types that are based largely on traits that might be considered traditionally feminine (dependent, histrionic, borderline) than for those that are based on traits that might be considered traditionally masculine (antisocial, paranoid, compulsive).





Vivien Leigh won Academy Awards for her performances as Scarlett O'Hara in *Gone with the Wind* (1939) and Blanche DuBois in *A Streetcar Named Desire* (1951). Both characters exhibit blends of histrionic and narcissistic features that fit stereotyped views of female personality traits.

A second question is concerned with the possibility of gender bias in the ways that clinicians assign diagnoses to their clients, regardless of whether the criteria themselves are biased. Are clinicians more likely to assign diagnoses such as dependent and borderline personality disorder to a woman than to a man, if both people exhibit the same set of symptoms? The answer to this question is also no. One study found that neither male nor female mental health professionals were more likely to describe a person as exhibiting symptoms of borderline personality disorder if that person were female rather than male (Woodward et al., 2009).

## STABILITY OF PERSONALITY DISORDERS OVER TIME

Temporal stability is one of the most important assumptions about personality disorders. Evidence for the assumption that personality disorders appear during adolescence and persist into adulthood has, until recently, been limited primarily to antisocial personality disorder. One classic follow-up study

(Robins, 1966) began with a large set of records describing young children treated for adjustment problems at a clinic during the 1920s. The investigator was able to locate and interview almost all of these people, who by then were adults. The best predictor of an adult diagnosis of antisocial personality was conduct disorder in childhood. The people who were most likely to be considered antisocial as adults were boys who had been referred to the clinic on the basis of serious theft or aggressive behavior; who exhibited such behaviors across a variety of situations; and whose antisocial behaviors created conflict with adults outside their own homes. More than half of the boys who exhibited these characteristics were given a diagnosis of antisocial personality disorder as adults.

Another longitudinal study has collected information regarding the prevalence and stability of personality disorders among adolescents (Cohen et al., 2005). This investigation is particularly important because it did not depend solely on subjects who had been referred for psychological treatment and because it was concerned

**Which personality disorders are least likely to change as a person gets older?**

with the full range of personality disorders. The rate of personality disorders was relatively high in this sample: Seventeen percent of the adolescents received a diagnosis of at least one personality disorder. Categorically defined diagnoses were not particularly stable; fewer than half of the adolescents who originally qualified for a personality disorder diagnosis met the same criteria two years later. Nevertheless, many of the study participants continued to exhibit similar problems over the next 20 years. Viewed from a dimensional perspective, the maladaptive traits that represent the core features of the disorders remained relatively stable between adolescence and young adulthood (Crawford, Cohen, & Brook, 2001).

Several studies have examined the stability of personality disorders among people who have received professional treatment for their problems, especially those who have been hospitalized for schizotypal or borderline disorders. Many patients who have been treated for these problems are still significantly impaired several years later, but the disorders are not uniformly stable (Paris, 2003; Skodol et al., 2008). Recovery rates are relatively high among patients with a diagnosis of borderline personality disorder. If patients who were initially treated during their early twenties are followed up when they are in their forties and fifties, only about one person in four would still qualify for a diagnosis of borderline personality disorder (Zanarini et al., 2006). The long-term prognosis is less optimistic for schizotypal and schizoid personality disorders. People with these diagnoses are likely to remain socially isolated and occupationally impaired.

## CULTURE AND PERSONALITY

In DSM-IV-TR, personality disorders are defined in terms of behavior that “deviates markedly from the expectations of the individual’s culture.” In setting this guideline, the authors of DSM-IV-TR recognized that judgments regarding





Is this young Afghan woman more extraverted than the others? Is she a risk-taker? It is impossible to make these personality judgments without more knowledge of the culture in which she lives. She may be unveiled because she is younger than the other women, or because she is not married.

appropriate behavior vary considerably from one society to the next. Some cultures encourage restrained or subtle displays of emotion, whereas others promote visible, public displays of anger, grief, and other emotional responses. Behavior that seems highly dramatic or extraverted (histrionic) in the former cultures might create a very different impression in the latter cultures. Cultures also differ in the extent to which they value individualism (the pursuit of personal goals) as opposed to collectivism (sharing and self-sacrifice for the good of the group; Triandis, 1994). Someone who seems exceedingly self-centered and egotistical in a collectivist society, such as Japan, might appear to be normal in an individualistic society like the United States.

The personality disorders may be more closely tied to cultural expectations than any other kind of mental disorder (Alarcon, 2005). Some studies have compared the prevalence and symptoms of personality disorders in different countries, and the data suggest that similar problems do exist in cultures outside the United States and Western Europe (Pinto et al., 2000; Yang et al., 2000). Nevertheless, much more information is needed before we can be confident that the DSM-IV-TR system for describing personality disorders is valid in other societies. Two questions are particularly important:

1. In other cultures, what are the personality traits that lead to marked interpersonal difficulties and social or occupational impairment? Are they different from those that have been identified for our own culture?
2. Are the diagnostic criteria that are used to define personality disorder syndromes in DSM-IV-TR (and ICD-10) meaningful in other cultures?

Cross-cultural studies that are designed to address these issues must confront a number of difficult methodological problems (see Research Methods).

Within a particular society, the experiences of people from cultural and ethnic minorities should also be considered

carefully before diagnostic decisions are made. Phenomena associated with paranoid personality disorder, including strong feelings of suspicion, alienation, and distrust, illustrate this issue. People who belong to minority groups (and those who are recent immigrants from a different culture) are more likely than members of the majority or dominant culture to hold realistic concerns about potential victimization and exploitation. For example, black Americans may develop and express mild paranoid tendencies as a way of adapting to ongoing experiences of oppression (Whaley, 2001). Clinicians may erroneously diagnose these conditions as paranoid personality disorder if they do not recognize or understand the cultural experiences in which they are formed. In this particular case, it is obviously important for the clinician to consider the person's attitudes and beliefs regarding members of his or her own family or peer group, as well as the person's feelings about the community as a whole.

## Schizotypal Personality Disorder (SPD)

Now that we have reviewed some of the important general issues for the entire set of personality disorders, we consider three specific types of disorders in more detail. We have decided to focus on schizotypal, borderline, and antisocial types because they have been the subject of extended research and debate in the scientific literature.

We begin each of the three sections with a brief case study. We have chosen cases that are prototypes for each disorder. In other words, these are people who exhibit most, if not all, of the features of the disorder. You should not infer from these descriptions that everyone who meets the criteria for these disorders would represent this type of typical case.



# RESEARCH METHODS

## CROSS-CULTURAL COMPARISONS: THE IMPORTANCE OF CONTEXT

Over the past 40 years, psychologists have begun to adopt a broader focus in their consideration of human behavior, including mental disorders. This means paying more attention to cultural diversity in the samples used in research studies.

At the broadest level, culture is a system of meanings that determines the ways in which people think about themselves and their environments. It shapes their most basic view of reality. Consider, for example, the process of bereavement following the death of a close relative. In some Native American cultures, people learn to expect to hear the spirit of the dead person calling to them from the afterworld (Kleinman, 1988). This is a common experience for people in these cultures. It resembles auditory hallucinations (perceptual experiences in the absence of external stimulation) that are seen in people with psychotic disorders. But among some Native American peoples, hearing voices from the dead is a “normative” or common response; it is not a sign of dysfunction. Perhaps most importantly, this type of experience is not regularly associated with social or occupational impairment. It would be a mistake, therefore, to consider these experiences to be symptoms of a mental disorder.

