

Major Causes of Anxiety Disorders

If you are dealing with one of the anxiety disorders, you are likely to be concerned with the causes of your problem. You probably ask yourself, "Why do I have panic attacks? Is it something hereditary, or is it the way I was brought up? What causes phobias to develop? Why am I afraid of something I know isn't dangerous? What causes obsessions and compulsions?"

The symptoms of anxiety disorders often seem irrational and inexplicable: it is only natural to raise the question "Why?" But before considering in detail the various causes of anxiety disorders, there are two general points you should bear in mind. First, although learning about the causes of anxiety disorders can give you insight into how these problems develop, such knowledge is not necessary to overcome your particular difficulty. The various strategies for overcoming anxiety disorders presented in this workbook—such as relaxation, exercise, desensitization, changing self-talk and mistaken beliefs, or dealing with feelings—do not depend on a knowledge of underlying causes to be effective. However interesting the information in this chapter may be, it is not necessarily what "cures." Second, be wary of the notion that there is one primary cause, or type of cause, for any of the anxiety disorders. Whether you are dealing with panic attacks, social phobia, generalized anxiety, or obsessive-compulsive disorder, recognize that there is no one cause which, if removed, would eliminate the problem. Anxiety problems are brought about by a variety of causes operating on numerous different levels: heredity, biology, family background and upbringing, conditioning, recent stressors, your self-talk and personal belief system, your ability to express feelings, and so on. The range of chapters in this book indicates the many different levels on which you can understand the causes of and the means of recovering from anxiety disorders.

Some experts in the field of anxiety disorders propose "single-cause" theories. Such theories tend to greatly oversimplify anxiety disorders and are susceptible to one of two mistaken lines of reasoning: the *biological fallacy* and the *psychological fallacy*. The biological fallacy assumes that a particular type of anxiety disorder is caused *solely* by some biological or physiological imbalance in the brain or body. For example, there has recently been a tendency to reduce the causation of panic disorder, as well as obsessive-compulsive disorder, to a strictly biological level. Panic disorder is viewed as arising from a dysfunction in parts of the brain, such as the *amygdala* and the *locus coeruleus*. Obsessive-compulsive disorder is thought to be caused by a deficiency in a particular neurotransmitter substance in the brain called *serotonin*—or a dysregulation in the serotonin system of neurons in the brain. (A *neurotransmitter* is a chemical substance that allows nerve impulses to be transmitted from one nerve cell to another.)

It is helpful to know that there may be physiological dysfunctions involved in panic disorder and obsessive-compulsive disorder. This certainly has implications for treatment of these problems. But this does not mean that panic attacks and obsessive-compulsive disorder are physiological disturbances only. The question remains: *What caused the physiological disturbance itself?* Perhaps chronic stress due to psychological conflict causes the amygdala and locus coeruleus to malfunction in panic disorder. Or perhaps chronically suppressed anger sets up a disturbance in brain serotonin levels that is a contributing cause of obsessive-compulsive disorder. Psychological conflicts and repressed anger may, in turn, have been caused by a person's upbringing. Because any particular physiological disturbance may have originally been set up by stress or other psychological factors, it is a fallacy to assume that anxiety disorders are solely (or even primarily) caused by physiological imbalances.

The psychological fallacy makes the same kind of mistake in the opposite direction. It assumes that, say, social phobia or generalized anxiety disorder is caused by having grown up with parents who neglected, abandoned, or abused you, resulting in a deep-seated sense of insecurity or shame that causes your current phobic avoidance and anxiety as an adult. While it may be true that your family background *contributed* in an important way to your current problems, is it reasonable to assume that this is the *only* cause? Again, not really. To do so overlooks the possible contributions of hereditary and biological factors. After all, not all children who grow up in dysfunctional families develop anxiety disorders. It is more plausible to assume that your problem is a result of *both* 1) a hereditary predisposition toward anxiety (and possibly phobia) *and* 2) early childhood conditions that fostered a sense of shame and/or insecurity.

In sum, the idea that your particular difficulties are *just* a physiological disturbance or *just* a psychological disturbance neglects the fact that nature and nurture are interactive. Biological disturbances may be "set up" by stress or psychological factors; psychological problems, in turn, may be influenced by inborn biological disturbances. There is simply no way to say which came first or which is the so-called ultimate cause. By the same token, a comprehensive approach to recovery from panic, phobias, or anxiety cannot restrict itself to treating physiological or psychological causes in isolation. A variety of strategies dealing with several different levels, including biological, behavioral, emotional, mental, interpersonal, and even spiritual factors, is necessary for a full and lasting recovery. This multidimensional approach to recovery is discussed in the next chapter and assumed throughout this book.

