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# Disorders of Trauma and Stress

## Stress and Arousal: The Fight-or-Flight Response

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### Getting a Handle on Trauma and Stress

 Specialist Latrell Robinson, a 25-year-old single African American man, was an activated National Guardsman [serving in the Iraq war]. He [had been] a full-time college student and competitive athlete raised by a single mother in public housing. . . . Initially trained in transportation, he was called to active duty and retrained as a military policeman to serve with his unit in Baghdad. He described enjoying the high intensity of his deployment and [became] recognized by others as an informal leader because of his aggressiveness and self-confidence. He [had] numerous [combat] exposures while performing convoy escort and security details [and he came] under small arms fire on several occasions, witnessing dead and injured civilians and Iraqi soldiers and on occasion feeling powerless when forced to detour or take evasive action. He began to develop increasing mistrust of the [Iraq] environment as the situation "on the street" seemed to deteriorate. He often felt that he and his fellow soldiers were placed in harm's way needlessly.

On a routine convoy mission [in 2003], serving as driver for the lead HUMVEE, his vehicle was struck by an Improvised Explosive Device showering him with shrapnel in his neck, arm, and leg. Another member of his vehicle was even more seriously injured. . . . He was evacuated to the Combat Support Hospital (CSH) where he was treated and returned to duty. . . . after several days despite requiring crutches and suffering chronic pain from retained shrapnel in his neck. He began to become angry at his command and doctors for keeping him in [Iraq] while he was unable to perform his duties effectively. He began to develop insomnia, hypervigilance, and a startle response. His initial dreams of the event became more intense and frequent and he suffered intrusive thoughts and flashbacks of the attack. He began to withdraw from his friends and suffered anhedonia, feeling detached from others, and he feared his future would be cut short. He was referred to a psychiatrist at the CSH. . . .

After two months of unsuccessful rehabilitation for his battle injuries and worsening depressive and anxiety symptoms, he was evacuated to a . . . military medical center [in the United States]. . . . He was screened for psychiatric symptoms and was referred for outpatient evaluation and management. He met . . . criteria for acute PTSD and was offered medication management, supportive therapy, and group therapy. . . . He was ambivalent about taking passes or convalescent leave to his home because of fears of being "different, irritated, or aggressive" around his family or girlfriend. After three months at the military service center, he was [deactivated from service and] referred to his local VA Hospital to receive follow-up care.

(National Center for PTSD, 2008)

**D**uring the horror of combat, soldiers often become highly anxious and depressed, confused and disoriented, even physically ill. Moreover, for many, like Latrell, these and related reactions to extraordinary stress or trauma continue well beyond the combat experience itself.

Of course, it is not just combat soldiers who are affected by stress. Nor does stress have to rise to the level of combat trauma to have a profound effect on psychological and physical functioning. Stress comes in all sizes and shapes, and we are all greatly affected by it.

We feel some degree of stress whenever we are faced with demands or opportunities that require us to change in some manner. The state of stress has two components: a *stressor*, the event that creates the demands, and a *stress response*, the person's



Peio Hernandez/EPA/Newscom



Jon Dimis/AP Photo

**Different strokes for different folks** Some people are exhilarated by the opportunity to chase bulls through the streets of Pamplona, Spain, during the annual "running of the bulls." Others are terrified by such a prospect and prefer instead to engage tamer animals, such as ostriches, during the "running of the ostriches" fiesta in Irurzun, Spain.

and arousal, then move on to discussions of acute and posttraumatic stress disorders and the dissociative disorders. ■

## Stress and Arousal: The Fight-or-Flight Response

The features of arousal are set in motion by the brain structure called the *hypothalamus*. When our brain interprets a situation as dangerous, neurotransmitters in the hypothalamus are released, triggering the firing of neurons throughout the brain and the release of chemicals throughout the body. Actually, the hypothalamus activates two important systems—the *autonomic nervous system* and the *endocrine system*. The **autonomic nervous system (ANS)** is the extensive network of nerve fibers that connect the *central nervous system* (the brain and spinal cord) to all the other organs of the body. These fibers help control the *involuntary* activities of the organs—breathing, heartbeat, blood pressure, perspiration, and the like (see **Figure 5-1**). The **endocrine system** is the network of *glands* located throughout the body. (As you read in Chapter 2, glands release

reactions to the demands. The stressors of life may include annoying everyday hassles, such as rush-hour traffic; turning-point events, such as college graduation or marriage; long-term problems, such as poverty or poor health; or traumatic events, such as major accidents, assaults, tornadoes, or military combat. Our response to such stressors is influenced by the way we *judge* both the events and our capacity to react to them in an effective way (Blaxton & Bergeman, 2017; Lazarus & Folkman, 1984). People who sense that they have the ability and the resources to cope are more likely to take stressors in stride and to respond well.

When we view a stressor as threatening, a natural reaction is arousal and a sense of fear—a response frequently discussed in Chapter 4. Stress reactions, and the sense of fear they produce, are often at play in psychological disorders. People who experience a large number of stressful events are particularly vulnerable to the onset of the anxiety disorders that you read about in Chapter 4 (Furr et al., 2018). Similarly, increases in stress have been linked to the onset of depression, schizophrenia, sexual dysfunctions, and other psychological problems.

Extraordinary stress and trauma play an even more central role in certain psychological disorders. In these disorders, the reactions to stress become severe and debilitating, linger for a long period of time, and may make it impossible for the individual to live a normal life. Under the heading "Trauma- and Stressor-Related Disorders," DSM-5 lists several disorders in which trauma and extraordinary stress trigger a range of significant stress symptoms, including heightened arousal, anxiety and mood problems, memory and orientation difficulties, and behavioral disturbances. Two of these disorders, *acute stress disorder* and *posttraumatic stress disorder*, are discussed in this chapter. In addition, DSM-5 lists the "dissociative disorders," a group of disorders also triggered by traumatic events, in which the primary symptoms are severe memory and orientation problems. These disorders are also examined in this chapter.

To fully understand these various stress-related disorders, it is important to appreciate the precise nature of stress and how the brain and body typically react to stress. Thus let's first discuss stress

hormones into the bloodstream and on to the various body organs.) The ANS and the endocrine system often overlap in their responsibilities. There are two brain–body pathways, or routes, by which these systems produce arousal—the *sympathetic nervous system* pathway and the *hypothalamic-pituitary-adrenal* pathway.

When we face a dangerous situation, the hypothalamus first excites the **sympathetic nervous system**, a group of ANS fibers that work to quicken our heartbeat and produce the other changes that we come to experience as fear or anxiety. These nerves may stimulate the organs of the body directly—for example, they may directly stimulate the heart and increase heart rate. The nerves may also influence the organs indirectly, by stimulating the *adrenal glands* (glands located on top of the kidneys), particularly an area of these glands called the *adrenal medulla*. When the adrenal medulla is stimulated, the chemicals *epinephrine* (adrenaline) and *norepinephrine* (noradrenaline) are released. You have already seen that these chemicals are important neurotransmitters when they operate in the brain (see page 38). When released from the adrenal medulla, however, they act as hormones and travel through the bloodstream to various organs and muscles, further producing arousal.

When the perceived danger passes, a second group of autonomic nervous system fibers, called the **parasympathetic nervous system**, helps return our heartbeat and other body processes to normal. Together the sympathetic and parasympathetic nervous systems help control our arousal reactions.

**autonomic nervous system (ANS)** The network of nerve fibers that connect the central nervous system to all the other organs of the body.

**endocrine system** The system of glands located throughout the body that help control important activities such as growth and sexual activity.

**sympathetic nervous system** The nerve fibers of the autonomic nervous system that quicken the heartbeat and produce other changes experienced as arousal.

**parasympathetic nervous system** The nerve fibers of the autonomic nervous system that help return bodily processes to normal.

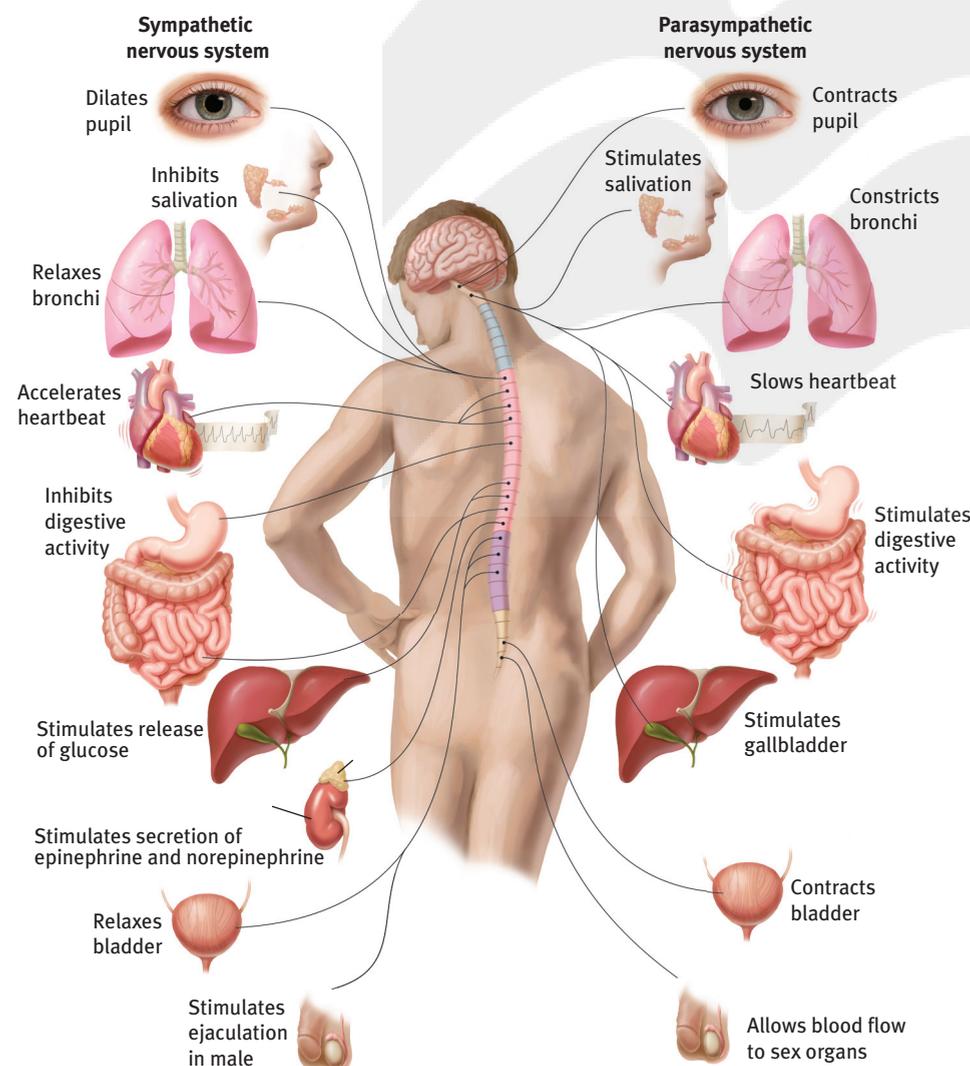


FIGURE 5-1

### The Autonomic Nervous System (ANS)

When the sympathetic division of the ANS is activated, it stimulates some organs and inhibits others. The result is a state of general arousal. In contrast, activation of the parasympathetic division leads to an overall calming effect.

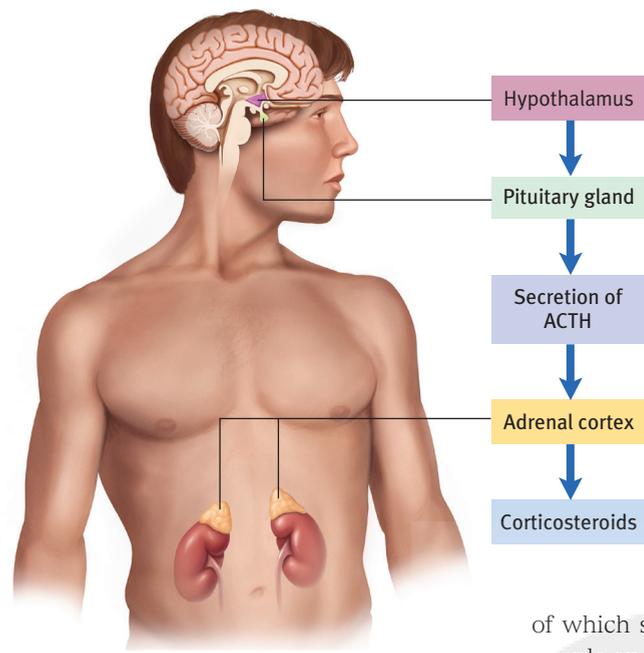


FIGURE 5-2

### The Endocrine System: The HPA Pathway

When a person perceives a stressor, the hypothalamus activates the pituitary gland to secrete the adrenocorticotropic hormone, or ACTH, which stimulates the adrenal cortex. The adrenal cortex releases stress hormones called corticosteroids that act on other body organs to trigger arousal and fear reactions.

**hypothalamic-pituitary-adrenal (HPA) pathway** One route by which the brain and body produce arousal.

**corticosteroids** Hormones, including cortisol, released by the adrenal glands at times of stress.

**acute stress disorder** A disorder in which a person experiences fear and related symptoms soon after a trauma but for less than a month.

**posttraumatic stress disorder (PTSD)** A disorder in which a person experiences fear and related symptoms long after a traumatic event.

The second brain-body pathway by which arousal is produced is the **hypothalamic-pituitary-adrenal (HPA) pathway** (see Figure 5-2). When we are faced by stressors, the hypothalamus also signals the *pituitary gland*, which lies nearby, to secrete the *adrenocorticotropic hormone (ACTH)*, sometimes called the body's "major stress hormone." ACTH, in turn, stimulates the outer layer of the adrenal glands, an area called the *adrenal cortex*, triggering the release of a group of stress hormones called **corticosteroids**, including the hormone *cortisol*. These corticosteroids travel to various body organs, where they further produce arousal reactions (Donohoue, 2017; Jacoby et al., 2016).