**Cross-cultural psychology** is the scientific study of ways that human behavior and mental processes are influenced by social and cultural factors (Berry et al., 2002). This field includes the study of ethnic differences (among cultural groups living in close proximity within a single nation). Comparison is a fundamental element of any cross-cultural study. Cross-cultural psychologists examine ways in which human behaviors are different, as well as ways in which they are similar, from one culture to the next.

Cross-cultural comparisons are relevant to the study of psychopathology

in many ways (Draguns & Tanaka-Matsumi, 2003; Kirmayer, 2006). One way involves epidemiology—comparisons of the prevalence of disorders across cultures. Investigations aimed at etiological mechanisms, including biological, psychological, and social variables, can also be extremely informative when viewed in cross-cultural perspective. For example, we know that negative patterns of thinking are correlated with depressed mood in middle-class Americans. Is the same relationship found among people living in rural China? Virtually any study of psychopathology would provide useful information if it were replicated in different cultures.

The valuable process of making cross-cultural comparisons can actually be quite difficult (Draguns, 2006; Ratner & Hui, 2003). Several complex issues must be faced by investigators who want to study psychopathology in cross-cultural perspective:

1. *Identifying meaningful groups:* The first step in making cross-cultural comparisons is the selection of participants who are representative members of different cultures. This might be a relatively straightforward process if the comparison is to be made between two small, homogeneous groups such as two isolated rural villages in two very different countries (say, Peru and Zimbabwe). The situation becomes much more complex if the investigator’s goal is to compare ethnic groups within a large, multicultural society such as the United States. Hispanic Americans, for example, include people whose cultural backgrounds can be traced to many different Spanish-speaking homelands with very different cultural traditions, such as Puerto Rico, Mexico, and Cuba. Even greater

cultural diversity is found among various Native American peoples. How do we determine which people share a common culture? What is the cultural “unit,” and how do we find its boundaries?

2. *Selecting equivalent measurement procedures:* Comparison between groups can be valid only if equivalent measurement procedures are used in both cultures (or in all groups). Participants in different cultures

### *What are the most important challenges in collecting and interpreting cross-cultural data?*

often speak different languages (or different dialects). Questionnaires and psychological tests must be cross-validated to ensure that they measure the same concepts in different cultures.

3. *Considering causal explanations:* Suppose that investigators identify a reliable difference between people in two different cultures. They must now decide how to interpret this difference. Is it, in fact, due to cultural variables? Or would the differences disappear if other variables, such as poverty, education, and age, were held constant between the two groups?
4. *Avoiding culturally biased interpretations:* Investigators, who are often middle class and white, must interpret the results of cross-cultural research cautiously. In particular, scientists must not interpret differences between cultures or ethnic groups as being indicative of deficits in minority groups or non-Western cultures. Some cross-cultural psychologists have suggested that it is more important to study developmental processes within cultures or ethnic groups than to compare outcomes between groups.



Remember, also, that many people simultaneously meet the criteria for more than one personality disorder; these cases are relatively simple examples. The following case illustrates some of the most important features of schizotypal personality disorder (SPD).

The concept of schizotypal personality disorder is closely tied to the history of schizophrenia as a diagnostic entity (Gottesman, 1987). The term was originally coined as an abbreviation for *schizophrenic phenotype*. These maladaptive personality traits are presumably seen among people who possess the genotype that makes them vulnerable to schizophrenia. The symptoms of schizotypal personality disorder represent early manifestations of the predisposition to develop the full-blown disorder. It has been recognized for many years that a fairly large proportion of the family members of schizophrenic patients exhibit strange or unusual behaviors that are similar to, but milder in form than, the disturbance shown by the patient.

## BRIEF CASE STUDY

### Schizotypal Personality Disorder

Sandra, when she first came for treatment at the age of 27, presented with marked anxiety in social situations and in getting along with coworkers, eccentric behavior, and paranoid ideas. She had no close female friends and only one male friend, and though the latter was a sexual relationship, she revealed almost nothing to him about her past. She had many strange beliefs involving astrology, foods, and medicines.

Sandra had only one friend during her adolescence: someone who shared her faddishness about foods and her beliefs in astrology. Girls excluded her from their school clubs. She never understood why they rejected her, although it is probable that they considered her “weird” because of her inability to make small talk, and her voice pattern: a flat, high-pitched, stilted-sounding monotone that made her come across as mannered and insincere. Added to this peculiarity of speech was her tendency to skip from topic to topic abruptly, giving equal emphasis to each, such that it was difficult to distinguish the trivial from the important. From a therapeutic standpoint, this was particularly bedeviling, since it strained one’s intuitive capacities to the uttermost just to figure out what was really bothering her or what was the “main theme” on any particular day.

Her empathic skills were very limited, leading her to comment at times that she found people and their motives completely puzzling: “I can’t connect up with them. If they invite me to lunch with them, I can’t seem to join in the conversation or else I say the wrong thing, so after a while they don’t invite me anymore and I eat by myself.” If a teaching supervisor wore a dour expression walking down the hall, Sandra assumed the supervisor was dissatisfied with her work, even though it might be a person who was not even assigned to her department. She tended to be surly and “superior” sounding when asking for vacation requests and the like—and often didn’t get what she wanted because of having alienated the people whose favor she needed. This reinforced her notion that the world was pretty much against her.

Although considered a knowledgeable teacher, she had no charm or patience with the children and was eventually given a semi-administrative job where little interaction with others was necessary. With boyfriends, she was comfortable about having sex but made such fussy and endless-seeming preparations (such as doing her fingernails in the bathroom for half an hour) that the men lost the mood and usually ended the relationship after a few months.

More striking than her empathic difficulties was a curious inability to grasp what one might call the statistics of everyday life. Travel was a great burden, since she felt it necessary to plan for all possible contingencies. She once went to (France) on an August vacation packing her winter overcoat, because, as she reminded me, “There was a cold spell there in the 1950s and it could happen again.” Furthermore, she sent a packet of clothes on ahead to the hotel because, “What if my baggage got stolen?” She had great difficulty, in other words, aligning her behavior in harmony with the expectable, in contrast with the remotely possible—all thinkable events being in her mind equally probable (Stone, 1993, pp. 179–180).

## SYMPTOMS

The DSM-IV-TR criteria for schizotypal personality disorder are listed in Table 9.3. These criteria represent a blend of those characteristics that have been reported among the relatives of schizophrenic patients and those symptoms that seem to characterize nonpsychotic patients with schizophrenic-like disorders (Esterberg, Goulding, & Walker, 2010). In addition to social detachment, emphasis is placed on eccentricity and cognitive or perceptual distortions.

People who meet the criteria for schizotypal personality disorder frequently meet the criteria for additional Axis II disorders. There is considerable overlap between schizotypal personality disorder and other personality disorders in Cluster A (paranoid and schizoid), as well as with avoidant personality disorder. This finding is not particularly surprising, given the conceptual origins of the schizotypal category. There is also quite a bit of overlap between schizotypal personality disorder and borderline personality disorder.