The causes of anxiety disorders vary not only according to the level at which they occur but also according to the time period over which they operate. Some are *predisposing causes*, which set you up from birth or childhood to develop panic or anxiety later on. Some are *recent* or *short-term* causes—circumstances that *trigger* the onset of, say, panic attacks or agoraphobia. Others are *maintaining* causes—factors in your current lifestyle, attitudes, and behavior that serve to keep anxiety disorders going once they have developed. The remainder of this chapter examines each of these types of causes in more detail. A section on biological causes is included to acquaint you with some of the better-known hypotheses about the role of the brain in causing panic attacks and anxiety.

An outline of the causes of anxiety disorders follows.

Causes of Anxiety Disorders

Long-Term, Predisposing Causes

1. Heredity
2. Childhood Circumstances
 - Your Parents Communicate an Overly Cautious View of the World
 - Your Parents Are Overly Critical and Set Excessively High Standards
 - Emotional Insecurity and Dependence
 - Your Parents Suppress Your Expression of Feelings and Self-Assertiveness
3. Cumulative Stress over Time

Biological Causes

1. The physiology of Panic
2. Panic Attacks
3. Generalized Anxiety
4. Obsessive-Compulsive Disorder
5. Medical Conditions That Can Cause Panic Attacks or Anxiety

Short-Term, Triggering Causes

1. Stressors That Precipitate Panic Attacks
 - Significant Personal Loss
 - Significant Life Change
 - Stimulants and Recreational Drugs
2. Conditioning and the Origin of Phobias
3. Trauma, Simple Phobias, and Post-Traumatic Stress Disorder

Maintaining Causes

1. Avoidance of Phobic Situations

2. Anxious Self-Talk
3. Mistaken Beliefs
4. Withheld Feelings
5. Lack of Assertiveness
6. Lack of Self-Nurturing Skills
7. Muscle Tension
8. Stimulants and Other Dietary Factors
9. High-Stress Lifestyle
10. Lack of Meaning or Sense of Purpose

Long-Term, Predisposing Causes

Heredity

Are anxiety disorders inherited? The limited evidence that exists to date would argue that they are—at least in part. For example, it is estimated that 15 to 25 percent of children growing up with at least one agoraphobic parent become agoraphobic themselves, while the rate of agoraphobia in the general population is only 5 percent. This fact in itself doesn't prove that agoraphobia is inherited, however, because it could be argued that children *learn* from their parents to be agoraphobic.

More compelling evidence comes from studies of identical twins, who, of course, have exactly the same genetic makeup. If one identical twin has an anxiety disorder, the probability of the other identical twin having an anxiety disorder ranges from 31 to 88 percent, depending on the study you're looking at. By comparison, when fraternal twins (whose genes are no more similar than those of siblings born at different times) are studied, the probability is much lower. If one fraternal twin has an anxiety disorder, the odds of the other having an anxiety disorder range from about 0 to 38 percent—again, depending on the study. Having the same genetic makeup as someone else with phobias or anxiety makes it *more than twice as likely* that you will have a similar problem. Interestingly, the percentages for fraternal twins are generally higher than the incidence of anxiety disorders in the population (about 8 to 10 percent). This would argue that growing up in the same family—having the same parenting—contributes at least something to the development of anxiety disorders. Both nature and nurture seem to have an impact.

What is it that is inherited? Based on what is known at this time, it seems that you don't inherit agoraphobia, social phobia, or even panic attacks specifically from your parents. What is inherited seems to be a *general personality type* that predisposes you to be overly anxious.

This is a volatile, excitable, reactive personality that is more easily set off by any slightly threatening stimulus than is the personality of individuals without anxiety disorders. Once you are born with this highly reactive personality, you might develop one or another anxiety disorder, depending on your particular environment and upbringing. For example, whether you develop agoraphobia or social phobia might depend on how much you learned to feel ashamed in situations where you were expected to perform. Whether you develop panic attacks or not might depend on the nature and degree of stress you're exposed to during adolescence and early adulthood. In short, while heredity might cause you to be born with a more reactive, excitable nervous system, childhood experiences, conditioning, and stress all serve to shape the particular type of anxiety disorder you subsequently develop.