The reactions on display in these two pathways are collectively referred to as the *fight-or-flight* response, precisely because they arouse our body and prepare us for a response to danger. Each person has a particular pattern of autonomic and endocrine functioning and so has a particular way of experiencing arousal when he or she confronts stressors. Some people, for example, react with relatively little tension even in the face of significant threats, while others react with considerable tension even when they encounter minimal threats. People also differ in their sense

of which situations are threatening. Flying in an airplane may arouse terror in some people and boredom in others.

## Acute and Posttraumatic Stress Disorders

Of course when we actually confront stressful situations, we do not think to ourselves, "Oh, there goes my autonomic nervous system," or "My fight-or-flight response seems to be kicking in." We just feel aroused psychologically and physically and experience a growing sense of fear. If the stressful situation is perceived as extraordinary and/or unusually dangerous, we may temporarily experience levels of arousal, fear, and depression that are beyond anything we have ever known.

For most people, such reactions subside soon after the danger passes. For others, however, the symptoms of arousal, anxiety, and depression, as well as other kinds of symptoms, persist well after the upsetting situation is over. These people may be suffering from *acute stress disorder* or *posttraumatic stress disorder*, patterns that arise in reaction to a psychologically traumatic event. A traumatic event is one in which a person is exposed to actual or threatened death, serious injury, or sexual violation (APA, 2013). Unlike the anxiety disorders that you read about in Chapter 4, which typically are triggered by situations that most people would not find threatening, the situations that cause acute stress disorder or posttraumatic stress disorder—combat, rape, an earthquake, an airplane crash—would be traumatic for almost anyone (Chou et al., 2017).

If the symptoms begin within 4 weeks of the traumatic event and last for less than a month, DSM-5 assigns a diagnosis of **acute stress disorder** (APA, 2013). If the symptoms continue longer than a month, a diagnosis of **posttraumatic stress disorder (PTSD)** is given. The symptoms of PTSD may begin either shortly after the traumatic event or months or years afterward (see Table 5-1). In fact, 25 percent of people with PTSD do not develop a full clinical syndrome until 6 months or more after their trauma (Sareen, 2018).

Studies indicate that at least half of all cases of acute stress disorder develop into posttraumatic stress disorder (Bryant, 2017, 2014). Think back to Latrell, the soldier in Iraq whose case opened this chapter. As you'll recall, Latrell became overrun by arousal, anxiety, insomnia, worry, anger, depression, irritability, intrusive thoughts, flashback memories, and social detachment within days of the attack on his convoy mission—thus qualifying him for a diagnosis of acute stress disorder. As his symptoms worsened and continued beyond one month—even long after his return to the United

States—this diagnosis became PTSD. Aside from the differences in onset and duration, the symptoms of acute stress disorder and PTSD are almost identical:

**INCREASED AROUSAL, NEGATIVE EMOTIONS, AND GUILT** People may feel excessively alert (hyperalertness), be easily startled, have trouble concentrating, and develop sleep problems. They may display anxiety, anger, or depression, and feel extreme guilt because they survived the traumatic event while others did not (Norman et al., 2018). Some also feel guilty about what they may have had to do to survive.

**REEXPERIENCING THE TRAUMATIC EVENT** People may be battered by recurring thoughts, memories, dreams, or nightmares connected to the event (Walton et al., 2017). A few relive the event so vividly in their minds (flashbacks) that they think it is actually happening again.

**AVOIDANCE** People usually avoid activities that remind them of the traumatic event and try to avoid related thoughts, feelings, or conversations.

**REDUCED RESPONSIVENESS AND DISSOCIATION** People with these disorders may feel detached from other people, be unresponsive to external stimuli, and lose interest in activities that once brought enjoyment. Many endure symptoms of *dissociation*, or psychological separation: that is, they feel dazed, have trouble remembering things, experience *depersonalization* (feeling that their conscious state or body is unreal), or have a sense of *derealization* (feeling that the environment is unreal or strange).

You can see these symptoms in the recollections of a Vietnam combat veteran years after he returned home:



*I can't get the memories out of my mind! The images come flooding back in vivid detail, triggered by the most inconsequential things, like a door slamming or the smell of stir-fried pork. Last night I went to bed, was having a good sleep for a change. Then in the early morning a storm-front passed through and there was a bolt of crackling thunder. I awoke instantly, frozen in fear. I am right back in Vietnam, in the middle of the monsoon season at my guard post. I am sure I'll get hit in the next volley and convinced I will die. My hands are freezing, yet sweat pours from my entire body. I feel each hair on the back of my neck standing on end. I can't catch my breath and my heart is pounding. I smell a damp sulfur smell.*

(Davis, 1992)

Clinicians have come to appreciate that people who experience symptoms of dissociation and unresponsiveness as part of their stress syndrome tend to be more impaired and distressed than other sufferers (Hansen, Ross, & Armour, 2017). This pattern is particularly common among PTSD victims whose traumas involved military combat, sexual abuse, or other forms of physical abuse, especially repeated abuse or childhood abuse.

An acute or posttraumatic stress disorder can occur at any age, even in childhood (Furr et al., 2018). Surveys indicate that 3.5 to 6 percent of people in North America have one of the stress disorders in any given year; 7 to 12 percent suffer from one of them during their lifetimes (Sareen, 2018; Kessler et al., 2012). Around half of these individuals seek treatment, but relatively few do so when they first develop the disorder (NIMH, 2017; Wang et al., 2005). Approximately 20 percent attempt suicide (Lanius, Frewen, & Brand, 2016). People with these stress disorders often develop other psychological disorders as well, such as depressive, anxiety, or substance use disorders (Dworkin et al., 2018). They also have an increased risk of developing physical ailments such as bronchitis, asthma, heart disease, and liver disease (Sareen, 2018; La Greca, Comer, & Lai, 2016).

TABLE: 5-1

## Dx Checklist

### Posttraumatic Stress Disorder

1. Person is exposed to a traumatic event—death or threatened death, severe injury, or sexual violation.
2. Person experiences at least one of the following intrusive symptoms:
  - Repeated, uncontrolled, and distressing memories
  - Repeated and upsetting trauma-linked dreams
  - Dissociative experiences such as flashbacks
  - Significant upset when exposed to trauma-linked cues
  - Pronounced physical reactions when reminded of the event(s)
3. Person continually avoids trauma-linked stimuli.
4. Person experiences negative changes in trauma-linked cognitions and moods, such as being unable to remember key features of the event(s) or experiencing repeated negative emotions.
5. Person displays conspicuous changes in arousal or reactivity, such as excessive alertness, extreme startle responses, or sleep disturbances.
6. Person experiences significant distress or impairment, with symptoms lasting more than a month.

Information from: APA, 2013.



Craig F. Walker/Getty Images

**Lingering impact** More than four decades after the Vietnam War, over a quarter million veterans of that war are still suffering from PTSD. Until his death in 2016, one such veteran was King Charsa Bakari Kamau. He is seen here playing the piano at a mall in Denver, Colorado, an avocation that he considered to be his best therapy.

People with low incomes are twice as likely as people with higher incomes to experience stress disorders (Sareen, 2018; Sareen et al., 2011). Women are more likely than men to develop one of these disorders: around 20 percent of women who are exposed to a severe trauma may develop one, compared with 8 percent of men (Perrin et al., 2014; Russo & Tartaro, 2008). Similarly, Hispanic Americans, African Americans, and American Indians are more likely than non-Hispanic white Americans to develop a stress disorder after confronting a severe trauma (Tull, 2017; Ghafoori et al., 2013). The reason for this racial-ethnic difference is not clear.

## What Triggers Acute and Posttraumatic Stress Disorders?

Any traumatic event can trigger a stress disorder; however, some are particularly likely to do so (Sareen, 2018). Among the most common are combat, disasters, and abuse and victimization.

**Combat** For years clinicians have recognized that many soldiers develop symptoms of severe anxiety and depression *during* combat. It was called “shell shock” during World War I and “combat fatigue” during World War II and the Korean War (Figley, 1978). Not until after the Vietnam War, however, did clinicians learn that a great many soldiers also experience serious psychological symptoms *after* combat (Ruzek et al., 2011).

By the late 1970s, it became apparent that many Vietnam combat veterans were still experiencing war-related psychological difficulties. We now know that as many as 29 percent of all Vietnam veterans, male and female, suffered an acute or posttraumatic stress disorder, while another 22 percent have had at least some stress symptoms (Hermes, Hoff, & Rosenheck, 2014; Krippner & Paulson, 2006). In fact, 10 percent of the veterans of that war still deal with posttraumatic stress symptoms, including flashbacks, night terrors, nightmares, and persistent images and thoughts (Gradus, 2017; Marmar et al., 2015).

A similar pattern has unfolded among the nearly 2.7 million veterans of the wars in Afghanistan and Iraq (Vasterling et al., 2016; Zoroya, 2013; Ruzek et al., 2011). Around 20 percent of the Americans deployed to those wars have so far reported symptoms of PTSD. Among those directly exposed to prolonged periods of combat-related stress, the percentage with PTSD is higher still.

**Disasters and Accidents** Acute and posttraumatic stress disorders may also follow natural and accidental disasters such as earthquakes, floods, tornadoes, fires, airplane

crashes, and serious car accidents (see **Table 5-2**). Researchers have found, for example, unusually high rates of PTSD among the survivors of 2005’s Hurricane Katrina, 2010’s BP Gulf Coast oil spill, and the devastating hurricanes that struck Puerto Rico, Florida, and Texas in 2017 (Dickerson, 2017; Brown et al., 2016). In fact, because they occur more often, civilian traumas have been the trigger of stress disorders at least 10 times as often as combat traumas (Bremner, 2002). Studies have found that between 12 and 40 percent of people involved in traffic accidents—adult or child—may develop PTSD within a year of the accident (Sareen, 2018; Noll-Hussong et al., 2013).

**Victimization** People who have been abused or victimized often have stress symptoms that linger. Research suggests that over one-third of all victims of physical or sexual assault develop PTSD (Sareen, 2018; Koss et al., 2011). As many as half of all people directly exposed to terrorism or torture may develop the disorder (Comer et al., 2018; Basoglu et al., 2001).

**TABLE: 5-2**

### Worst Natural Disasters of the Past 110 Years

Disaster	Year	Location	Number Killed
Flood	1931	Huang River, China	3,700,000
Tsunami	2004	South Asia	280,000
Earthquake	1976	Tangshan, China	255,000
Heat wave	2003	Europe	35,000
Volcano	1985	Nevado del Ruiz, Colombia	23,000
Hurricane	1998	(Mitch) Central America	18,277
Landslide	1970	Yungay, Peru	17,500
Avalanche	1916	Italian Alps	10,000
Blizzard	1972	Iran	4,000
Tornado	1989	Saturia, Bangladesh	1,300

Information from: Statista, 2018; Infogalactic, 2016; USGS, 2011; Ash, 2001.

**SEXUAL ASSAULT** A common form of victimization in our society today is sexual assault (see *InfoCentral* on page 147).

**Rape** is forced sexual intercourse or another sexual act committed against a nonconsenting person or intercourse between an adult and an underage person. In the United States, approximately 96,000 cases of rape or attempted rape are reported to the police each year (FBI, 2017). Most experts believe that these are but a fraction of the actual number of rapes and rape attempts, given the reluctance of many victims to report their sexual assaults. Most rapists are men, and most victims are women. Around one in six women is raped at some time during her life. Approximately 71 percent of the victims are raped by acquaintances, intimates, or relatives (BJS, 2017, 2016, 2013).

The rates of rape differ among racial-ethnic groups. Around 27 percent of American Indian women and 22 percent of African American women have been raped at some point in their lives, compared with 19 percent of non-Hispanic white American women, 15 percent of Hispanic American women, and 12 percent of Asian American women (BJS, 2017; Black et al., 2011).

The psychological impact of rape on a victim is immediate and may last a long time (Bates, 2017; Koss et al., 2015, 2011, 2008). Rape victims typically experience enormous distress during the week after the assault. Stress continues to rise for the next 3 weeks, maintains a peak level for another month or so, and then starts to improve. In one study, 94 percent of rape victims fully qualified for a clinical diagnosis of acute stress disorder when they were observed around 12 days after the assault (Rothbaum et al., 1992). Although some rape victims improve psychologically within three or four months, for many others, the profound effects of their assault persist for up to 18 months or longer. Victims typically continue to have higher-than-average levels of anxiety, suspiciousness, depression, self-esteem problems, self-blame, flashbacks, sleep problems, and sexual dysfunction (Bates, 2017; Remes et al., 2016).

Female victims of rape and other crimes also are much more likely than other women to suffer serious long-term health problems (Bates, 2017; Koss & Heslet, 1992). Interviews with 390 women revealed that such victims had poorer physical well-being for at least five years after the crime and made twice as many visits to physicians.

Ongoing victimization and abuse in the family—specifically child and spouse abuse—may also lead to psychological stress disorders (Mills, Hill, & Johnson, 2018; Ng et al., 2018). Because these forms of abuse may occur over the long term and violate family trust, many victims develop other symptoms and disorders as well.

**TERRORISM** People who are victims of *terrorism* or who live under the threat of terrorism often experience posttraumatic stress symptoms (Glad et al., 2017; Comer et al., 2016). Unfortunately, this source of traumatic stress is on the rise in our society. The terrorist events of September 11, 2001, have left a lasting mark on the United States and the rest of the world. Hijacked airplanes crashed into and brought down the World Trade Center in New York City and partially destroyed the Pentagon in Washington, DC, killing thousands of victims and rescue workers and forcing thousands more to desperately run, crawl, and even dig their way to safety. A number of studies have indicated that in the aftermath of that fateful day, many individuals developed immediate and long-term psychological effects, ranging from brief stress reactions, such as shock, fear, and anger, to enduring psychological disorders, such as PTSD (Comer et al., 2018; Ruggero et al., 2013).



David McNew/Getty Images

**The power of disclosure** These demonstrators participate in a #MeToo Survivors March in Los Angeles, California. As part of the #MeToo movement, which began in 2017 after a series of high-profile revelations of sexual assault and harassment, women around the world have spoken out about their sexual victimization experiences—a wave of disclosures that has raised public awareness, provided support and empathy to millions of victims, and led to calls for change in our society's laws, workplace policies, and social norms. According to research, disclosure—in written or verbal form—often enhances a person's recovery from traumatic experiences and can help prevent the onset of PTSD.