## CAUSES

Most of the interest in the etiology of schizotypal personality disorder has focused on the importance of genetic factors. Is schizotypal personality disorder genetically related to schizophrenia? Family and adoption studies indicate that the answer is “yes”? (Reichborn-Kjennerud, 2010). Twin studies have examined genetic contributions to schizotypal personality disorder from a dimensional perspective in which schizotypal personality traits are measured with questionnaires. This evidence also points to a significant genetic contribution (Linney et al., 2003).

The first-degree relatives of schizophrenic patients are considerably more likely than people in the general population to exhibit symptoms of schizotypal personality disorder. Several studies have examined the prevalence of



**TABLE 9.3 DSM-IV-TR Criteria for Schizotypal Personality Disorder**

**A. A pervasive pattern of social and interpersonal deficits marked by acute discomfort with, and reduced capacity for, close relationships as well as by cognitive or perceptual distortions and eccentricities of behavior, beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:**

1. Ideas of reference (excluding delusions of reference).
2. Odd beliefs or magical thinking that influences behavior and is inconsistent with subcultural norms (such as superstitiousness, belief in clairvoyance, or telepathy).
3. Unusual perceptual experiences, including bodily illusions.
4. Odd thinking and speech (vague, circumstantial, metaphorical, overelaborate, or stereotyped).
5. Suspiciousness or paranoid ideation.
6. Inappropriate or constricted affect.\*
7. Behavior or appearance that is odd, eccentric, or peculiar.
8. Lack of close friends or confidants other than first-degree relatives.
9. Excessive social anxiety that does not diminish with familiarity and tends to be associated with paranoid fears rather than with negative judgments about self.

**B. Does not occur exclusively during the course of Schizophrenia, a Mood Disorder with Psychotic Features, another Psychotic Disorder, or a Pervasive Developmental Disorder.**

\*Inappropriate affect refers to emotional responses that appear to be inconsistent with the social context—for example, uncontrollable giggling at a wake or funeral. Constricted affect refers to the absence of emotional responsiveness, such as lack of facial expressions. See Chapter 13 for a more detailed discussion.

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schizotypal personality disorder among the parents and siblings of patients being treated for schizophrenia (Tienari et al., 2003). The most striking and consistent finding has been an increased prevalence of schizotypal personality disorder among the relatives of the schizophrenic patients. Prevalence rates for paranoid and avoidant personality disorder also tend to be higher among the relatives of the schizophrenic patients. These types of personality disorders are not more prevalent among the relatives of people with mood disorders. Results from these studies are consistent with the conclusion that schizotypal personality disorder is genetically related to schizophrenia.

## TREATMENT

Two important considerations complicate the treatment of people with personality disorders in general and SPD in particular and make it difficult to evaluate the effectiveness of various forms of intervention. One consideration involves the ego-syntonic nature of many personality disorders (discussed earlier). Many people with these disorders do not seek treatment for their problems because they do not see their own behavior as being the source of distress. A related difficulty involves premature termination: A relatively high proportion of personality disorder patients drop out of treatment before it is completed.

When people with personality disorders appear at hospitals or clinics, it is often because they are also suffering from another type of mental disorder, such as depression or a substance use disorder, such as alcohol dependence. This comorbidity is the

second consideration that complicates treatment. “Pure forms” of personality disorder are relatively rare. There is tremendous overlap between specific personality disorder categories and other forms of abnormal behavior, including disorders that would be listed on both Axis I and Axis II. Treatment is seldom aimed at problem behaviors that are associated with only one type of personality disorder, and the efficacy of treatment is, therefore, difficult to evaluate.

The literature regarding treatment of schizotypal personality disorder, like that dealing with its causes, mirrors efforts aimed at schizophrenia. A few studies have focused on the possible treatment value of antipsychotic drugs, which are effective with many schizophrenic patients. Some studies have found that low doses of antipsychotic medication are beneficial in alleviating cognitive problems and social anxiety in patients who have received a diagnosis of schizotypal personality disorder (Koenigsberg et al., 2003). There is also some indication that patients with schizotypal personality disorder may respond positively to antidepressant medications, including SSRIs. In general, the therapeutic effects of medication are positive, but they tend to be modest.

Clinical experience suggests that these patients do not respond well to insight-oriented psychotherapy, in part because they do not see themselves as having psychological problems and also because they are so uncomfortable with close personal relationships. Some clinicians have suggested that a supportive, educational approach that is focused on fostering basic social skills may be beneficial if the goals of treatment are modest (Crits-Christoph, 1998; Gabbard,

**Why are personality disorders so difficult to treat?**



2000). Unfortunately, controlled studies of psychological forms of treatment with schizotypal personality disorder have not been reported.

## Borderline Personality Disorder (BPD)

Borderline personality disorder is one of the most perplexing, most disabling, and most frequently treated forms of personality disorder. Because of the severity of their problems, people with BPD are more likely to come into clinics seeking treatment. The following case illustrates many of the features associated with borderline personality disorder.

### BRIEF CASE STUDY

#### Borderline Personality Disorder

Barbara, a single woman of 24, sought treatment with me shortly after discharge from a hospital, where she had spent three weeks because of depression, panic attacks, and a suicide gesture. This had been her seventh hospitalization—all of them brief, and all for similar symptoms—since age 17. Cheerful and cooperative as a young girl, she underwent a radical change of personality at the time of her menarche. Thereafter, she became irascible, rebellious, moody, and demanding.

For a time she was anorexic; later on, bulimic (maintaining her normal weight by vomiting). Schoolwork deteriorated, and she took up with a wild crowd, abusing marijuana and other drugs and engaging in promiscuous sex. At one point she ran away from home with a boyfriend and didn't return for three months.

She quit high school with one year to go. Her life became even more chaotic; she scratched her wrists on a number of occasions, and consorted with abusive men who would use her sexually and then beat her up.

By the time I began working with Barbara, she had been abusing alcohol for about a year and had also become addicted to benzodiazepines. Her proneness to panic-level anxiety now took the form of agoraphobia, necessitating her being accompanied by a parent to her therapy sessions. Premenstrually, her irritability rose to fever pitch: She would strike her parents with her fists, sometimes necessitating help from the police. She would then threaten to kill herself.

Lacking any hobbies or interests, apart from dancing, she was bored or distraction at home, yet afraid to venture out. Nothing gave her any pleasure except glitzy clothes (which her agoraphobia rendered irrelevant).

For a few weeks Barbara dated a man from her neighborhood, and although she was able to leave the house if she were with him, she used the opportunity in a self-destructive way, going to wild nightclubs and provoking him with demands

to the point where he drove her only halfway home, pushing her out of the car, so that she had to hitchhike home at 2 A.M. This precipitated a suicide attempt with a variety of medications (Stone, 1993, pp. 248–249).

The intellectual heritage of BPD is quite diverse, and it is more difficult to trace than that of schizotypal personality disorder. It is, in fact, rather confusing. Several traditions are important, and in some cases they represent conflicting points of view (Leichtman, 1989).