Recent research in the field of behavior genetics has begun to hone in on specific genes associated with anxiety disorders. For example, the seventeenth chromosome (we all have 23) contains a gene known as SERT (serotonin transfer gene), which functions in the manufacture of the brain neurotransmitter serotonin. People with the "short" form of the gene tend to be more predisposed to develop anxiety disorders (as well as mood disorders such as depression), while people with the "long" form of the gene have a degree of protection, in spite of childhood and adult stress, from developing problems with anxiety.

Childhood Circumstances

What childhood experiences or family environments might predispose you to develop a particular anxiety disorder? Unfortunately, very little research on this topic has been done. Researchers have found that panic attacks and agoraphobia in adulthood are often preceded by separation anxiety disorder in childhood. This is a condition in which children experience anxiety, panic, or somatic symptoms when separated from their parents, as when going to school or even before going to sleep. Later on as adults, these same people experience anxiety when separated from a "safe" person or place. The conditions that might lead to separation anxiety disorder in the first place are matters for speculation.

What follows is a list of childhood circumstances that might predispose you to develop anxiety disorders. The list is based on my own experience with clients over several years. These factors are especially relevant if you are dealing with agoraphobia or social phobia, but may be applicable to other anxiety disorders as well.

- *Your Parents Communicate an Overly Cautious View of the World*

Parents of people with phobias either tend to have phobias themselves or are more fearful and anxious than average. Often they are overly concerned about potential dangers to their child. They are likely to say things like "Don't go out in the rain—you'll catch a cold," "Don't watch TV so much. You'll ruin your eyes," or "Be very careful," again and again. The more they communicate a fearful, overcautious attitude toward their child, the more that child comes to view the world as a "dangerous" place. When you learn that the outside world is threatening, you automatically restrict your exploration and risk taking. You grow up with a tendency to worry excessively and be overly concerned with safety.

- ***Your Parents Are Overly Critical and Set Excessively High Standards***

Children growing up with critical, perfectionist parents are never quite sure of their own acceptability. There is always some doubt about whether you are “good enough,” or sufficiently worthy. As a result, you are constantly striving to please your parents and maintain their approval. As an adult, you may be overly eager to please, “look good,” and “be nice” at the expense of your true feelings and capacity for assertiveness. Having grown up always feeling insecure, you may become very dependent on a safe person or safe place, and may restrict yourself from entering public or social situations where there is a risk of “losing face.” You often come to internalize your parents’ values, becoming exceptionally perfectionist and self-critical (as well as critical of others).

- ***Emotional Insecurity and Dependence***

Up to the age of four or five, children are utterly dependent on their parents, especially their mother. Any conditions that create insecurity during this time can lead to excessive dependency and clinging later on. Excessive criticism and perfectionist standards on the part of parents seem to be a common source of insecurity for people who later develop anxiety disorders. *However, experiences of neglect, rejection, abandonment through divorce or death, and physical or sexual abuse can also produce the kind of basic insecurity (as well as emotional dependency) that forms a background for anxiety disorders.*

Growing up in a family in which one or both parents are alcoholic is also a common contributing factor in 20 to 25 percent of the clients I’ve seen. As described in a number of popular books on the subject, adult children of alcoholics grow up with characteristics such as 1) obsession with control, 2) avoidance of feelings, 3) difficulty trusting others, 4) overresponsibility, 5) all-or-nothing thinking, and 6) excessive eagerness to please, at the expense of their own needs. Although not all adult children of alcoholics develop anxiety disorders, the above characteristics are commonly seen in many people who have problems with panic and/or phobias.

A common denominator in the background of adult children of alcoholics, adult survivors of other forms of abuse, and most people who develop anxiety disorders is a deep-seated sense of insecurity. Perhaps the degree of insecurity and the way children respond to it will determine whether they later develop a specific type of anxiety disorder—as opposed to, say, an addictive personality or some other behavior disturbance. When children respond to insecurity with *excessive dependency*, the stage is set for overreliance on a safe person or safe place later in life. This is a common background for agoraphobia.

- ***Your Parents Suppress Your Expression of Feelings and Self-Assertiveness***

Parents not only may foster dependency but may suppress your innate capacity to express your feelings and assert yourself. For example, as a child you may have been continually reprimanded or punished for speaking out, acting impulsively, or getting angry. Subsequently you grew up exerting a restrictive, even punitive, attitude toward your own expression of impulses and feelings. If these impulses and feelings are suppressed over a long period of time, their sudden recurrence under stress may produce anxiety or even panic. Frequently,

people who learned to bottle up their feelings and self-expression as children are tense, more prone to be anxious, and unable to express themselves as adults. Of course, this form of suppression in childhood can also lead to depression and passivity later on. In both cases, learning to express your feelings and becoming more assertive can have a very beneficial effect.