How might physicians, police, the courts, and other agents better meet the psychological needs of rape victims?

**rape** Forced sexual intercourse or another sexual act committed against a nonconsenting person or intercourse between an adult and an underage person.

**Je suis Charlie** In 2015, terrorists conducted a three-day killing spree in Paris, including the murder of 12 employees of the weekly satirical newspaper *Charlie Hebdo*. Using the slogan *Je suis Charlie* (“I am Charlie”), close to 4 million people joined rallies around France, voicing their support for free speech and their resolve against terrorism. This terrorist attack, like others, led to a significant rise in the rate of PTSD across France (Ben-Ezra et al., 2015).



Loic Venance/Getty Images

Follow-up studies suggest that many such individuals continue to struggle with terrorism-related stress reactions (Tucker et al., 2017; Adams & Boscarino, 2005). Indeed, even years after the attacks, 42 percent of all adults in the United States and 70 percent of all New York adults report high terrorism fears; 23 percent of all adults in the United States report feeling less safe in their homes; 15 percent of all U.S. adults report drinking more alcohol than they did prior to the attacks; and 9 percent of New York adults display PTSD, compared with the national annual prevalence of 3.5 percent. Studies of subsequent acts of terrorism, such as the 2004 commuter train bombings in Madrid, the 2013 Boston Marathon bombing, the 2016 Bastille Day truck attack in Nice, France, and the 2017 Ariana Grande concert bombing in Manchester, United Kingdom, tell a similar story (Goodwin et al., 2017; Comer et al., 2014).

An ever-growing phenomenon in the United States and across the world are *mass shootings*—sometimes in the name of terrorism, sometimes not—at schools and other public places, such as the 2017 killings of 58 concertgoers in Las Vegas, Nevada, and the 2018 killings of 17 individuals at the Marjory Stoneman Douglas High School in Parkland, Florida (see page 408). Here again, studies suggest that many survivors of these shootings develop shooting-related stress disorders (Godlasky, 2018; Bekker, 2017).

**TORTURE** **Torture** refers to the use of “brutal, degrading, and disorienting strategies in order to reduce victims to a state of utter helplessness” (Okawa & Hauss, 2007). Often, it is done on the orders of a government or another authority to force persons to yield information or make a confession (Dando, 2017). As you will see in Chapter 16, the question of the morality of torturing prisoners who are considered suspects in the “war on terror” has been the subject of much discussion over the past decade.

People from all walks of life are subjected to torture worldwide—from suspected terrorists to student activists and members of religious, ethnic, and cultural minority groups. The techniques used on them may include *physical torture* (beatings, waterboarding, electrocution), *psychological torture* (threats of death, mock executions, verbal abuse, degradation), *sexual torture* (rape, violence to the genitals, sexual humiliation), or *torture through deprivation* (sleep, sensory, social, nutritional, medical, or hygiene deprivation). Torture victims often experience physical ailments as a result of their ordeal, from scarring and fractures to neurological problems and chronic pain. It also appears that between 30 and 50 percent of torture victims develop PTSD (Ibrahim & Hassan, 2017; Taylor et al., 2013).

**torture** The use of brutal, degrading, and disorienting strategies to reduce victims to a state of utter helplessness.

## SEXUAL ASSAULT

People who are **sexually assaulted** have been forced to engage in a sexual act against their will. According to most definitions, people who are **raped** have been forced into sexual intercourse or other forms of sexual penetration. Rape victims often experience

**rape trauma syndrome (RTS)**, a pattern of problematic physical and psychological symptoms. RTS is actually a form of PTSD. Approximately **one-third** of rape victims develop PTSD.

### THE PSYCHOLOGICAL EFFECTS OF RAPE

suicidal thoughts  
 attempted suicide  
 vulnerability to develop psychological disorders  
 feelings of self-blame and betrayal  
 flashbacks  
 panic attacks  
 sleep problems  
 memory problems

#### Rape victims are more likely to:

3 X suffer from depression

4 X contemplate suicide

6 X suffer from PTSD

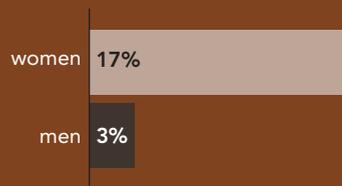
13 X abuse alcohol

26 X abuse drugs

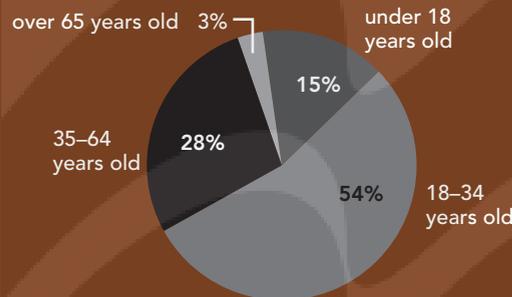
(CMSAC, 2017; RAINN, 2016, 2009; Adams, 2013)

### WHO ARE THE VICTIMS?

#### Gender

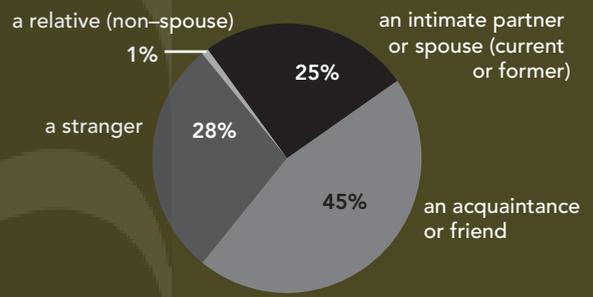


#### Age



(Bates, 2017; RAINN, 2016, 2009)

#### Who commits rape?



(BJS, 2017, 2016, 2013; RAINN, 2016; Adams, 2013)

### SEXUAL ASSAULT ON COLLEGE CAMPUSES

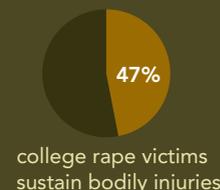
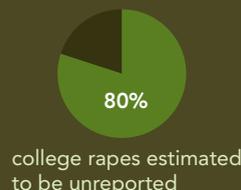
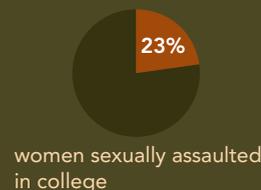
In 2014, the White House pressured colleges to develop better guidelines to address the problem of sexual assaults on campus. It also encouraged all students and university staff to sign the **"It's On Us"** pledge, which makes everyone on campus responsible for preventing and intervening in sexual assaults. That initiative has now grown into a nationwide campaign, called "It's On Us," that uses social media platforms to increase awareness about sexual assault on campus.

#### I pledge:

- To **RECOGNIZE** that non-consensual sex is sexual assault.
- To **IDENTIFY** situations in which sexual assault may occur.
- To **INTERVENE** in situations where consent has not or cannot be given.
- To **CREATE** an environment in which sexual assault is unacceptable and survivors are supported.



#### Crisis on College Campuses



(RAINN, 2016, 2009; CRCC, 2014; Weiner, 2014; Adams, 2013)

#### Factors Aiding Recovery

- Positive self-esteem
- Social support
- Previous success in coping with stress
- Economic security
- Accurate information about rape and rape trauma syndrome
- Constructive decision-making



(NCVS, 2017, 2014)

#### Factors Delaying Recovery

- Prior victimization
- Chronic life stressors
- Lack of social support
- Low self-esteem
- Degree of violence during attack



(NCVS, 2017, 2014)

96,000 rapes are reported to police per year, but the number of rapes per year is estimated to be at least **432,000**

(FBI, 2017; Statista, 2017; BJS, 2017, 2016)

#

**#CommonEvent**

More than 60% of adults have experienced a traumatic event at least once in their lives (NCPTSD, 2016; Sidran Institute, 2016).

## Why Do People Develop Acute and Posttraumatic Stress Disorders?

Clearly, extraordinary trauma can cause a stress disorder. The stressful event alone, however, may not be the entire explanation. Anyone who experiences an unusual trauma will be affected by it, but only some people develop a stress disorder. To understand the development of these disorders more fully, researchers have looked at *biological factors*, *childhood experiences*, *personal styles*, *social support systems*, and the *severity and nature of the traumas*. Our discussions in this section will center on PTSD because that is the stress disorder that is most researched.

**Biological Factors** Investigators have linked posttraumatic stress disorder to several biological factors. The ones that have received the most attention are the brain–body *stress pathways*, the brain’s *stress circuit*, and *inherited predispositions*.

**THE BRAIN–BODY STRESS PATHWAYS** As you’ll recall, when we are stressed, the brain’s hypothalamus activates two stress pathways throughout the brain and body—the sympathetic nervous system pathway and the hypothalamic-pituitary-adrenal (HPA) pathway (see pages 141–142). These pathways react to stress by producing a general state of arousal, the former through nerve cell firing and the latter through releasing hormones into the bloodstream.

While everyone reacts to traumatic events with increased arousal throughout these two pathways, research suggests that people who develop PTSD react with especially heightened arousal in the pathways (Dayan, Rauchs, & Guillery-Girard, 2017; Ross et al., 2017). There is evidence that, even prior to confronting a severe trauma, such individuals’ pathways are overly reactive to modest stressors, thus setting up a predisposition to develop PTSD. There is also evidence that *after* confrontation with a severe trauma, those brain–body pathways become even more overly reactive (Lehrner & Yehuda, 2018; Rasmusson & Shalev, 2014). Small wonder that researchers have found abnormal activity of the hormone *cortisol* and the neurotransmitter/hormone *norepinephrine*—major players in the two pathways—in the urine, blood, and saliva of combat soldiers, rape victims, concentration camp survivors, and survivors of other severe stresses (Tull et al., 2018; Gola et al., 2012). In short, once PTSD sets in, an individual’s brain–body pathways are characterized by still greater overreactivity in the

**Candidates for dysfunction** A stock trader reacts with exhaustion, worry, and disbelief after a particularly bad—stock-plummeting—day. Business difficulties, such as the trader’s, are among the most common triggers of *adjustment disorder*, a DSM-5 disorder characterized by excessive and extended feelings of anxiety, depressed mood, or antisocial behavior in response to life stressors. The symptoms of an adjustment disorder are not as severe as those in PTSD or in anxiety disorders, but they do cause individuals considerable stress and may interfere with their job, schoolwork, or social life.



AP Photo/M. Spencer Green



Omar Havana/Getty Images

**Helpers at risk** Emergency rescue workers and volunteers frantically carry a victim from the ruins of an earthquake in Kathmandu, Nepal. Studies reveal that those who are called on to help people during disasters, accidents, and other life-and-death situations may themselves be at high risk for developing acute and/or posttraumatic stress disorders (Luftman et al., 2017).

face of stress, and this persistent overreactivity may lock in brain and body dysfunction and the continuing symptoms of PTSD.

**THE BRAIN'S STRESS CIRCUIT** Researchers believe that the chronic overreactivity of the two stress pathways may help bring about dysfunction in a distinct brain circuit, sometimes called the brain's *stress circuit*. As you have seen in earlier chapters, emotional, behavioral, and cognitive reactions of various kinds are tied to brain circuits—networks of brain structures that communicate and trigger each other into action. Dysfunction in one such circuit, the stress circuit, apparently contributes to the symptoms of PTSD. The brain's stress circuit includes such structures as the *amygdala*, *prefrontal cortex*, *anterior cingulate cortex*, *insula*, and *hippocampus*, among others (Sheynin & Liberzon, 2017; Pedersen, 2016). Given the close relationship between arousal, fear, and anxiety, it is not surprising that several of the structures in this circuit are also parts of the brain's fear and panic circuits that help produce anxiety disorders. But in the case of PTSD, the problematic activity and interconnections of these structures differ from those found in anxiety disorders.

**INHERITED PREDISPOSITION** Researchers also believe that certain individuals inherit a tendency for overly reactive brain–body stress pathways and a dysfunctional brain stress circuit. In turn, such individuals may have a susceptibility to PTSD. Genetic studies have located several genes that might be involved in this inherited susceptibility (Sheerin et al., 2017; Young, 2017). Similarly, family pedigree research supports the notion of an inherited susceptibility. Studies conducted on thousands of pairs of twins who have served in the military find that if one twin develops posttraumatic stress symptoms after combat, an identical twin is more likely than a fraternal twin to develop the same problem (Koenen et al., 2003; True & Lyons, 1999).

In related work, researchers have found that people suffering from PTSD are more likely to transmit relevant biological abnormalities to their children (Cook et al., 2018; Yehuda et al., 2015). In one study, for example, investigators examined the cortisol levels of women who had been pregnant during the September 11, 2001, terrorist attack and had developed PTSD in its aftermath (Yehuda & Bierer, 2007). Not only did these women have higher-than-average cortisol levels, but their babies born after the attacks also displayed higher cortisol levels, suggesting that the babies inherited a predisposition to develop PTSD.

#

## #TopStressors

1. Personal finances
2. Job pressure
3. The economy
4. Relationships
5. Health

(Information from: APA, 2015)



Aleppo Media Center via AP

**Children too** In this famous and heart-wrenching photo, a bloodied and disoriented 5-year-old child named Omran Daqneesh sits in an ambulance covered with dirt and dust after being pulled from the rubble of a building destroyed by an airstrike in Aleppo, Syria. After confronting horrific traumas, especially repeated ones, children too may develop PTSD, leading clinicians to worry greatly about the mental health of children caught in the middle of Syria's civil war.

**Childhood Experiences** Other researchers agree that certain individuals have overly reactive stress pathways and a dysfunctional stress circuit that predispose them to develop PTSD. However, they believe that such a predisposition may be acquired during childhood rather than inherited at birth (Ross et al., 2017). In support of this notion, a number of studies have found that young children who are chronically neglected or abused or otherwise traumatized develop overly reactive stress pathways and a dysfunctional brain stress circuit that carry into later life (Lee, Coe, & Ryff, 2017; Zannas & West, 2014). Apparently, their unfortunate childhood experiences actually play a role in reprogramming their brain and body stress responses.