Otto Kernberg (1967, 1975), a psychiatrist at Cornell University, has developed an explanation of borderline personality that is based on psychodynamic theory. According to Kernberg, borderline personality is not a specific syndrome. Rather, it refers to a set of personality features or deficiencies that can be found in individuals with various disorders. In Kernberg's model, the common characteristic of people diagnosed with borderline personality is faulty development of ego structure. Another common feature of people with borderline disorder is *splitting*—the tendency to see people and events alternately as entirely good or entirely bad. Thus, a man with borderline personality might perceive his wife as almost perfect at some times and as highly flawed at other times. The tendency toward splitting helps explain the broad mood swings and unstable relationships associated with borderline personalities.

Kernberg's emphasis on a broadly defined level of pathology, rather than on discrete clinical symptoms, resulted in a relatively expansive definition of borderline personality. Viewed from this perspective, borderline disorder can encompass a great many types of abnormal behavior, including paranoid, schizoid, and cyclothymic personality disorders, impulse control disorders (see Impulse Control Disorders), substance use disorders, and various types of mood disorders.

In an effort to foster research on borderline disorders, these psychodynamic views regarding personality organization were translated into more reliable, descriptive terms by several prominent clinicians. John Gunderson (1984, 1994), a psychiatrist



Some people with borderline personality disorder engage in recurrent suicidal gestures or self-mutilating behavior.



## IMPULSE CONTROL DISORDERS

Failure to control harmful impulses is associated with several of the disorders listed in DSM-IV-TR. People who meet the criteria for borderline personality disorder and antisocial personality disorder engage in various types of impulsive, maladaptive behaviors (most often self-mutilation in the case of BPD, and theft and aggression in the case of ASPD). People in the midst of a manic episode frequently become excessively involved in pleasurable activities that can have painful consequences, such as unrestrained buying or sexual indiscretions. These are examples of impulse control problems that appear as part of a more broadly defined syndrome or mental disorder.

DSM-IV-TR includes several additional problems under a heading called **impulse control disorders** (Hollander & Stein, 2006). They are coded on Axis I rather than Axis II. Relatively little is known about these problems. They are defined in terms of persistent, clinically significant impulsive behaviors that are not better explained by other disorders in DSM-IV-TR. They include the following:

- *Intermittent explosive disorder*: Aggressive behaviors resulting in serious assaultive acts or destruction of property (Coccaro, Posternak, & Zimmerman, 2005; Olvera, 2002). The level of aggression is grossly out of proportion to any precipitating psychosocial stressors.
- *Kleptomania*: Stealing objects that are not needed for personal use or for their financial value. The theft is not motivated by anger or vengeance (Presta et al., 2002).
- *Pyromania*: Deliberate and purposeful setting of fires, accompanied by fascination with or attraction to fire and things that are associated with it. The behavior is not motivated by financial considerations (as in arson), social or political ideology, anger, vengeance, or delusional beliefs (Lejoyeux, McLoughlin, & Ades, 2006).
- *Trichotillomania*: Pulling out one's own hair, resulting in noticeable hair loss as well as significant distress or impairment in social or occupational functioning (Woods, Adcock, & Conelea, 2008).
- *Pathological gambling*: Repeated maladaptive gambling that is associated with other problems, such as

repeated, unsuccessful efforts to stop gambling, restlessness or irritability when trying to stop gambling, lying to family members and friends to conceal the extent of gambling, and committing crimes to finance gambling (Sharpe, 2002).

In most cases, the impulsive behavior is preceded by increasing tension and followed by a feeling of pleasure, gratification, or relief. The motivation for these impulsive behaviors is, therefore, somewhat different than the motivation for compulsive behavior (see Chapter 6). Impulsive and compulsive behaviors can be difficult to distinguish, as both are repetitious and difficult to resist. The primary difference is that the original goal for impulsive behavior is to experience pleasure, and the original goal for compulsive behavior is to avoid anxiety (Frances, et al., 1995; Grant & Potenza, 2006).

The most frequent type of impulse control disorder is pathological gambling. The lifetime prevalence of pathological gambling in the United States is approximately 2 or 3 percent of the population and seems to be increasing with the spread of legalized gambling (Stucki & Rihs-Middel, 2007). Men are more likely than women to become pathological gamblers. They tend to be intelligent, well-educated, competitive people who enjoy the challenges and risks involved in betting. Substance use disorders (see Chapter 11) and antisocial personality disorder are commonly associated with pathological gambling. Evidence from twin studies suggests that impulsivity represents a common form of vulnerability to all three types of disorders, and this predisposition is influenced by genetic factors (Slutske et al., 2000; Xian et al., 2007).

Most gambling is not associated with a mental disorder. Social gambling is a form of recreation that is accepted in most cultures. Professional gambling is an occupation pursued by people whose gambling is highly disciplined. Pathological gambling, in contrast, is out of control, takes over the person's life, and leads to horrendous financial and interpersonal consequences.

The tragic life of Art Schlichter provides a vivid illustration of the devastating

impact that persistent, uncontrolled, impulsive gambling can have on a person and his family (Keteyian, 1986; Valente, 1996). Schlichter, an All-American quarterback at Ohio State University, was the first player drafted by the National Football League in 1982. He had been gambling since high school, but the problem became worse after he started playing professional football. His career was disappointing. As the pressures mounted, so did his gambling debts, which eventually reached \$1 million. He was cut from several teams in the National Football League and the Canadian Football League and was ultimately banned from the NFL for betting on professional games. He entered treatment for his compulsive gambling on several occasions, but the results were unsuccessful and his repeated promises to stop gambling went unfulfilled. Schlichter has been arrested and jailed on several occasions for charges that include forgery, theft, and bank fraud. In 2001, he was sentenced to six years in prison for violating the terms of his probation. Schlichter's promising football career

### *In what ways are impulse control disorders different from compulsive behaviors?*

was ruined, and his young family was torn apart by his uncontrolled gambling.

The impulse control disorders occupy an interesting and controversial niche in DSM-IV-TR. The implication of impulse control disorders is that people who repeatedly engage in dangerous, illegal, or destructive behaviors must have a mental disorder. If they do not, why do they do these things? Unfortunately, this reasoning quickly becomes circular. Why does he gamble recklessly? Because he has a mental disorder. How do you know he has a mental disorder? Because he gambles recklessly. This logical dilemma is particularly evident in the case of impulse control disorders when the problem behaviors do not appear as part of a broader syndrome in which other symptoms of disorder are also present. In other words, the problem behavior is the disorder. Until we can step outside this loop, validating the utility of the diagnostic concept by reference to other psychological or biological response systems, we are left with an unsatisfying approach to the definition of these problems.



## Compulsive Gambling



ED

*"My mother was on her deathbed. Her words to me were, 'You've got to stop gambling. It's ruining your life. You'll lose everything.' She died the following day, and I spent the next year of my life proving her right. I did lose everything."*

Watch the video "Compulsive Gambling: Ed" on MyPsychLab. As you watch the interview and the day-in-the-life segments, ask yourself what purpose Ed's gambling seemed to play in his life. How was his preoccupation with gambling different from a serious commitment to a career or a hobby?

at Harvard University, identified a number of descriptive characteristics that are commonly associated with Kernberg's concept of borderline personality. Gunderson and his colleagues developed a structured interview that would allow clinicians to diagnose the condition reliably and served as the basis for the current definition of BPD in DSM-IV-TR.