Consistent with these findings, researchers have also found that certain childhood experiences increase a person's risk for later PTSD. People whose childhoods were marked by poverty appear more likely to develop the disorder in the face of later trauma (Lee et al., 2017). So do people whose childhoods included an assault, abuse, or a catastrophe; multiple traumas; parental separation or divorce; or living with family members suffering from psychological disorders (Carroll et al., 2017; Hyland et al., 2017).

Do the vivid images children see regularly on the Web, on TV, and in video games make them more vulnerable to later developing psychological stress disorders or less vulnerable?

**Personal Styles** Research suggests that people with certain personalities, attitudes, and coping styles are particularly likely to develop posttraumatic stress disorder (Ning, Guan, & Liu, 2017). For example, a classic study conducted after the monster 1989 storm, Hurricane Hugo, revealed that children who had been highly anxious before the storm were more likely than other children to develop severe stress reactions (Hardin et al., 2002). Research has also found that people who generally view life's negative events as beyond their control tend to develop more severe stress symptoms after sexual abuse or other kinds of traumatic events than people who feel that they have more control over their lives (Catanesi et al., 2013; Bremner, 2002). Similarly, people who generally find it difficult to derive anything positive from unpleasant situations adjust more poorly after traumatic events than other people (Kunst, 2011).

Conversely, it has been found that people with a *resilient* style of personality are *less* likely than other individuals to develop PTSD after encountering traumatic events (Thompson et al., 2018; Ross et al., 2017). The term "resilient" has been applied to people who adapt well and cope effectively in the face of life adversity. Although there is evidence that genetic factors may help determine one's level of *resilience*, studies also find that young children who are regularly exposed to *manageable* stress often develop heightened resilience, a gain that may continue throughout childhood and adulthood. Not surprisingly, studies also find that the brain-body stress pathways and brain stress circuits of resilient persons tend to operate better than those of other people (Meng et al., 2018).

**Social Support Systems** People whose social and family support systems are weak are also more likely to develop posttraumatic stress disorder after a traumatic event (Sareen, 2018). Rape victims who feel loved, cared for, valued, and accepted by their friends and relatives recover from their ordeal more successfully. So do those treated with dignity and respect by the criminal justice system (AAMFT, 2018; Patterson, 2011). In contrast, clinical reports have suggested that poor social support contributes to the development of PTSD in some combat veterans (Schumm et al., 2014).

**The Severity and Nature of the Trauma** As you might expect, the severity and nature of the traumatic event a person encounters help determine whether the individual will develop a stress disorder. Some events may override a favorable biological foundation, nurturing childhood, positive attitudes, and/or social support (Conrad et al., 2017). One early study examined 253 Vietnam War prisoners five years after their

release. Some 23 percent qualified for a clinical diagnosis of PTSD, though all had been evaluated as well adjusted before their imprisonment (Ursano et al., 1981).

Generally, the more severe or prolonged the trauma and the more direct one's exposure to it, the greater the likelihood of developing a stress disorder (Hyland et al., 2017; Ursano et al., 2003). Mutilation, severe physical injury, or sexual assault in particular seem to increase the risk of stress disorders, as does witnessing the injury or death of other people. In addition, people who experience intentionally inflicted traumas are more likely to develop a stress disorder than persons who encounter unintentional traumas (Sareen, 2018).

There is also growing evidence that encounters with multiple or recurring traumas can lead to a particularly severe pattern called *complex PTSD* (Hyland et al., 2017; Jakob et al., 2017). Persons with complex PTSD experience virtually all of the symptoms mentioned throughout this chapter along with profound disturbances in their emotional control, self-concept, and relationships.

**Putting the Factors Together** Most of today's stress theorists believe that the various factors we have been looking at work together to help produce posttraumatic stress disorder (Ross et al., 2017). The *developmental psychopathology* perspective, which has received considerable research support in the realm of PTSD, provides one of the most influential explanations of how this might occur (Cicchetti, 2018, 2016; Meyer et al., 2017).

As you'll recall from Chapters 2 and 4, theorists from this perspective focus on the *intersection* and *context* of important variables at key *points of time* throughout an individual's life span. In the case of PTSD, they suggest that certain people have a biological predisposition—either inherited or acquired—for overreactivity in their brain-body stress pathways (that is, the sympathetic nervous system pathway and the hypothalamic-pituitary-adrenal pathway) and for dysfunction in their brain's stress circuit. This predisposition sets the stage for, but does not guarantee, the later development of PTSD. If, however, these individuals encounter extreme stressors throughout their childhood, their stress pathways may become still more overreactive and their brain's stress circuit may become more dysfunctional, and their risk of later developing PTSD may continue to grow. This risk may increase still further if, over the course of their lives, the individuals acquire poor coping mechanisms, develop problematic personal styles, and/or have weak social supports. When they confront extraordinary traumas in life, such individuals will be particularly vulnerable to the development of PTSD.



Rhona Wise/Getty Images

## #GenderDifference

Many researchers believe that women's higher rates of posttraumatic stress disorder are tied to the types of violent traumas they experience—namely, interpersonal assaults such as rape or sexual abuse (Sareen, 2018; USDVA, 2015; Street et al., 2011).

**Empowerment and resilience** One week after 17 students and teachers were killed in a 2018 mass shooting at Marjory Stoneman Douglas High School in Parkland, Florida, thousands of nearby south Florida students streamed out of their classrooms and staged this rally on the grounds of the stricken high school, demanding improvements in school safety and stricter gun-control laws. A month later, more than a million students nationwide followed suit in the "National School Walkout." Beyond the validity and importance of these protests, clinical theorists believe that the qualities of empowerment and resilience demonstrated by the students—particularly those who directly experienced the school shooting trauma—has helped protect some of them from developing posttraumatic stress disorder.

#

**#StressfulOutcome**

- 20% Percentage of people who report they have no one to support them during stress
- 29% Percentage of people who report feeling more stress this year than last year
- 41% Percentage of married people who say stress has caused them to yell at their spouse during the past month

(Information from: APA, 2017, 2015)

It is important to note that in the developmental psychopathology perspective, the relationship between the contributing factors is often a two-way street. For example, while overreactive stress pathways can contribute to poor coping during childhood and beyond, it is also the case that a childhood filled with experiences of *manageable* stress can, as we saw earlier, improve the functioning of the stress pathways, facilitate better coping skills, and help build a resilient personal style, thus reducing the risk of later developing PTSD (Southwick & Charney, 2012).

According to developmental psychopathologists, the *timing* of stressors and traumas over the course of development has a profound influence on whether an individual will develop PTSD (Moreno, 2018; Bremner, 2016). For example, extreme stressors in childhood disrupt and alter newly developing brain–body stress pathways and brain stress circuits, increasing the likelihood that those pathways and circuits will operate poorly over the course of life. Thus experiences of intense stress early in life are particularly likely to set the stage for PTSD should an individual eventually confront extraordinary traumas. At the same time, each stage of development ushers in new psychological and biological challenges, so extreme stressors at any point across the life span can increase a person’s vulnerability to PTSD.

The consequence of all this, according to the developmental psychopathology perspective, is that one person born with, say, overreactive stress pathways may eventually develop PTSD when confronted by an extraordinary trauma, whereas another person born with similar predisposing stress pathways may not develop PTSD in the face of such trauma. It all depends on the presence, timing, and intersections of the various factors we have been discussing. As you’ll recall from Chapter 2, this is the principle of *multifinality*, the notion that persons with similar beginnings may wind up at very different end points (Cicchetti, 2018, 2016). Conversely, two persons—one born with overreactive stress pathways and the other with pathways that react to stressors more appropriately—may both develop PTSD when eventually confronted by an extraordinary trauma. In such cases, the person born with favorable stress pathways might nonetheless come to develop overreactive pathways as a result of aversive childhood experiences, inadequate social supports, and other such factors. This principle is known as *equifinality*, the notion that different developmental pathways may lead to the same end point (Cicchetti, 2018, 2016).

**End of a journey?** Not necessarily, at least in the psychological realm. This small boat filled with migrants comes ashore at Lesbos, a pastoral Greek island through which a half million refugees—mostly from Syria—have passed on their way to countries throughout Europe. The rate of PTSD among refugees can be as high as 56 percent in some areas of the world, particularly for those who were tortured in their homeland or whose travels were perilous. Thus a small team of clinicians in Lesbos work full-time to help reduce the stress-related symptoms of refugees during their short stay on the island (Yaser et al., 2016).



Sergey Ponomarev/The New York Times/Redux



ZUMA Press, Inc./Alamy

**Standing down** To help prevent, reduce, or treat combat-related PTSD, the U.S. military and other organizations now offer stress- and trauma-release exercises for soldiers and ex-soldiers to perform. Here relaxation training and yoga are taught to veterans during the 2013 Veteran Stand Down hosted by Goodwill Southern California.

## How Do Clinicians Treat Acute and Posttraumatic Stress Disorders?

Treatment can be very important for people who have been overwhelmed by traumatic events. Overall, one-third of all cases of posttraumatic stress disorder improve within 12 months. The remainder of cases may persist for years, and, indeed, one-third of people with PTSD do not achieve normal functioning even after many years (Sareen, 2018; Byers et al., 2014).

Today's treatment procedures for troubled survivors often vary from trauma to trauma. Was it combat, an act of terrorism, sexual molestation, or a major accident? Yet all the programs share basic goals: they try to help survivors put an end to their stress reactions, gain perspective on their painful experiences, and return to constructive living (Rothbaum, 2017; Brown et al., 2016). Programs for combat veterans who suffer from PTSD illustrate how these issues may be addressed.

**Treatment for Combat Veterans** Therapists have used a variety of techniques to help reduce veterans' posttraumatic symptoms. Among the most common are *anti-depressant drug therapy*, *cognitive-behavioral therapy*, *couple or family therapy*, and *group therapy*. Commonly, the approaches are combined, as no one of them successfully reduces all the symptoms (Rothbaum, 2017).

**ANTIDEPRESSANT DRUGS** Antidepressant drugs are widely used for veterans with PTSD (Stein, 2017). Typically, these medications are more helpful for the PTSD symptoms of increased arousal and negative emotions, and less helpful for the recurrent negative memories, dissociations, and avoidance behaviors that also characterize the disorder. Around half of PTSD patients who take antidepressant drugs experience some symptom reductions. Other psychotropic drugs do not fare as well in PTSD research and are prescribed less often (Stein, 2017).

**COGNITIVE-BEHAVIORAL THERAPY** Cognitive-behavioral therapy has proved to be of considerable help to many veterans with PTSD, bringing significant overall improvement to half or more of those who receive such treatment (Rothbaum, 2017; Shou et al., 2017). On the cognitive side, the therapists guide the veterans to examine and change the dysfunctional attitudes and styles of interpretation they have developed as a result of their traumatic experiences. Over the course of such examinations and efforts, often

#

### #SmellingStress

Stress is odorless. The bacteria that feed off of our sweat are what give our bodies an odor during very stressful events.

#

**#GenderImpact**

51% Percentage of U.S. women who often lie awake at night due to stress

32% Percentage of U.S. men who often lie awake at night due to stress

(Information from: APA, 2017, 2015)

called *cognitive processing therapy* when applied in cases of PTSD, the veterans learn to deal with difficult memories and feelings, come to accept what they have done and experienced, become less judgmental of themselves, and begin to trust other people once again (Holliday et al., 2017). Increasingly, a number of cognitive-behavioral therapists are adding mindfulness-based techniques (see page 53) to further help the clients become more accepting and less judgmental of their recurring thoughts, feelings, and memories. Research indicates that such mindfulness techniques produce some additional improvements (Rothbaum, 2017).

On the behavioral side, cognitive-behavioral therapists typically apply *exposure* techniques when treating veterans with PTSD. These techniques have been quite successful at reducing specific symptoms and, in turn, bringing about improvements in overall adjustment (Cooper et al., 2017; Korte et al., 2017). In fact, some studies indicate that exposure may be the single most helpful intervention for people with PTSD (Haagen et al., 2015).

During exposure therapy, veterans with PTSD are guided to confront trauma-related—usually combat-related—objects, events, and situations that continue to cause them extreme upset and anxiety. Their exposures may be imagined or in vivo. Of course, it is technically impossible, not to mention unethical, to expose veterans with PTSD to actual combat experiences, so many of today's exposure treatments rely on the vivid, multisensory images produced by virtual reality procedures (Maples-Keller et al., 2017) (see *MindTech*).

Perhaps the most widely applied exposure technique in cases of PTSD is **prolonged exposure** (Foa et al., 2018; Acierno et al., 2017). Here therapists direct clients to confront not only trauma-related objects and situations but also their painful memories of traumatic experiences—memories they have been actively avoiding. The clients repeatedly recall and describe the memories in great detail for extended periods of time, holding on to them until becoming less aroused, anxious, and upset by them. Here a therapist conducting prolonged exposure typically offers instructions to a client with PTSD:



*Up to this point . . . you have been making great progress and have been experiencing the decrease in anxiety that we expect to see. Today we are going to do the exposure a little differently. . . . I will ask you to tell me . . . what the most distressing or upsetting parts of this memory are for you now. And then . . . I will ask you to focus the revisiting and recounting on each of these "hot spots," one at a time. We will pick one to begin with and you will repeat that one part of the memory over and over just by itself, focusing in closely and describing what happened in great detail, as if in slow motion, including what you felt, saw, heard, and thought. We will repeat it as many times as necessary to "wear it out" or bring about a big decrease in your [discomfort] level. When that part seems to have been sufficiently processed, we will move to the next one.*

(Foa et al., 2007, pp. 100–101)

**prolonged exposure** A treatment approach in which clients confront not only trauma-related objects and situations but also their painful memories of traumatic experiences.

**eye movement desensitization and reprocessing (EMDR)** An exposure treatment in which clients move their eyes in a rhythmic manner from side to side while flooding their minds with images of objects and situations they ordinarily avoid.