## SYMPTOMS

The DSM-IV-TR criteria for borderline personality disorder are presented in Table 9.4. The overriding characteristic of borderline personality disorder is a pervasive pattern of instability in self-image, in interpersonal relationships, and in mood.

To be borderline means to lack grounding emotionally and to exist from moment to moment without any sense

of continuity, predictability, or meaning. Life is experienced in fragments, more like a series of snapshots than a moving picture. It is a series of discrete points of experience that fail to flow together smoothly or to create an integrated whole.

(Moskovitz, 1996, pp. 5–6)

Borderline personality disorder overlaps with several other categories on Axis II, including the histrionic, narcissistic, paranoid, dependent, and avoidant types. There is also a significant amount of overlap between borderline personality disorder and Axis I disorders, especially depression (Trull, Stepp, & Solhan, 2006). Many patients with other types of impulse control problems, such as substance dependence and eating disorders, also qualify for a diagnosis of borderline personality disorder.

Follow-up studies suggest many similarities between borderline personality disorder and mood disorders. In many cases, the symptoms of BPD are evident before the onset of major depression. For example, one study focused on a group of 100 outpatients with a diagnosis of borderline personality disorder (Akiskal, 1992). During follow-up, 29 percent of the sample developed severe depression. Another longitudinal study of patients who were discharged from a private psychiatric hospital is also interesting in this regard. In a sample of patients with a pure diagnosis of borderline personality disorder (that is, those who did not receive any other diagnosis on Axis I or II), 23 percent developed major depressive episodes during the course of the 15-year follow-up (McGlashan, 1986).

## CAUSES

Genetic factors are clearly involved in the etiology of borderline personality disorder when it is viewed in terms of the

**TABLE 9.4 DSM-IV-TR Criteria for Borderline Personality Disorder**

**A pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:**

1. Frantic efforts to avoid real or imagined abandonment.
2. A pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of idealization and devaluation.
3. Identity disturbance: markedly and persistently unstable self-image or sense of self.
4. Impulsiveness in at least two areas that are potentially self-damaging (for example, spending, sex, substance abuse, reckless driving, binge eating).
5. Recurrent suicidal behavior, gestures, or threats, or self-mutilating behavior.
6. Affective instability due to a marked reactivity of mood (such as intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days).
7. Chronic feelings of emptiness.
8. Inappropriate, intense anger or difficulty controlling anger (for example, frequent displays of temper, constant anger, recurrent physical fights).
9. Transient, stress-related paranoid ideation or severe dissociative symptoms.

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syndrome that is defined in DSM-IV-TR (Distel et al., 2010). Furthermore, the fundamental personality traits that serve to define the disorder, such as neuroticism and impulsivity, are also influenced by genetic factors (Livesley, 2008). The most important question is how a genetic predisposition toward certain personality characteristics can interact with various types of detrimental environmental events to produce the problems in emotional regulation and attachment relationships that are seen among patients with borderline personality disorder.

Some investigators have argued that borderline patients suffer from the negative consequences of parental loss, neglect, and mistreatment during childhood (Fonagy & Bateman, 2008). This model is supported by studies of the families of borderline patients and by comparisons with the literature on social development in monkeys that examined the effects of separating infants from their mothers. Studies of patients with borderline personality disorder do point toward the influence of widespread problematic relationships with their parents. Adolescent girls with borderline personality disorder report pervasive lack of supervision, frequent witnessing of domestic violence, and being subjected to inappropriate behavior by their parents and other adults, including verbal, physical, and sexual abuse (Helgeland & Torgersen, 2004; Pally, 2002). The extent and severity of abuse vary widely across individuals. Many patients describe multiple forms of abuse by more than one person.

The association between borderline personality disorder and the patients' recollections of childhood maltreatment raises an important question about the direction of this relationship: Does childhood abuse lead to borderline personality disorder? Or are people with borderline personality disorder simply more likely to remember that they were abused by their parents, due to biased reporting?

Longitudinal data from a study of adolescents in upstate New York provide important evidence on this point (Johnson et al., 1999). Rather than relying exclusively on self-report measures, the investigators obtained data on child maltreatment from the New York State Central Registry for Child Abuse. Maltreatment included documented cases of physical abuse, sexual abuse, and childhood neglect. People with documented evidence of childhood abuse and neglect were four times more likely than those who had not been mistreated to develop symptoms of personality disorders as young adults. Strongest connections were found for Cluster B disorders (see Figure 9.1). Physical abuse was most closely associated with subsequent antisocial personality disorder; sexual abuse with borderline personality disorder; and childhood neglect with antisocial, borderline, narcissistic, and avoidant personality disorder. These data support the argument that maladaptive patterns of parenting and family relationships increase the probability that a person will develop certain types of personality disorder.

## TREATMENT

Given that the concept of borderline personality disorder is rooted in psychodynamic theory, it should not be surprising that many clinicians have advocated the use of psychotherapy for the treatment of these conditions. In psychodynamic therapy, the *transference relationship*, defined as the way in which the patient behaves toward the therapist and that

(This item omitted from WebBook edition)

### FIGURE 9.1 Family Environment and Risk for Personality Disorders

Associations between childhood maltreatment and risk for early adulthood personality disorders.

Source: J. G. Cohen, J. Brown, E. M. Smailes, and D. P. Bernstein, 1999, "Childhood Maltreatment Increases Risk for Personality Disorders during Early Adulthood," *Archives of General Psychiatry*, 56, pp. 600–606. Copyright © 1999. This material can be found at: <http://archpsyc.ama-assn.org/cgi/content/abstract/56/7/600>. Reprinted by permission of the American Medical Association.

is believed to reflect early primary relationships, is used to increase patients' ability to experience themselves and other people in a more realistic and integrated way (Clarkin et al., 2001; Gabbard, 2000).

As we have said, personality disorders have traditionally been considered to be hard to treat from a psychological perspective, and borderline conditions are among the most difficult. Close personal relationships form the foundation of psychological intervention, and it is specifically in the area of establishing and maintaining such relationships that borderline patients experience their greatest difficulty (see Getting Help). Their persistent alternation between overidealization and devaluation leads to frequent rage toward the therapist and can become a significant deterrent to progress in therapy. Not surprisingly, between one-half and two-thirds of all patients with borderline personality disorder discontinue treatment, against their therapists' advice, within the first several weeks of treatment (Kelly et al., 1992).

One promising approach to psychotherapy with borderline patients, called *dialectical behavior therapy* (DBT), has been developed and evaluated by Marsha Linehan (Linehan, Cochran, & Kehrer, 2001), a clinical psychologist at the University of Washington. This procedure combines the use of broadly based behavioral strategies with the more general principles of supportive psychotherapy. In philosophy, the term *dialectics* refers to a process of reasoning that places opposite or contradictory ideas side by side. In Linehan's approach to treatment, the term refers to strategies that are employed by the therapist in order to help the person appreciate and balance apparently contradictory needs to accept things as they are (such as intense negative emotions) and to work toward changing patterns of thinking



and behavior that contribute to problems in the regulation of emotions. Emphasis is placed on learning to be more comfortable with strong emotions, such as anger, sadness, and fear, and learning to think in a more integrated way that accepts both good and bad features of the self and other people. Traditional behavioral and cognitive techniques, such as skill training, exposure, and problem solving, are also employed to help the patient improve interpersonal relationships, tolerate distress, and regulate emotional responses. Finally, considerable emphasis is placed on the therapist's acceptance of patients, including their frequently demanding, manipulative, and contradictory behaviors. This factor is important, because borderline patients are extremely sensitive to even the most subtle signs of criticism or rejection by other people.