Over the course of prolonged exposure, the clients are expected to remember more and more details of their traumas, experience less distress during such memories, become less fearful of the memories, and indeed display fewer symptoms of PTSD. Research suggests that for clients who can stay with such intense memory exercises (many cannot), prolonged exposure is even more helpful than more gradual exposure interventions (Foa et al., 2018).

Another popular form of exposure therapy is **eye movement desensitization and reprocessing (EMDR)**, in which clients move their eyes in a rhythmic manner from side to side while flooding their minds with images of the objects and situations they ordinarily try to avoid. Although this approach has a number of skeptics, case studies and some controlled studies suggest that the treatment can sometimes be helpful to people with PTSD (Rothbaum, 2017; Shapiro & Forrest, 2016). Many theorists argue that

## MINDTECH

## Virtual Reality Therapy: Better than the Real Thing?



For years, exposure-based treatment for PTSD for combat veterans was less than optimal. Unable to revisit real-life battle settings, veterans had to imagine rifle fire, bomb explosions, dead bodies, and/or other traumatic stimuli for their treatment.

All that changed a decade ago, when “virtual” exposure to combat conditions became available for veterans with PTSD. The Office of Naval Research funded the development of “Virtual Iraq,” a war simulation treatment game (McIlvaine, 2011). This game was able to produce sights and

sounds that seemed every bit as real and produced as much—or more—alarm as real battle conditions. The use of virtual reality as an exposure technique has since become a standard in PTSD treatment.

In *virtual reality therapy*, PTSD clients use wraparound goggles and joysticks to navigate their way through a computer-generated military convoy, battle, or bomb attack in a landscape that looks like Iraq, Afghanistan, or other war zones. The therapist controls the intensity of the horrifying sights, terrifying sounds, and awful smells of combat, triggering very real feelings of fear or panic in the client. Exposures to these stimuli are applied by the therapist in either gradual steps or abruptly.

Study after study has suggested that virtual reality therapy is extremely helpful for combat veterans with PTSD, more so than covert exposure therapy (Maples-Keller et al., 2017). In addition, the improvements produced by this intervention appear to last for extended periods, perhaps indefinitely. Small wonder that virtual reality therapy is now also becoming common in the treatment of other anxiety disorders and phobias, including social anxiety disorder and fears of heights, flying, and closed spaces (Bouchard et al., 2017). 



AP Photo/Ted S. Warren

**“Virtual” exposure** An ex-soldier’s headset and video game–type controller take him back to a battle scene in Iraq.

it is the exposure feature of EMDR, rather than the eye movement per se, that accounts for its success as a treatment (Lamprecht et al., 2004).

**COUPLE AND FAMILY THERAPY** Veterans with PTSD may be further helped in couple therapy or family therapy formats (Rothbaum, 2017; Vogt et al., 2017, 2011). The symptoms of PTSD are particularly apparent to spouses and other family members, who may be directly affected by the client’s anxieties, depressed mood, or angry outbursts (Freytes et al., 2017). With the help and support of their family members, clients may come to examine their impact on others, learn to communicate better, and improve their problem-solving skills (Sareen, 2018).

**GROUP THERAPY** In group therapy sessions, called *rap groups* when initiated during the 1980s, veterans meet with others like themselves to share experiences and feelings (particularly guilt and rage), develop insights, and give mutual support (Levi et al., 2017; Ellis et al., 2014). Today hundreds of small *Veterans Outreach Centers* across the country, as well as treatment programs in Veterans Administration hospitals and mental health clinics, provide group treatment (Finley et al., 2017). These agencies also offer individual therapy, counseling for spouses and children, family therapy, and aid in seeking jobs, education, and benefits. Clinical reports suggest that such programs offer a necessary, sometimes life-saving, treatment opportunity.

**psychological debriefing** A form of crisis intervention in which victims are helped to talk about their feelings and reactions to traumatic incidents. Also called *critical incident stress debriefing*.

**dissociative disorders** Disorders marked by major changes in memory that do not have clear physical causes.

**memory** The faculty for recalling past events and past learning.

**dissociative amnesia** A disorder marked by an inability to recall important personal events and information.

**Psychological Debriefing** People who are traumatized by disasters, victimization, or accidents profit from many of the same treatments that are used to help survivors of combat (Rothbaum, 2017). In addition, because their traumas occur in their own community, where mental health resources are close at hand, they may, according to many clinicians, further benefit from immediate community interventions.

One of the leading such approaches is called **psychological debriefing**, or **critical incident stress debriefing**, an intervention applied widely over the past 30 years. Psychological debriefing is a form of crisis intervention that has victims of trauma talk extensively about their feelings and reactions within days of the critical incident (Tarquinio et al., 2016; Mitchell, 2003, 1983). The clinicians then clarify to the victims that their reactions are normal responses to a terrible event, offer stress management tips, and in some cases, refer the victims to professionals for long-term counseling. Based on the assumption that such sessions prevent or reduce stress reactions, they are often provided to trauma victims who have not yet displayed any symptoms at all, as well as to those who have.

This intense approach has been applied in the aftermath of countless traumatic events (Tarquinio et al., 2016; Pfefferbaum, Newman, & Nelson, 2014). Indeed, when a traumatic incident affects numerous individuals, debriefing-trained counselors may come from far and wide to conduct debriefing sessions with the victims. Large mobilizations of this kind have offered free emergency mental health services at the sites of disasters such as the 2001 World Trade Center attack, the 2005 floods caused by Hurricane Katrina, and the mass killings of 49 persons at Pulse, a gay nightclub in Orlando, Florida, in 2016 and of 58 individuals at a concert in Las Vegas, Nevada, in 2017.

Over the years, personal testimonials for rapid mobilization programs have often been favorable (Healy & Tyrrell, 2013; Watson & Shalev, 2005). However, research conducted over the past decade has called into question the effectiveness of this kind of intervention (Tarquinio et al., 2016; USDVA, 2016). In fact, some clinicians believe that the early intervention programs may encourage victims to dwell too long on the traumatic events they have experienced. And a number worry that early disaster counseling may unintentionally “suggest” problems to certain victims, thus helping to produce stress disorders (USDVA, 2016; McNally, 2004). Thus, although many mental health professionals continue to believe in psychological debriefing programs, the current clinical climate is moving away from the ready application of this approach.

## 📍... SUMMING UP

**ACUTE AND POSTTRAUMATIC STRESS DISORDERS** When we appraise a stressor as threatening, we often experience a stress response consisting of arousal and a sense of fear. The features of arousal are set in motion by the hypothalamus, a brain structure that activates two different pathways—the sympathetic nervous system pathway and the hypothalamic-pituitary-adrenal pathway.

People with acute stress disorder or posttraumatic stress disorder react with arousal, anxiety, and other stress symptoms long after a traumatic event, including reexperiencing the traumatic event, avoiding related events, being markedly less responsive than normal, and feeling guilt. Traumatic events may include combat experiences, disasters, or episodes of victimization.

In attempting to explain why certain people develop a psychological stress disorder, researchers have focused on biological factors (particularly, overly reactive brain–body stress pathways, a dysfunctional brain stress circuit, and an inherited predisposition), childhood experiences, personal styles, social support systems, and the severity and nature of traumatic events, as well as on how these factors may work together to produce such a disorder. Techniques used to treat the stress disorders include antidepressant drugs, cognitive-behavioral therapy (including exposure techniques), family therapy, and group therapy. Critical incident stress debriefing initially appeared helpful after large-scale disasters; however, recent studies have raised questions about the usefulness of this intervention.

#

### #TheirWords

“Reality is the leading cause of stress among those in touch with it.”

Lily Tomlin

## Dissociative Disorders

As you have just read, a number of people with acute and posttraumatic stress disorders have symptoms of dissociation along with their other symptoms. They may, for example, feel dazed, have trouble remembering things, or have a sense of depersonalization or derealization. Symptoms of this kind are also on display in **dissociative disorders**, another group of disorders triggered by traumatic events. The memory difficulties and other dissociative symptoms found in these disorders are particularly intense, extensive, and disruptive. Moreover, in such disorders, dissociative reactions are the main or only symptoms. People with dissociative disorders do not typically have the significant arousal, negative emotions, sleep difficulties, and other problems that characterize acute and posttraumatic stress disorders. Nor are there clear physical factors at work in dissociative disorders.

Most of us experience a sense of wholeness and continuity as we interact with the world. We perceive ourselves as being more than a collection of isolated sensory experiences, feelings, and behaviors. In other words, we have an *identity*, a sense of who we are and where we fit in our environment. **Memory** is a key to this sense of identity, the link between our past, present, and future. Without a memory, we would always be starting over; with it, our life and our identity move forward. In dissociative disorders, one part of a person's memory or identity becomes *dissociated*, or separated, from other parts of his or her memory or identity.

There are several kinds of dissociative disorders. People with *dissociative amnesia* are unable to recall important personal events and information. People with *dissociative identity disorder*, once known as *multiple personality disorder*, have two or more separate identities that may not always be aware of each other's memories, thoughts, feelings, and behavior. And people with *depersonalization-derealization disorder* feel as though they have become detached from their own mental processes or bodies or are observing themselves from the outside.

Several famous books and movies have portrayed dissociative disorders. Two classics are *The Three Faces of Eve* and *Sybil*, each about a woman who developed multiple personalities after having been subject to traumatic events in childhood. The topic is so fascinating that most television drama series seem to include at least one case of dissociation every season, creating the impression that the disorders are very common. Many clinicians, however, believe that they are rare.

### Dissociative Amnesia

People with **dissociative amnesia** are unable to recall important information, usually of a stressful nature, about their lives (APA, 2013). The loss of memory is much more extensive than normal forgetting and is not caused by physical factors such as a blow to the head (see **Table 5-3**). Typically, an episode of amnesia is directly triggered by a traumatic or upsetting event (Odagaki, 2017).

Dissociative amnesia may be *localized*, *selective*, *generalized*, or *continuous*. In *localized amnesia*, the most common type of dissociative amnesia, a person loses all memory of events that took place within a limited period of time, almost always beginning with some very disturbing occurrence. A soldier, for example, may awaken a week after a horrific combat battle and be unable to recall the battle or any of the events surrounding it. She may remember everything that happened up to the battle, and may recall everything that has occurred over the



Barcroft/Getty Images

**Managing without memory** Andy Wray developed dissociative amnesia after witnessing several horrific deaths in his work as a policeman. His disorder is marked by *continuous forgetting*. Every few days, many of his new memories disappear, leaving him unable to recognize friends, relatives, and events in any detail. To help him get on with his life, he uses countless notebooks and reminder cards like the ones he is looking at here.

TABLE: 5-3

### Dx Checklist

#### Dissociative Amnesia

1. Person cannot recall important life-related information, typically traumatic or stressful information. The memory problem is more than simple forgetting.
2. Significant distress or impairment.
3. The symptoms are not caused by a substance or medical condition.

#### Dissociative Identity Disorder

1. Person experiences a disruption to his or her identity, as reflected by at least two separate personality states or experiences of possession.
2. Person repeatedly experiences memory gaps regarding daily events, key personal information, or traumatic events, beyond ordinary forgetting.
3. Significant distress or impairment.
4. The symptoms are not caused by a substance or medical condition.

Information from: APA, 2013.

#

## #FrequentlyForgotten

Online passwords

Where cell phone was left

Where keys were left

Where remote control was left

Phone numbers

Names

Dream content

Birthdays/anniversaries

past several days, but the events in between remain a total blank. The forgotten period is called the *amnestic episode*. During an amnestic episode, people may appear confused; in some cases they wander about aimlessly. They are already experiencing memory difficulties but seem unaware of them.

People with *selective amnesia*, the second most common form of dissociative amnesia, remember some, but not all, events that took place during a period of time. If the combat soldier mentioned in the previous paragraph had selective amnesia, she might remember certain interactions or conversations that occurred during the battle, but not more disturbing events such as the death of a friend or the screams of enemy soldiers.

In some cases the loss of memory extends back to times long before the upsetting period. In addition to forgetting battle-linked events, the soldier may not remember events that occurred earlier in her life. In this case, she would have what is called *generalized amnesia*. In extreme cases, she might not even recognize relatives and friends.

In the forms of dissociative amnesia just discussed, the period affected by the amnesia has an end. In *continuous amnesia*, however, forgetting continues into the present. The soldier might forget new and ongoing experiences as well as what happened before and during the battle.

These various forms of dissociative amnesia are similar in that the amnesia interferes mostly with a person's memory of personal material. Memory for abstract or encyclopedic information usually remains. People with dissociative amnesia are as likely as anyone else to know the name of the president of the United States and how to read or drive a car.

Studies suggest that at least 2 percent of all adults experience dissociative amnesia in a given year (Loewenstein, 2014). Many cases seem to begin during serious threats to health and safety, as in wartime and natural disasters. Like the soldier in the earlier examples, combat veterans often report memory gaps of hours or days, and some forget personal information, such as their name and address (Guina et al., 2018; Bremner, 2016, 2002).

Childhood abuse, particularly child sexual abuse, can also trigger dissociative amnesia (Hébert et al., 2018); indeed, in the 1990s there were many reports in which adults claimed to recall long-forgotten experiences of childhood abuse (see *PsychWatch*). In addition, dissociative amnesia may occur under more ordinary circumstances, such as

Why do many people question the authenticity of people who seem to lose their memories at times of severe stress?

**An additional risk** Three concertgoers desperately run for cover during the 2017 mass shooting at an outdoor country music festival in Las Vegas, Nevada, a horrific incident that left 58 people dead and 546 injured. People who experience severe threats to their health and safety—as in natural and human-produced disasters—are particularly vulnerable to amnesia and other dissociative reactions. In the aftermath of mass shootings, for example, survivors may forget specific details of their ordeal, personal information, or even their identities.



David Becker/Getty Images

## PSYCHWATCH

## Repressed Childhood Memories or False Memory Syndrome?

 Throughout the 1990s, reports of repressed childhood memory of abuse attracted much public attention. Adults with this type of dissociative amnesia seemed to recover buried memories of sexual and physical abuse from their childhood. A woman might claim, for example, that her father had sexually molested her repeatedly between the ages of 5 and 7. Or a young man might remember that a family friend had made sexual advances on several occasions when he was very young. Often the repressed memories surfaced during therapy for another problem.

Although the number of such claims has declined dramatically in recent years, clinicians remain divided on this issue (Andrews & Brewin, 2017; McNally, 2017). Some believe that recovered memories are just what they appear to be—horrible memories of abuse that have been buried for years in the person's mind (MacIntosh, Fletcher, & Collin-Vézina, 2016). Other clinicians—the majority—believe that the memories are actually illusions, false images created by a mind that is confused. Opponents of the repressed memory concept hold that the details of childhood sexual abuse are often remembered all too well, not completely wiped from memory. They also point out that memory in general is often flawed. Moreover, false memories of various kinds can be created in the laboratory by tapping into research participants' imaginations (McNally, 2017; Volz et al., 2017).

If the alleged recovery of childhood memories is not what it appears to be, what is it? According to opponents of the concept, it may be a powerful case of suggestibility (McNally, 2017; Loftus, 2003, 2001). These theorists hold that the attention paid to the phenomenon by both clinicians and the public leads some therapists to make the diagnosis without sufficient evidence. Moreover, certain therapists use special memory recovery techniques, including hypnosis and regression therapy. Perhaps some clients respond to the techniques by unknowingly forming false memories of abuse (McNally, 2017; McNally & Garaerts, 2009).

Of course, repressed memories of childhood sexual abuse do not emerge only in

clinical settings. Some individuals come forward on their own (MacIntosh et al., 2016). Opponents of the repressed memory concept explain these cases by pointing to various books, Web sites, and television shows that seem to validate the phenomenon of repressed memories of childhood abuse (Haaken & Reavey, 2010; Loftus, 1993). Still other opponents believe that some individuals are simply more prone than others to experience false memories—either of childhood abuse or of other kinds of events (McNally, 2017; McNally et al., 2005).

It is important to recognize that the theorists who question the recovery of repressed childhood memories do not in any way deny the problem of child sexual abuse. In fact, proponents and opponents alike are greatly concerned that the public may take this debate to mean that clinicians have doubts about the scope of the problem of child sexual abuse. Unfortunately, that problem is all too real and all too common.



**Early recall** These siblings, all born on the same day in different years, have very different reactions to their cakes at a 1958 birthday party. But how do they each remember that party today? Research suggests that our memories of early childhood may be influenced by the reminiscences of family members, our dreams, television and movie plots, and our present self-image.

the sudden loss of a loved one through rejection or death, or extreme guilt over certain actions (for example, an extramarital affair) (Guina et al., 2018).

The personal impact of dissociative amnesia depends on how much is forgotten. Obviously, an amnesic episode of two years is more of a problem than one of two hours. Similarly, an amnesic episode during which a person's life changes in major ways causes more difficulties than one that is quiet.

An extreme version of dissociative amnesia is called **dissociative fugue**. Here persons not only forget their personal identities and details of their past lives but also flee to an entirely different location. Some people travel a short distance and make few social contacts in the new setting (Harrison et al., 2017; APA, 2013). Their fugue may be brief—a matter of hours or days—and end suddenly. In other cases, however, the person may travel far from home, take a new name, and establish a new identity,

**dissociative fugue** A form of dissociative amnesia in which a person travels to a new location and may assume a new identity, simultaneously forgetting his or her past.

new relationships, and even a new line of work. Such people may also display new personality characteristics; often they are more outgoing. This pattern is seen in the century-old case of the Reverend Ansel Bourne, whose last name was the inspiration for Jason Bourne, the memory-deprived secret agent in the modern-day Bourne books and movies.



*On January 17, 1887, [the Reverend Ansel Bourne, of Greene, R.I.] drew 551 dollars from a bank in Providence with which to pay for a certain lot of land in Greene, paid certain bills, and got into a Pawtucket horsecar. This is the last incident which he remembers. He did not return home that day, and nothing was heard of him for two months. He was published in the papers as missing, and foul play being suspected, the police sought in vain his whereabouts. On the morning of March 14th, however, at Norristown, Pennsylvania, a man calling himself A. I. Brown who had rented a small shop six weeks previously, stocked it with stationery, confectionery, fruit and small articles, and carried on his quiet trade without seeming to any one unnatural or eccentric, woke up in a fright and called in the people of the house to tell him where he was. He said that his name was Ansel Bourne, that he was entirely ignorant of Norristown, that he knew nothing of shop keeping, and that the last thing he remembered—it seemed only yesterday—was drawing the money from the bank, etc. in Providence. . . . He was very weak, having lost apparently over twenty pounds of flesh during his escapade, and had such a horror of the idea of the candy-store that he refused to set foot in it again.*

*(James, 1890, pp. 391–393)*



AP Photo/Peter Cosgrove

**Lost and found** Cheryl Ann Barnes is helped off a plane by her grandmother and stepmother upon arrival in Florida in 1996. The 17-year-old high school honor student had disappeared from her Florida home and was found one month later in a New York City hospital listed as Jane Doe, apparently suffering from a dissociative fugue.

Fugues tend to end abruptly. In some cases, as with Reverend Bourne, the person “awakens” in a strange place, surrounded by unfamiliar faces, and wonders how he or she got there. In other cases, the lack of personal history may arouse suspicion. Perhaps a traffic accident or legal problem leads police to discover the false identity; at other times friends search for and find the missing person. When people are found before their state of fugue has ended, therapists may find it necessary to ask them many questions about the details of their lives, repeatedly remind them who they are, and even begin psychotherapy before they recover their memories (Harrison et al., 2017; Igwe, 2013). As these people recover their past, some forget the events of the fugue period.

The majority of people who go through a dissociative fugue regain most or all of their memories and never have a recurrence. Since fugues are usually brief and totally reversible, those who have experienced them tend to have few aftereffects. People who have been away for months or years, however, often do have trouble adjusting to the changes that took place during their flight. In addition, some people commit illegal or violent acts in their fugue state and later must face the consequences.

## Dissociative Identity Disorder

Dissociative identity disorder is both dramatic and disabling, as we see in the case of Luisa:



*Luisa was first brought in for treatment after she was found walking in circles by the side of the road in a suburban neighborhood near Denver. Agitated, malnourished, and dirty, this 30-year-old woman told police that her name was Franny and that she was a 15-year-old who was running away from her home in Telluride. At first, the police officers suspected she was giving a false identity to avoid prosecution for prostitution or drug possession, but there really was no evidence for either crime when she was found.*

*Once it became apparent that she fully believed what she was saying, the woman, who carried no identification of any kind, was transferred to a psychiatric hospital for observation. By the time she met with a therapist, she was no longer a young child speaking rapidly about a terrible family situation. She was now calling herself Luisa, and she spoke in slow, measured, and sad tones—eloquent but often confused.*

Luisa described how she had been sexually abused for years by her stepfather, starting when she was six. She said she had run away from home at the age of 15 and had not spoken since to either her mother or stepfather. She claimed that, although she had spent considerable time living on the streets over the years, she was currently living with her boyfriend, Tim, in a small apartment. However, when pressed, she was unable to say what Tim did for a living, nor could she provide his address or last name. Thus she remained in treatment.

Over the course of treatment, as her therapist continued to probe for details of her unhappy childhood and sexual abuse, Luisa became more and more agitated, until finally, she actually transformed back into 15-year-old Franny during one session. Her therapist wrote in his notes, "Her entire physical presence transformed itself suddenly and almost violently. Her face, previously relaxed and even flat, became tense and scrunched up, and her entire body hunched over. She moved her chair back almost two feet and repeatedly flinched from me if I even gestured in her direction. Her voice became high-pitched, clipped, and fast, spitting out words, and her vocabulary became limited, to that which a child would display. She seemed to be a different person in every way possible."

Over the following several sessions, Luisa's therapist wound up meeting still other personalities. One was Miss Johnson, a strict school principal who claimed to have taught Luisa when she was younger. Another was Roger—homeless, tough, and threatening—who made it clear that he was in charge of Luisa and the other personalities. In addition there was Sarah, aged 55 and divorced, and Lilly, aged 24, a math genius and accountant who seemed to appear whenever Luisa needed to deal with money or complex mathematical issues.

A person with **dissociative identity disorder**, known in the past as *multiple personality disorder*, develops two or more distinct personalities, often called **subpersonalities**, or **alternate personalities**, each with a unique set of memories, behaviors, thoughts, and emotions (see again Table 5-3). At any given time, one of the subpersonalities takes center stage and dominates the person's functioning. Usually one subpersonality, called the *primary*, or *host*, personality, appears more often than the others.

The transition from one subpersonality to another, called *switching*, is usually sudden and may be dramatic. Luisa, for example, twisted her face and hunched her shoulders and body forward violently. Switching is usually triggered by a stressful event, although clinicians can also bring about the change with hypnotic suggestion.

Cases of dissociative identity disorder were first reported almost three centuries ago (Rieber, 2006, 2002). Many clinicians consider the disorder to be rare, but some reports

**Why might women be more likely than men to receive a diagnosis of dissociative identity disorder?**

suggest that it may be more common than was once thought (Foote, 2018; Dorahy et al., 2014). Most cases are first diagnosed in late adolescence or early adulthood, but more often than not, the symptoms actually began in early childhood after episodes of trauma or abuse (often sexual abuse) (Foote, 2018). Women receive this diagnosis at least three times as often as men.

**How Do Subpersonalities Interact?** How subpersonalities relate to or recall one another varies from case to case (Morton, 2018, 2017; Ellenberger, 1970). Generally, however, there are three kinds of relationships. In *mutually amnesic relationships*, the subpersonalities have no awareness of one another. Conversely, in *mutually cognizant patterns*, each subpersonality is well aware of the rest. They may hear one another's voices and even talk among themselves. Some are on good terms, while others do not get along at all.

In *one-way amnesic relationships*, the most common relationship pattern, some subpersonalities are aware of others, but the awareness is not mutual. Those who are aware, called *coconscious subpersonalities*, are "quiet observers" who watch the actions and thoughts of the other subpersonalities but do not interact with them. Sometimes while another subpersonality is present, the coconscious personality makes itself known through indirect means, such as auditory hallucinations (perhaps a voice giving

#

## #AssessmentDelay

People with dissociative identity disorder do not receive that diagnosis until they have been in therapy for an average of seven years (Foote, 2018).

**dissociative identity disorder** A dissociative disorder in which a person develops two or more distinct personalities. Also known as *multiple personality disorder*.

**subpersonalities** The two or more distinct personalities found in individuals suffering with dissociative identity disorder. Also known as *alternate personalities*.

#

**#MemoryMovies***Split* (2017)*Finding Dory* (2016)*The Bourne* series (2012, 2007, 2004, 2002)*Total Recall* (2012, 1990)*Black Swan* (2010)*Shutter Island* (2010)*The Hangover* (2009)*Spider-Man 3* (2007)*Eternal Sunshine of the Spotless Mind* (2004)*The Manchurian Candidate* (2004, 1962)*Finding Nemo* (2003)*Memento* (2000)

commands) or “automatic writing” (the current personality may find itself writing down words over which it has no control).

Investigators used to believe that most cases of dissociative identity disorder involved two or three subpersonalities. Studies now suggest, however, that the average number of subpersonalities per patient is much higher—15 for women and 8 for men (Foote, 2018; APA, 2000). In fact, there have been cases in which 100 or more subpersonalities were observed. Often the subpersonalities emerge in groups of 2 or 3 at a time.

In the case of “Eve White,” made famous in the book and movie *The Three Faces of Eve*, a woman had three subpersonalities—Eve White, Eve Black, and Jane (Thigpen & Cleckley, 1957). Eve White, the primary personality, was quiet and serious; Eve Black was carefree and mischievous; and Jane was mature and intelligent. According to the book, these three subpersonalities eventually merged into Evelyn, a stable personality who was really an integration of the other three.

The book was mistaken, however; this was not to be the end of Eve’s dissociation. In an autobiography 20 years later, she revealed that altogether 22 subpersonalities had come forth during her life, including 9 subpersonalities after Evelyn. Usually they appeared in groups of three, and so the authors of *The Three Faces of Eve* apparently never knew about her previous or subsequent subpersonalities. She later overcame her disorder, achieving a single, stable identity, and was known as Chris Sizemore for four decades until her death in 2016 (Weber, 2016; Sizemore, 1991).

**How Do Subpersonalities Differ?** As in Chris Sizemore’s case, subpersonalities often exhibit dramatically different characteristics. They may also have their own names and different *identifying features, abilities and preferences, and even physiological responses.*

**IDENTIFYING FEATURES** The subpersonalities may differ in features as basic as age, gender, race, and family history, as in the case of Sybil Dorsett, whose disorder is described in the famous novel *Sybil* (Schreiber, 1973). According to the novel, Sybil displayed 17 subpersonalities, all with different identifying features. They included adults, a teenager, and even a baby. One subpersonality, Vicky, saw herself as attractive and blonde, while another, Peggy Lou, believed herself to be “a pixie with a pug nose.” Yet another, Mary, was plump with dark hair, and Vanessa was a tall, thin redhead. (It is



“Would it surprise you to learn, Felix, that we’re already married?”

Michael Maslin/The New Yorker  
Collection/The Cartoon Bank

worth noting that the accuracy of the real-life case on which this novel was based has been challenged in recent years.)

**ABILITIES AND PREFERENCES** Although memories of abstract or encyclopedic information are not usually affected in dissociative amnesia, they are often disturbed in dissociative identity disorder. It is not uncommon for the different subpersonalities to have different abilities: one may be able to drive, speak a foreign language, or play a musical instrument, while the others cannot (Foote, 2018; Coons & Bowman, 2001). Their handwriting can also differ. In addition, the subpersonalities usually have different tastes in food, friends, music, and literature. Chris Sizemore (“Eve”) later pointed out, “If I had learned to sew as one personality and then tried to sew as another, I couldn’t do it. Driving a car was the same. Some of my personalities couldn’t drive” (Sizemore & Pitillo, 1977, p. 4).