One controlled study of dialectical behavior therapy produced encouraging results with regard to some aspects of the patients' behavior (Linehan et al., 1994, 1999). All of the patients in this study were women who met diagnostic criteria for BPD and also had a previous history of suicide attempts or deliberate self-harm. Patients were randomly assigned to receive either DBT or treatment as usual, which was essentially any form of treatment that was available within the community. The adjustment of patients in both groups was measured after one year of treatment and over a one-year period following termination. One of the most important results involved the dropout rate. Almost 60 percent of the patients in the treatment as usual group terminated prematurely, whereas the rate in the DBT group was only 17 percent. The patients who received DBT also showed a significant reduction in the frequency and severity of suicide attempts, spent fewer days in psychiatric hospitals over the course of the study, and rated themselves higher on a measure of social adjustment. The groups did not differ, however, on other important measures, such as level of depression and hopelessness.

Positive results have also been reported in more recent studies in which women with BPD were randomly assigned to either dialectical behavior therapy or treatment as usual. Outcome measures indicated that women who were treated with dialectical behavior therapy experienced more improvement than women in the control groups with regard to symptoms such as depression and hopelessness (Bohus et al., 2004; Koons et al., 2001; Verheul et al., 2003).

In general, these studies suggest that DBT is a promising form of treatment for people with borderline personality disorder. It should be noted, however, that the sample sizes in these studies are quite small. Important methodological questions have been raised about the outcome results, including the possible influence of the allegiance effect (see Research Methods in Chapter 10). DBT has become one of the most popular and rapidly expanding forms of psychological treatment, and it has begun to be used in treating other problems that involve impulsive behavior, such as substance use disorders and binge eating disorders (Robins & Chapman, 2004). Enthusiasm for the therapeutic value of DBT will undoubtedly lead to more rigorous evaluations of its effectiveness in clinical settings.

Psychotropic medication is also used frequently in the treatment of borderline patients. Unfortunately, no disorder-specific drug has been found. Psychiatrists employ the entire spectrum of psychoactive medication with borderline patients, from antipsychotics and antidepressants to lithium and anticonvulsants (Koenigsberg, Woo-Ming, & Siever, 2002; Zanarini & Frankenburg, 2001). Different types of drugs are

recommended to treat individual symptoms, such as impulsive aggression, emotional instability, and transient paranoid thinking, but there is no systematic proof that a specific drug is effective for any of the borderline features.

## Antisocial Personality Disorder (ASPD)

Antisocial personality disorder (ASPD) has been studied more thoroughly and for a longer period of time than any of the other personality disorders (Blashfield, 2000). One case study involving this disorder was presented at the beginning of this chapter. Tom, the man in that case, illustrated the pattern of repeated antisocial behavior that is associated with the disorder. Emotional and interpersonal problems also play an important role in the definition of antisocial personality disorder. The following case, written by Robert Hare, a clinical psychologist at the University of British Columbia, illustrates the egocentricity that is a central feature of the disorder. It also demonstrates the stunning lack of concern that such people have for the impact of their behavior on other people, especially those who are close to them.

### BRIEF CASE STUDY

#### Antisocial Personality Disorder

Terry is 21, the second of three boys born into a wealthy and highly respected family. His older brother is a doctor, and his younger brother is a scholarship student in his second year of college. Terry is a first-time offender, serving 2 years for a series of robberies committed a year ago.

By all accounts, his family life was stable, his parents were warm and loving, and his opportunities for success were enormous. His brothers were honest and hardworking, whereas he simply "floated through life, taking whatever was offered." His parents' hopes and expectations were less important to him than having a good time. Still, they supported him emotionally and financially through an adolescence marked by wildness, testing the limits, and repeated brushes with the law—speeding, reckless driving, drunkenness—but no formal convictions. By age 20 he had fathered two children and was heavily involved in gambling and drugs. When he could no longer obtain money from his family, he turned to robbing banks, and he was soon caught and sent to prison. "I wouldn't be here if my parents had come across when I needed them," he said. "What kind of parents would let their son rot in a place like this?" Asked about his children, he replied, "I've never seen them. I think they were given up for adoption. How the hell should I know!" (Hare, 1993, p. 167).

The contrast between Terry's willingness to blame his problems on his parents and his apparent inability to accept responsibility for his own children is striking. It illustrates clearly the callous indifference and shallow emotional experience of the person with antisocial personality disorder.





Bernard Madoff, former U.S. stockbroker and investment counselor, is now serving a 150-year prison sentence for running a massive Ponzi scheme that cheated thousands of people out of their life savings. Grandiosity, deceit, manipulateness, and lack of remorse are traits associated with the “white-collar psychopath.”

Current views of antisocial personality disorder have been greatly influenced by two specific books. These books have inspired two different approaches to the definition of the disorder itself. The first book, *The Mask of Sanity*, was written by Hervey Cleckley (1976), a psychiatrist at the University of Georgia, and was originally published in 1941. It includes numerous case examples of impulsive, self-centered, pleasure seeking people who seemed to be completely lacking in certain primary emotions, such as anxiety, shame, and guilt. Cleckley used the term **psychopathy** to describe this disorder. According to Cleckley’s definition, the psychopath is a person who is intelligent and superficially charming but is also chronically deceitful, unreliable, and incapable of learning from experience. This diagnostic approach places principal emphasis on emotional deficits and personality traits. Unfortunately, Cleckley’s definition was difficult to use reliably because it contained such elusive features as “incapacity for love” and “failure to learn from experience.”

The second book that influenced the concept of antisocial personality disorder was a report by Lee Robins of her follow-up study of children who had been treated many years earlier at a child guidance clinic. The book, *Deviant Children Grown Up* (1966), demonstrated that certain forms of conduct disorder that were evident during childhood, especially among boys, were reliable predictors of other forms of antisocial behavior when these same people became adults. The diagnostic approach inspired by this research study was adopted by DSM-III (APA, 1980). It places principal emphasis on observable behaviors and repeated conflict with, including failure to conform to social norms with respect to lawful behavior. This approach can be used with greater reliability than psychopathy because it is focused on concrete consequences of the disorder, which are often documented by legal records, rather than subjectively defined emotional deficits, such as lack of empathy.

Psychopathy and ASPD are two different attempts to define the same disorder. Yet they are sufficiently different that they certainly do not identify the same people, and they are no longer used interchangeably. Critics argued that DSM-III had blurred the distinction between antisocial personality and criminality. Cleckley’s approach had been relatively clear on this point; all criminals are not psychopaths, and all psychopaths are not criminals. The DSM-III definition made it difficult to diagnose antisocial personality disorder in a person who did not already have a criminal record, such as an egocentric, manipulative, and callous businessperson. It also moved in the direction of including a much larger proportion of criminals within the boundaries of antisocial personality disorder (Hart & Hare, 1997). The true meaning of the concept might have been sacrificed in DSM-III for the sake of improved reliability.