**PHYSIOLOGICAL RESPONSES** Researchers have discovered that subpersonalities may have physiological differences, such as differences in blood pressure levels and allergies (Spiegel, 2009; Putnam et al., 1990). A pioneering study looked at the brain activities of different subpersonalities by measuring their *evoked potentials*—that is, brain-response patterns recorded on an electroencephalograph (Putnam, 1984). The brain pattern a person produces in response to a specific stimulus (such as a flashing light) is usually unique and consistent. However, when an evoked potential test was administered to four subpersonalities of each of 10 people with dissociative identity disorder, the results were dramatic. The brain-activity pattern of each subpersonality was unique, showing the kinds of variations usually found in totally different people. A number of other studies conducted over the past two decades have yielded similar findings (Boysen & VanBergen, 2014).

**How Common Is Dissociative Identity Disorder?** As you have seen, dissociative identity disorder has traditionally been thought of as rare. Some researchers even argue that many or all cases are *iatrogenic*—that is, unintentionally produced by practitioners (Foote, 2018). They believe that therapists create this disorder by subtly suggesting the existence of other personalities during therapy or by explicitly asking a patient to produce different personalities while under hypnosis. In addition, they believe, a therapist who is looking for multiple personalities may reinforce these patterns by displaying greater interest when a patient displays symptoms of dissociation.

These arguments seem to be supported by the fact that many cases of dissociative identity disorder first come to attention while the person is already in treatment for a less serious problem. But such is not true of all cases; many people seek treatment because they have noticed time lapses throughout their lives or because relatives and friends have observed their subpersonalities (Foote, 2018; Putnam, 2006, 2000).

The number of people diagnosed with dissociative identity disorder increased dramatically in the 1980s and 1990s, only to decrease again in the twenty-first century (Foote, 2018; Paris, 2012). Notwithstanding this decline, thousands of cases have now been diagnosed in the United States and Canada alone and some clinical theorists estimate that around 1 percent of the population in the United States and other Western countries displays the disorder (Foote, 2018). On the other side of the coin, many clinicians continue to question the legitimacy of this category.

## How Do Theorists Explain Dissociative Amnesia and Dissociative Identity Disorder?

A variety of theories have been proposed to explain dissociative amnesia and dissociative identity disorder. Older explanations, such as that offered by psychodynamic theorists, have not received much investigation (Merenda, 2008). However, newer viewpoints, which highlight such factors as *state-dependent learning* and *self-hypnosis*, have captured the interest of clinical scientists.

What verdict is appropriate for accused criminals who experience dissociative identity disorder and whose crimes are committed by one of their subpersonalities?

#

### #TreatingSybil

Recent reports, including claims by several colleagues who worked closely with the author of *Sybil* and with Sybil’s real-life therapist, suggest that Shirley Mason (the person on whom Sybil was based) was highly hypnotizable, extremely suggestible, and anxious to please her therapist, and that her disorder was in fact induced largely by hypnosis, sodium pentothal, and therapist suggestion (Carey, 2017; Nathan, 2011; Rieber, 2002, 1999).

**state-dependent learning** Learning that becomes associated with the conditions under which it occurred, so that it is best remembered under the same conditions.

**The Psychodynamic View** Psychodynamic theorists believe that these dissociative disorders are caused by *repression*, the most basic ego defense mechanism: people fight off anxiety by unconsciously preventing painful memories, thoughts, or impulses from reaching awareness. Everyone uses repression to a degree (see *PsychWatch*), but people with dissociative amnesia and dissociative identity disorder are thought to repress their memories excessively (Snyder, 2018; Henderson, 2010).

In the psychodynamic view, dissociative amnesia is a *single episode* of massive repression. A person unconsciously blocks the memory of an extremely upsetting event to avoid the pain of facing it (Foote, 2018; Kikuchi et al., 2010). Repressing may be his or her only protection from overwhelming anxiety.

In contrast, dissociative identity disorder is thought to result from a *lifetime* of excessive repression (Snyder, 2018; Howell, 2011). Psychodynamic theorists believe that this continuous use of repression is motivated by traumatic childhood events, particularly abusive parenting (Foote, 2018; Blass, 2015). Children who experience such traumas may come to fear the dangerous world they live in and take flight from it by pretending to be another person who is looking on safely from afar. Abused children may also come to fear the impulses that they believe are the reasons for their excessive punishments. Whenever they experience “bad” thoughts or impulses, they unconsciously try to disown and deny them by assigning them to other personalities.

Support for the psychodynamic explanation of dissociative identity disorder comes from a variety of studies, largely case studies, which report such brutal childhood

## PSYCHWATCH

### Peculiarities of Memory



Usually memory problems must interfere greatly with a person's functioning before they are considered a sign of a disorder. Peculiarities of memory, on the other hand, fill our daily lives. Memory investigators have identified a number of these peculiarities—some familiar, some useful, some problematic, but none abnormal.

- **Absentmindedness** Often we fail to register information because our thoughts are focusing on other things. If we haven't absorbed the information in the first place, it is no surprise that later we can't recall it.
- **Déjà vu** Almost all of us have at some time had the strange sensation of recognizing a scene that we happen upon for the first time. We feel sure we have been there before.
- **Jamais vu** Sometimes we have the opposite experience: a situation or scene that is part of our daily life seems suddenly unfamiliar. “I knew it was my car, but I felt as if I'd never seen it before.”
- **The tip-of-the-tongue phenomenon** To have something on the tip of the

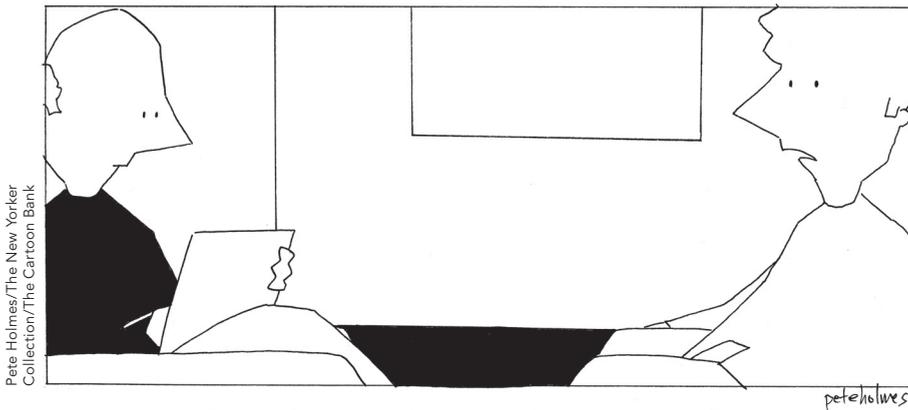


**Memory for music** Eight-year-old blind pianist Ying-Shan Tseng performs at a concert in South Africa. The young artist can breeze through complex concertos by Tchaikovsky, Mozart, and others from memory—a skill beyond the reach of most accomplished pianists.

said by others during the surgical procedure.

tongue is an acute “feeling of knowing”: we are unable to recall some piece of information, but we know that we know it.

- **Eidetic images** Some people have such vivid visual afterimages that they can describe a picture in detail after looking at it just once. The images may be memories of pictures, events, fantasies, or dreams.
- **Memory while under anesthesia** Some surgical patients continue to understand language while they are under anesthesia and may later recall what was
- **Memory for music** Even as a small child, Mozart could memorize and reproduce a piece of music after having heard it only once. In a similar vein, many musicians can mentally hear whole pieces of music, so they can rehearse anywhere, far from their instruments.
- **Visual memory** Most people recall visual information better than other kinds of information: they easily can bring to their mind the appearance of places, objects, faces, or the pages of a book. They almost never forget a face, yet they may well forget the name attached to it. Other people have stronger verbal memories: they remember sounds or words particularly well, and the memories that come to their minds are often puns or rhymes.



"I think I accidentally repressed my good memories."

experiences as beatings, cuttings, burnings with cigarettes, imprisonment in closets, rape, and extensive verbal abuse (Foote, 2018; Ross & Ness, 2010). Yet some individuals with this disorder do not seem to have experiences of abuse in their background (Ross, 2018). For example, Chris Sizemore, the subject of *The Three Faces of Eve*, reported that her disorder first emerged during her preschool years after she witnessed two deaths and a horrifying accident within a three-month period.

**State-Dependent Learning: A Cognitive-Behavioral View** If people learn something when they are in a particular situation or state of mind, they are likely to remember it best when they are again in that same condition. If they are given a learning task while under the influence of alcohol, for example, their later recall of the information may be strongest under the influence of alcohol. Similarly, if they smoke cigarettes while learning, they may later have better recall when they are again smoking.

**Might it be possible to use the principles of state-dependent learning to produce better results in school or at work?**

This link between state and recall is called **state-dependent learning**. It was initially observed in animals who learned things during experiments while under the influence of certain drugs (Radulovic et al., 2017; Overton, 1966, 1964). Research with human participants later showed that state-dependent learning can be associated with mood states as well: material learned during a happy mood is recalled best when the participant is again happy, and sad-state learning is recalled best during sad states (Xie & Zhang, 2017; Bower, 1981) (see **Figure 5-3**).

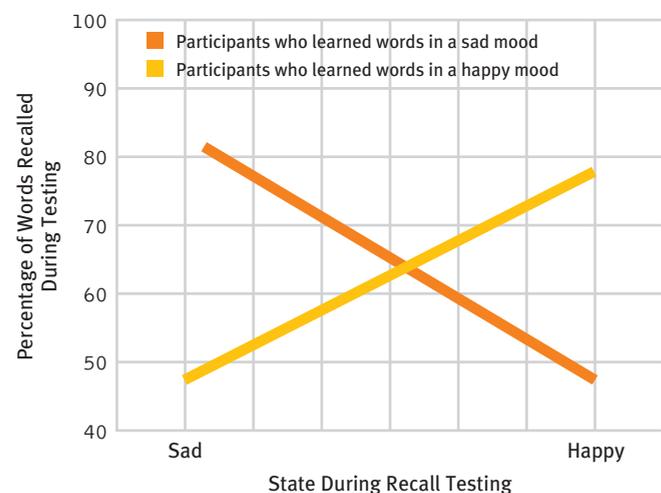
What causes state-dependent learning? One possibility is that *arousal* levels are an important part of learning and memory. That is, a particular level of arousal will have a set of remembered events, thoughts, and skills attached to it. When a situation produces that particular level of arousal, the person is more likely to recall the memories linked to it.

Although people remember certain events better in some arousal states than in others, most can recall events under a variety of states. However, some theorists suggest, people who are prone to develop dissociative disorders have state-to-memory links that are unusually rigid and narrow (Miller, 2017; Barlow, 2011). Each of their thoughts, memories, and skills may be tied *exclusively* to a particular state of arousal, so they recall a given event only when they experience an arousal state almost identical to the state in which the memory was first acquired. When such people are calm, for example, they may forget what happened during stressful times, thus laying the groundwork for dissociative amnesia. Similarly, in dissociative identity disorder, different arousal levels may produce entirely different groups of memories, thoughts, and abilities—that is, different subpersonalities. This could explain why personality transitions in dissociative identity disorder tend to be sudden and stress-related.

**FIGURE 5-3**

### State-Dependent Learning

In one study, participants who learned a list of words while in a hypnotically induced happy state remembered the words better if they were in a happy mood when tested later than if they were in a sad mood. Conversely, participants who learned the words when in a sad mood recalled them better if they were sad during testing than if they were happy. (Information from: Bower, 1981.)



**Sensory memories** Sensory stimuli often trigger important memories. Thus some clinicians practice *olfactotherapy*, a method that uses the smells and vibrations of essential oils to help elicit memories from clients.



Anellie-Benoist/BSIP/Getty Images

**Self-Hypnosis** As you first saw in Chapter 1, people who are *hypnotized* enter a sleeplike state in which they become very suggestible. While in this state, they can behave, perceive, and think in ways that would ordinarily seem impossible. They may, for example, become temporarily blind, deaf, or insensitive to pain. Hypnosis can also help people remember events that occurred and were forgotten years ago, a capability used by many psychotherapists. Conversely, it can make people forget facts, events, and even their personal identities—an effect called *hypnotic amnesia*.

The parallels between hypnotic amnesia and the dissociative disorders we have been examining are striking (Foote, 2018; van der Kruijs et al., 2014). Both are conditions in which people forget certain material for a period of time yet later remember it. And in both, the people forget without any insight into why they are forgetting or any awareness that something is being forgotten. These parallels have led some theorists to conclude that dissociative disorders may be a form of **self-hypnosis** in which people hypnotize themselves to forget unpleasant events (Brenner, 2018; Dell, 2010). Dissociative amnesia may develop, for example, in people who, consciously or unconsciously, hypnotize themselves into forgetting horrifying experiences that have recently taken place in their lives. If the self-induced amnesia covers all memories of a person's past and identity, that person may undergo a dissociative fugue.

The self-hypnosis theory might also be used to explain dissociative identity disorder (Brenner, 2018; Wood, 2016). On the basis of several investigations, some theorists believe that this disorder often begins between the ages of 4 and 6, a time when children are generally very suggestible and excellent hypnotic subjects (Lyons, 2015; Kohen & Olness, 2011). These theorists argue that some children who experience abuse or other horrifying events manage to escape their threatening world by self-hypnosis, mentally separating themselves from their bodies and fulfilling their wish to become some other person or persons (Foote, 2018). One patient with multiple personalities observed, "I was in a trance often [during my childhood]. There was a little place where I could sit, close my eyes and imagine, until I felt very relaxed just like hypnosis" (Bliss, 1980, p. 1392).

## #CulturalTies

Some clinical theorists argue that dissociative identity disorder is culture-bound (Kim et al., 2016; Boysen & VanBergen, 2013). While the prevalence of this disorder has grown in North America, it is rare or nonexistent in Great Britain, Sweden, Russia, India, and Southeast Asia. Moreover, within the United States the prevalence is particularly low among Hispanic Americans and Asian Americans.

## How Are Dissociative Amnesia and Dissociative Identity Disorder Treated?

As you have seen, people with dissociative amnesia often recover on their own. Only sometimes do their memory problems linger and require treatment. In contrast, people

with dissociative identity disorder usually require treatment to regain their lost memories and develop an integrated personality. Treatments for dissociative amnesia tend to be more successful than those for dissociative identity disorder, probably because the former pattern is less complex.

**How Do Therapists Help People with Dissociative Amnesia?** The leading treatments for dissociative amnesia are *psychodynamic therapy*, *hypnotic therapy*, and *drug therapy*, although support for these interventions comes largely from case studies rather than controlled investigations (Gentile, Dillon, & Gillig, 2013). Psychodynamic therapists guide patients to search their unconscious in the hope of bringing forgotten experiences back to consciousness (Howell, 2011). The focus of psychodynamic therapy seems particularly well suited to the needs of people with dissociative amnesia. After all, the patients need to recover lost memories, and the general approach of psychodynamic therapists is to try to uncover memories—as well as other psychological processes—that have been repressed. Thus many theorists, including some who do not ordinarily favor psychodynamic approaches, believe that psychodynamic therapy may be the most appropriate treatment for dissociative amnesia.

Another common treatment for dissociative amnesia is **hypnotic therapy**, or **hypnotherapy**. Therapists hypnotize patients and then guide them to recall their forgotten events (Brenner, 2018; Rathbone et al., 2014). Given the possibility that dissociative amnesia may be a form of self-hypnosis, hypnotherapy may be a particularly useful intervention. It has been applied both alone and in combination with other approaches (Colletti et al., 2010).

Sometimes injections of barbiturates such as *sodium amobarbital* (Amytal) or *sodium pentobarbital* (Pentothal) have been used to help patients with dissociative amnesia regain their lost memories. These drugs are often called “truth serums,” but actually their effect is to calm people and free their inhibitions, thus helping them to recall anxiety-producing events. These drugs do not always work, however, and if used at all, they are likely to be combined with other treatment approaches.

### How Do Therapists Help People with Dissociative Identity Disorder?

Unlike victims of dissociative amnesia, people with dissociative identity disorder do not typically recover without treatment. Treatment for this pattern is complex and difficult, much like the disorder itself. Therapists usually try to help the clients (1) recognize fully the nature of their disorder, (2) recover the gaps in their memory, and (3) integrate their subpersonalities into one functional personality (Ross, 2018; Bressert, 2017).

**self-hypnosis** The process of hypnotizing oneself, sometimes for the purpose of forgetting unpleasant events.

**hypnotic therapy** A treatment in which the patient undergoes hypnosis and is then guided to recall forgotten events or perform other therapeutic activities. Also known as *hypnotherapy*.



Erin Painter/Midland Daily News/AP Photo

**Hypnotic recall** Northwood University students react while under hypnosis to the suggestion of being on a beach in Hawaii and needing suntan lotion. Many clinicians use hypnotic procedures to help clients recall past events, but research reveals that such procedures often create false memories.

**fusion** The final merging of two or more subpersonalities in dissociative identity disorder.

**depersonalization-derealization disorder**

A dissociative disorder marked by the presence of persistent and recurrent episodes of depersonalization, derealization, or both.

**RECOGNIZING THE DISORDER** Once a diagnosis of dissociative identity disorder is made, therapists typically try to bond with the primary personality and with each of the subpersonalities (Meganck, 2017; Howell, 2011). As bonds are formed, therapists try to educate patients and help them to recognize fully the nature of their disorder. Some therapists actually introduce the subpersonalities to one another, by hypnosis, for example, or by having patients look at videos of their other personalities (Ross, 2018; Howell, 2011). A number of therapists have also found that group therapy helps to educate patients (Fine & Madden, 2000). In addition, family therapy may be used to help educate spouses and children about the disorder and to gather helpful information about the patient (Kluft, 2001, 2000).

**RECOVERING MEMORIES** To help patients recover the missing pieces of their past, therapists typically use the same approaches applied in dissociative amnesia, including psychodynamic therapy, hypnotherapy, and drug treatment (Brenner, 2018; Brand, Loewenstein, & Spiegel, 2014). These techniques work slowly for patients with dissociative identity disorder, however, as some subpersonalities may keep denying experiences that the others recall. One of the subpersonalities may even assume a “protector” role to prevent the primary personality from suffering the pain of recollecting traumatic experiences (Chefet, 2017).

**INTEGRATING THE SUBPERSONALITIES** The final goal of therapy is to merge the different subpersonalities into a single, integrated identity. Integration is a continuous process that occurs throughout treatment until patients “own” all of their behaviors, emotions, sensations, and knowledge. **Fusion** is the final merging of two or more subpersonalities. Many patients distrust this final treatment goal, and their subpersonalities may see integration as a form of death (Howell, 2011; Kluft, 2001, 1991). Therapists have used a range of approaches to help merge subpersonalities, including psychodynamic, supportive, cognitive-behavioral, and drug therapies (Ross, 2018; Cronin et al., 2014).

Once the subpersonalities are integrated, further therapy is typically needed to maintain the complete personality and to teach social and coping skills that may help prevent later dissociations. In case reports, some therapists note high success rates (Ross, 2018; Brand et al., 2014), but others find that patients continue to resist full integration. A few therapists have in fact questioned the need for full integration.

## Depersonalization-Derealization Disorder

As you read earlier, DSM-5 categorizes **depersonalization-derealization disorder** as a dissociative disorder, even though it is not characterized by the memory difficulties found in the other dissociative disorders. Its central symptoms are persistent and recurrent episodes of *depersonalization* (the sense that one’s own mental functioning or body are unreal or detached) and/or *derealization* (the sense that one’s surroundings are unreal or detached).



A 24-year-old graduate student . . . had begun to doubt his own reality. He felt he was living in a dream in which he saw himself from without, and did not feel connected to his body or his thoughts. When he saw himself through his own eyes, he perceived his body parts as distorted—his hands and feet seemed quite large. As he walked across campus, he often felt the people he saw might be robots. . . .

[By] his second session, he . . . had begun to perceive [his girlfriend] in a distorted manner. He . . . hesitated before returning, because he wondered whether his therapist was really alive.

(Kluft, 1988, p. 580)

Like this graduate student, people experiencing depersonalization feel as though they have become separated from their body and are observing themselves from outside. Occasionally their mind seems to be floating a few feet above them—a sensation

#

### #TheirWords

“I was trying to daydream, but my mind kept wandering.”

Steven Wright, comedian

known as *doubling*. Their body parts feel foreign to them, their hands and feet smaller or bigger than usual. Many sufferers describe their emotional state as “mechanical,” “dreamlike,” or “dizzy.” Throughout the whole experience, however, they are aware that their perceptions are distorted, and in that sense they remain in contact with reality. In some cases this sense of unreality also extends to other sensory experiences and behavior. People may, for example, have distortions in their sense of touch or smell or their judgments of time or space, or they may feel that they have lost control over their speech or actions.

In contrast to depersonalization, derealization is characterized by feeling that the external world is unreal and strange. Objects may seem to change shape or size; other people may seem removed, mechanical, or even dead. The graduate student, for example, saw other people as robots, perceived his girlfriend in a distorted manner, and hesitated to return for a second session of therapy because he wondered whether his therapist was really alive.

Depersonalization and derealization experiences by themselves do not indicate a depersonalization-derealization disorder. Transient depersonalization or derealization reactions are fairly common (Simeon, 2017; Michal, 2011). One-third of all people say that on occasion they have felt as though they were watching themselves in a movie. Similarly, one-third of individuals who confront a life-threatening danger

**If you have ever experienced feelings of depersonalization or derealization, how did you explain them at the time?**

experience feelings of depersonalization or derealization (van Duijl et al., 2010). People sometimes have feelings of depersonalization after practicing meditation or after traveling to new places. Young children may also experience depersonalization from time to time as they are developing their capacity for self-awareness. In most such cases, the affected people are able to compensate for the distortion and continue to function with reasonable effectiveness until the temporary episode eventually ends.

The symptoms of depersonalization-derealization disorder, in contrast, are persistent or recurrent, cause considerable distress, and may impair social relationships and job performance (Simeon, 2017; Gentile et al., 2014). The disorder is experienced by around 2 percent of the population, most often adolescents and young adults, hardly ever in people over 40. It usually comes on suddenly and may be triggered by extreme fatigue, physical pain, intense stress, or recovery from substance abuse. Survivors of traumatic experiences or people caught in life-threatening situations, such as hostages or kidnap victims, seem to be particularly vulnerable to this disorder. The disorder tends to be long-lasting; the symptoms may improve and even disappear for a time, only to return or intensify during times of severe stress. Like the graduate student in our case discussion, many sufferers fear that they are losing their minds and become preoccupied with worry about their symptoms. Few theories have been offered to explain depersonalization-derealization disorder. Several different forms of psychotherapy have been applied in cases of this disorder, but there have been almost no studies that test the efficacy of these approaches (Simeon, 2017).

## 📍... SUMMING UP

**DISSOCIATIVE DISORDERS** People with dissociative disorders experience major changes in memory and identity that are not caused by clear physical factors—changes that often emerge after a traumatic event. Typically, one part of the memory or identity



Daniel Morel/Reuters/Alamy

**Religious dissociations** As part of religious or cultural practices, many people voluntarily enter into trances that are similar to the symptoms found in dissociative identity disorder and depersonalization-derealization disorder. Here, voodoo followers sing and flail about in trances inside a sacred pool at a temple in Souvenance, Haiti.

(continued on the next page)

#

## #TheirWords

"There are lots of people who mistake their imagination for their memory."

Josh Billings

is dissociated, or separated, from the other parts. People with dissociative amnesia are unable to recall important personal information or past events in their lives. Those with dissociative fugue, an extreme form of dissociative amnesia, not only fail to remember personal information but also flee to a different location and may establish a new identity. In another dissociative disorder, dissociative identity disorder, a person develops two or more distinct subpersonalities.

Dissociative amnesia and dissociative identity disorder are not well understood. Among the processes that have been cited to explain them are extreme repression, state-dependent learning, and self-hypnosis.

Dissociative amnesia may end on its own or may require treatment. Dissociative identity disorder typically requires treatment. Approaches commonly used to help people with dissociative amnesia recover their lost memories are psychodynamic therapy, hypnotic therapy, and sodium amobarbital or sodium pentobarbital. Therapists who treat people with dissociative identity disorder use the same approaches and also try to help the clients recognize the nature and scope of their disorder, recover the gaps in their memory, and integrate their subpersonalities into one functional personality.

People with yet another kind of dissociative disorder, depersonalization-derealization disorder, feel as though they are detached from their own mental processes or body and are observing themselves from the outside, or feel as though the people or objects around them are unreal or detached.

## Getting a Handle on Trauma and Stress

The concepts of trauma and stress have been prominent in the field of abnormal psychology since its early days when, for example, Sigmund Freud proposed that most forms of psychopathology begin with traumatic losses or events. But why and how do trauma and stress translate into psychopathology? The answer to that question has, in fact, eluded clinical theorists and researchers—until recent times. Researchers now better understand the relationship between trauma, stress, and psychological dysfunction—viewing it as a complex and unfolding interaction of many variables, including biological factors, childhood experiences, personal styles, and social supports. Similarly, clinicians are now developing more effective treatment programs for people with acute and posttraumatic stress disorders—programs that *combine* biological, cognitive-behavioral, family, and group interventions.

Insights and treatments for the dissociative disorders, the other group of trauma-triggered disorders discussed in this chapter, have not moved as quickly. However, the field's focus on these disorders has surged during the past two decades—partly because of intense clinical interest in the memory abnormalities on display in posttraumatic stress reactions and in physically rooted disorders such as Alzheimer's disease.

Amidst the rapid developments in the realms of trauma and stress lies a cautionary tale. When problems are studied heavily, it is common for the public, as well as some researchers and clinicians, to draw conclusions that may be too bold. For example, many people—perhaps too many—are now receiving diagnoses of posttraumatic stress disorder, partly because the symptoms of PTSD are many and because PTSD has received so much attention. Similarly, some of today's clinicians worry that the resurging interest in dissociative disorders may be creating a false impression of their prevalence. We shall see such potential problems again when we look at other forms of pathology that are currently receiving great focus, such as bipolar disorder among children and attention-deficit/hyperactivity disorder. The line between enlightenment and overenthusiasm is often thin.



### CLINICAL CHOICES

Now that you've read about disorders of trauma and stress, try the interactive case study for this chapter. See if you are able to identify Michelle's symptoms and suggest a diagnosis based on her symptoms. What kind of treatment would be most effective for Michelle? Go to **LaunchPad** to access *Clinical Choices*.

## 📍 Key Terms

stressor, p. 139  
 hypothalamus, p. 140  
 autonomic nervous system (ANS), p. 140  
 endocrine system, p. 140  
 sympathetic nervous system, p. 141  
 parasympathetic nervous system, p. 141  
 hypothalamic-pituitary-adrenal (HPA) pathway, p. 142  
 corticosteroids, p. 142  
 acute stress disorder, p. 142  
 posttraumatic stress disorder (PTSD), p. 142  
 rape, p. 145  
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torture, p. 146  
 stress circuit, p. 149  
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 fusion, p. 168  
 depersonalization-derealization disorder, p. 168

## 📍 Quick Quiz

1. What factors determine how people react to stressors in life? *pp. 139–142*
2. What factors help influence whether persons will develop acute and post-traumatic stress disorders after experiencing a traumatic event? How does the developmental psychopathology perspective integrate these factors to explain the onset of posttraumatic stress disorder? *pp. 148–152*
3. What treatment approaches have been used with people suffering from acute or posttraumatic stress disorder? *pp. 153–156*
4. List and describe the different dissociative disorders. *pp. 157–169*
5. What are the various patterns of dissociative amnesia? What is dissociative fugue? *pp. 157–160*
6. What are the different kinds of relationships that the subpersonalities may have in dissociative identity disorder? *pp. 161–162*
7. Describe the psychodynamic, state-dependent learning, and self-hypnosis explanations of dissociative amnesia and dissociative identity disorder. How well is each explanation supported by research? *pp. 164–166*
8. What approaches have been used to treat dissociative amnesia? *p. 167*
9. What are the key features of treatment for dissociative identity disorder? Is treatment successful? *pp. 167–168*
10. Define and describe depersonalization-derealization disorder. How well is this problem understood? *pp. 168–169*

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