## SYMPTOMS

Table 9.5 lists the DSM-IV-TR criteria for antisocial personality disorder. One prominent feature in this definition is the required presence of symptoms of conduct disorder (see Chapter 16) prior to the age of 15, which reflects the impact of Robins’s work. The definition also requires the presence of at least three out of seven signs of irresponsible and antisocial behavior after the age of 15. One of these criteria, “lack of remorse,” did not appear in DSM-III but was one of Cleckley’s original criteria. Its inclusion in DSM-IV-TR clearly signals an attempt to move the definition back toward the original concept.

*What is the difference between antisocial personality disorder and psychopathy?*

Some investigators and clinicians prefer the concept of psychopathy to the DSM-IV-TR definition of antisocial personality. Robert Hare has developed a systematic approach to the assessment of psychopathy, known as the Psychopathy Checklist (PCL), that is based largely on Cleckley’s original description of the disorder. The PCL includes two major factors (groups of symptoms): (1) emotional/interpersonal traits and (2) social deviance associated with an unstable or antisocial lifestyle. Key symptoms for both factors are summarized in Table 9.6. The major difference between this definition of psychopathy and the DSM-IV-TR definition of antisocial personality disorder involves the list of emotional and interpersonal traits (although DSM-IV-TR does include being deceitful and failure to experience remorse). Extensive research with the PCL indicates that, contrary to previous experience with Cleckley’s criteria, the emotional and interpersonal traits can be used reliably (Hart & Hare, 1997).

The ultimate resolution of this prolonged dispute over the best definition of antisocial personality disorder will depend on systematic comparisons of the two approaches (Lilienfeld, 1994; Widiger, 2006). This situation is another classic example of studying the validity of a diagnostic concept (see Chapter 4). How different are these definitions? Which definition is most useful in predicting events such as repeated antisocial behavior following release from prison?

**Antisocial Behavior over the Life Span** Not everyone who engages in antisocial behavior does so consistently throughout his or her lifetime. Terrie Moffitt, a clinical



**TABLE 9.5 DSM-IV-TR Criteria for Antisocial Personality Disorder**

**A. There is a pervasive pattern of disregard for and violation of the rights of others occurring since age 15, as indicated by three (or more) of the following:**

1. Failure to conform to social norms with respect to lawful behavior as indicated by repeatedly performing acts that are grounds for arrest.
2. Deceitfulness, as indicated by repeated lying, use of aliases, or conning others for personal profit or pleasure.
3. Impulsivity or failure to plan ahead.
4. Irritability and aggressiveness, as indicated by repeated physical fights or assaults.
5. Reckless disregard for safety of self or others.
6. Consistent irresponsibility, as indicated by repeated failure to sustain consistent work behavior or honor financial obligations.
7. Lack of remorse, as indicated by being indifferent to or rationalizing having hurt, mistreated, or stolen from another.

**B. The individual is at least 18 years old.**

**C. Evidence of Conduct Disorder with onset before age 15.**

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psychologist at Duke University, has proposed that there are two primary forms of antisocial behavior: transient and nontransient. Moffitt (1993, 2007) considers adolescence-limited antisocial behavior to be a common form of social behavior that is often adaptive and that disappears by the time the person reaches adulthood. This type presumably accounts for most antisocial behavior, and it is unrelated to antisocial personality disorder.

A small proportion of antisocial individuals, mostly males, engage in antisocial behavior at all ages. Moffitt calls this type life-course-persistent antisocial behavior. The specific form of these problems may vary from one age level to the next:

Biting and hitting at age 4, shoplifting and truancy at age 10, selling drugs and stealing cars at age 16, robbery and rape at age 22, and fraud and child abuse at age 30. The underlying disposition remains the same, but its expression changes form as new social opportunities arise at different points in development.

(Moffitt, 1993, p. 679)

Follow-up studies suggest that in some ways psychopaths tend to “burn out” when they reach 40 or 45 years of age. These changes are most evident for the impulsive, socially deviant kinds of behavior that are represented in the second factor on Hare’s Psychopathy Checklist (Harpur & Hare, 1994). Indeed, older psychopaths are less likely to exhibit a pathological “need for excitement” or to engage in impulsive, criminal behaviors. In contrast to this pattern, personality traits associated with the emotional–interpersonal factor on the PCL, such as deceitfulness, callousness, and lack of empathy, do not become less conspicuous over time. These are apparently more stable features of the disorder.

It is not clear whether the age-related decline in social deviance represents a change in personality structure (improved impulse control and diminished sensation seeking). Moffitt’s theory suggests that, as psychopaths grow older, they may find new outlets for their aggression, impulsive behavior, and callous disregard for others. For example, they might resort to fraud or child abuse, for which they are less likely to get caught.

**TABLE 9.6 Key Symptoms of Psychopathy****Emotional/Interpersonal Traits**

Glib and superficial  
Egocentric and grandiose  
Lack of remorse or guilt  
Lack of empathy  
Deceitful and manipulative  
Shallow emotions

**Social Deviance (Antisocial Lifestyle)**

Impulsive  
Poor behavior controls  
Need for excitement  
Lack of responsibility  
Early behavior problems  
Adult antisocial behavior

Source: R. D. Hare, 1998, *Without Conscience: The Disturbing World of the Psychopaths Among Us*, (New York: Guilford Press). Reprinted by permission of the author.



## CAUSES

Psychologists have studied etiological factors associated with psychopathy and antisocial personality disorder more extensively than for any of the other personality disorders. Research studies on this topic fall into three general areas. One is concerned with the biological underpinnings of the disorder, especially the possible influence of genetic factors. The second focus of investigation is social factors. The relationship between familial conflict and the development of antisocial behavior in children falls under this general heading. The third group of studies has addressed the nature of the psychological factors that might explain the apparent inability of people with antisocial personality disorder to learn from experience.

**Biological Factors** Several investigators have used twin and adoption methods to study the contributions of genetic and environmental factors to the development of antisocial personality disorder and of criminal behavior more generally. The adoption strategy is based on the study of adoptees: people who were separated from their biological parents at an early age and raised by adoptive families (see Chapter 2). Several adoption studies have found that the development of antisocial behavior is determined by an interaction between genetic factors and adverse environmental circumstances (Waldman & Rhee, 2006). In other words, both types of influence are important. The highest rates of conduct disorder and antisocial behavior are found among the offspring of antisocial biological parents who are raised in an adverse adoptive environment.

Consider, for example, the results of one particularly informative study that was conducted by Remi Cadoret, a psychiatrist at the University of Iowa, and several colleagues (Cadoret et al., 1995; Yates, Cadoret, & Troughton, 1999). The investigators studied men and women who had been separated at birth from biological parents with antisocial personality disorder. This target group was compared to a control group of people who had been separated at birth from biological parents with no history of psychopathology. The offspring and their adoptive parents were interviewed to assess symptoms of conduct disorder, aggression, and antisocial behavior in the offspring. The adversity of the adoptive home environment was measured in terms of the total number of problems that were present, including severe marital difficulties, drug abuse, or criminal activity.

The results of the study by Cadoret and his colleagues indicated that people who were raised in more difficult adoptive homes were more likely to engage in various types of aggressive and antisocial behavior as children and as adults. Further analyses revealed that the harmful effects of an unfavorable environment were more pronounced in the target group than in the control group. In other words, offspring of antisocial parents were much more likely to exhibit symptoms of conduct disorder (truancy, school expulsion, lying, and stealing) as children and exaggerated aggressive behavior as adolescents if they were raised in an adverse adoptive home environment. Being raised in an adverse home environment did not significantly increase the probability of conduct disorder, aggression, or antisocial behavior among offspring in the control group. Thus, antisocial behavior



Antisocial behavior can be perpetuated when the person selects friends who share similar antisocial interests and problems.

appeared to result from the interaction of genetic and environmental factors.

**Social Factors** Adoption studies indicate that genetic factors interact with environmental events to produce patterns of antisocial and criminal behavior. The combination of a genetic predisposition toward antisocial behavior and environmental adversity is particularly harmful. What kinds of events might be involved in this process? Obvious candidates include physical abuse and childhood neglect, as indicated by the longitudinal study of adolescents and their families (Farrington, 2006; Johnson et al., 1999).

How can the interaction between genetic factors and family processes be explained? Moffitt's explanation for the etiology of life-course-persistent antisocial behavior depends on the influence of multiple, interacting systems. One pathway involves the concept of children's temperament and the effect that their characteristic response styles may have on parental behavior. Children with a "difficult" temperament—that is, those whose response style is characterized by high levels of negative emotion or excessive activity—may be especially irritating to their parents and caretakers (Bates, Wachs, & Emde, 1994). They may be clumsy, overactive, inattentive, irritable, or impulsive. Their resistance to disciplinary efforts may discourage adults from maintaining persistent strategies in this regard. This type of child may be most likely to evoke maladaptive reactions from parents who are poorly equipped to deal with the challenges presented by this kind of behavior. Parents may be driven either to use unusually harsh punishments or to abandon any attempt at discipline. This interaction between the child and the social environment fosters the development of poorly controlled behavior. Antisocial behavior is perpetuated when the person selects friends who share similar antisocial interests and problems.

After a pattern of antisocial behavior has been established during childhood, many factors lock the person into further antisocial activities. Moffitt's theory emphasizes two sources of continuity. The first is a limited range of behavioral skills. The person does not learn social skills that would



allow him or her to pursue more appropriate responses than behaviors such as lying, cheating, and stealing. Once the opportunity to develop these skills is lost during childhood, they may never be learned. The second source of continuity involves the results of antisocial behavior during childhood and adolescence. The person becomes progressively ensnared by the aftermath of earlier choices. Many possible consequences of antisocial behavior, including being addicted to drugs, becoming a teenaged parent, dropping out of school, and having a criminal record, can narrow the person's options.

**Psychological Factors** Adoption, twin, and family studies provide clues to the types of etiological factors that may cause antisocial personality disorder. Another series of studies, beginning in the 1950s and extending to the present, has been concerned with the psychological mechanisms that may mediate this type of behavior. These investigations have attempted to explain several characteristic features of psychopathy—such as lack of anxiety, impulsivity, and failure to learn from experience—using various types of laboratory tasks (Fowles & Dindo, 2006).

Subjects in the laboratory tasks are typically asked to learn a sequence of responses in order either to receive a reward or avoid an aversive consequence, such as electric shock or loss of money. Although the overall accuracy of psychopaths' performance on these tasks is generally equivalent to that of nonpsychopathic subjects, their behavior sometimes appears to be unaffected by the anticipation of punishment.

Two primary hypotheses have been advanced to explain the poor performance of psychopaths on these tasks. One point of view is based on Cleckley's argument that psychopaths are emotionally impoverished. Their lack of anxiety and fear is particularly striking. Research support for this hypothesis is based in large part on an examination of physiological responses while subjects are performing laboratory tasks. One particularly compelling line of investigation involves the examination of the eye blink startle reflex. People blink their eyes involuntarily when they are startled by a loud, unexpected burst of noise. For most people, the magnitude of this response is increased if, at the time they are startled, they are engaged in an ongoing task that elicits fear or some other negative emotional state (such as viewing frightening or disgusting stimuli). The magnitude of the startle response is decreased if the person is engaged in a task that elicits positive emotion. Psychopaths' startle responses follow a pattern different from those observed in normal subjects (Herpertz et al., 2001; Patrick & Zempolich, 1998); they do not show the exaggerated startle response that is indicative of fear in the presence of aversive stimuli. This emotional deficit may explain why psychopaths are relatively insensitive to, or able to ignore, the effects of punishment.

The other hypothesis holds that psychopaths have difficulty shifting or reallocating their attention to consider the possible negative consequences of their behavior. Evidence for this explanation is based in large part on the observation that psychopaths respond normally to punishment in some situations, but not in others. This is especially evident in mixed-incentive situations, in which the person's behavior might be either rewarded or punished. Psychopaths are preoccupied with the potential for a successful outcome. They

will continue gambling when the stakes are high, even when the odds are badly against them. And they will pursue a potential sexual encounter, even when the other person is trying to discourage their interest. They fail to inhibit inappropriate behavior because they are less able than other people to stop and consider the meaning of important signals that their behavior might lead to punishment (Hiatt & Newman, 2006; Patterson & Newman, 1993).

Critics of this line of research have noted some problems with existing psychological explanations for the psychopath's behavior. One limitation is the implicit assumption that most people conform to social regulations and ethical principles because of anxiety or fear of punishment. The heart of this criticism seems to lie in a disagreement regarding the relative importance of Cleckley's criteria for psychopathy. It might be argued that the most crucial features are not low anxiety and failure to learn from experience, but lack of shame and pathological egocentricity. According to this perspective, the psychopath is simply a person who has chosen, for whatever reason, to behave in a persistently selfish manner that ignores the feelings and rights of other people. "Rather than moral judgment being driven by anxiety, anxiety is driven by moral judgment" (Levenson, 1992).

## TREATMENT

People with antisocial personalities seldom seek professional mental health services unless they are forced into treatment by the legal system. When they do seek treatment, the general consensus among clinicians is that it is seldom effective. This widely held impression is based, in part, on the traits that are used to define the disorder; like people with borderline personality disorder, people with antisocial personality disorder are typically unable to establish intimate, trusting relationships, which obviously form the basis for any treatment program.

The research literature regarding the treatment of antisocial personality disorder is sparse (Harris & Rice, 2006). Very few studies have identified cases using official diagnostic criteria for antisocial personality disorder. Most of the programs that have been evaluated have focused on juvenile delinquents, adults who have been imprisoned, or people otherwise referred by the criminal justice system. Outcome is often measured in terms of the frequency of repeated criminal offenses rather than in terms of changes in behaviors more directly linked to the personality traits that define the core of antisocial personality. The high rate of alcoholism and other forms of substance dependence in this population is another problem that complicates planning and evaluating treatment programs aimed specifically at the personality disorder itself.

Although no form of intervention has proved to be effective for antisocial personality disorder, psychological interventions that are directed toward specific features of the disorder might be useful (Wallace & Newman, 2004). Examples are behavioral procedures that were originally designed for anger management and deviant sexual behaviors. Behavioral treatments can apparently produce temporary changes in behavior while the person is closely supervised, but they may not generalize to other settings.