Reading about the four factors just discussed may have stimulated you to think about what happened in your own childhood. Use the *Family Background Questionnaire* on the next page to further explore what circumstances in your family may have contributed to your own problems with anxiety.

Family Background Questionnaire

Use the following questionnaire to reflect on your childhood. Can you identify what conditions might have contributed to your current problem with anxiety?

1. Did either of your parents suffer from panic attacks or phobias?
2. Did you have a brother, sister, grandparent, or other relative who had panic attacks or phobias?
3. Did either of your parents seem excessively prone to worry?
4. Did either of your parents seem overly concerned about potential dangers that could befall you or other family members?
5. Did your parents encourage exploration of the outside world, or did they cultivate an attitude of caution, suspicion, or distrust?
6. Do you feel that your parents were overly critical or demanding of you? If so, how did you feel in response to this criticism?

<input type="checkbox"/> Put down or diminished	<input type="checkbox"/> Ashamed or guilty
<input type="checkbox"/> Hurt or rejected	<input type="checkbox"/> Angry or rebellious
7. As a child, did you feel free to express your feelings and impulses? How were feelings dealt with in your family?

<input type="checkbox"/> Openly expressed	<input type="checkbox"/> Punished
<input type="checkbox"/> Denied	
8. Was it okay for you to cry? How did your parents respond when you cried?
9. Was it okay to express anger? How did your parents respond when you got angry?
10. What was your role in the family? How were you perceived relative to other children in the family?
11. Do you feel that you grew up feeling insecure? Which of the following might have contributed to your insecurity:

<input type="checkbox"/> Excessive criticism by your parents
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- Excessive punishment
 - Your parents made you feel ashamed
 - Your parents made you feel guilty
 - Your parents neglected you
 - One or both parents abandoned you through death or divorce
 - Physical abuse
 - Sexual abuse
 - Parental alcoholism
12. If you grew up insecure, how did you respond to your feelings of insecurity?
- By becoming very dependent on your family (Did you have difficulty leaving home?)
 - By becoming very independent of your family (Did you leave home early?)
 - By becoming angry or rebellious

Cumulative Stress over Time

A third contributing factor in the development of anxiety disorders is the influence of *cumulative* stress over time. When stress persists without letup over a period of time, such as several months or years, it tends to accumulate. This sort of stress is more enduring than the normal, temporary stresses of moving, the Christmas season, or a short-term financial setback. Cumulative stress can arise from unresolved psychological conflicts lasting over many years. Or it can be due to difficulties in one area of your life—such as problems with your marriage or physical health—that persist over a long period of time. Finally, it may be due to the accretion of a large number of *life events*. Life events include changes in the course of your life that require an adjustment and reordering of your priorities, such as going off to college, changing jobs, getting married or leaving an intimate relationship, moving to a new location, having a baby, or having your children leave home. While one or two life events every year is a common and manageable experience, a series of many of them stretching over one or two years' time can lead to a state of chronic stress and exhaustion.

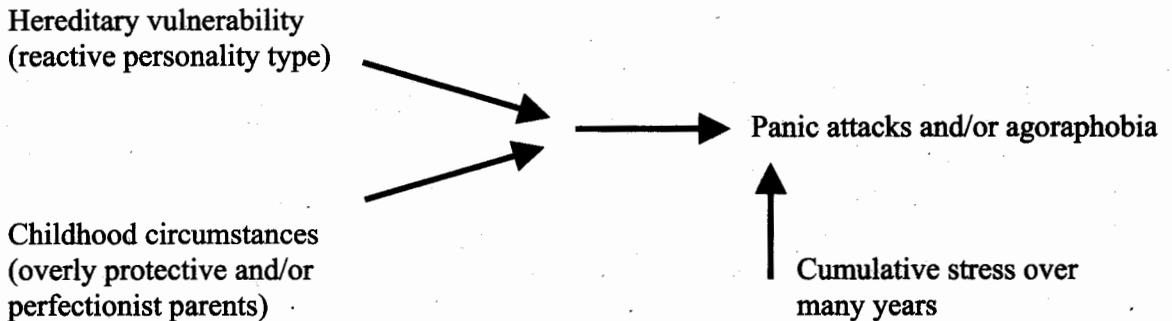
The concept of life events arose from the work of Dr. Richard Holmes and Dr. Thomas Rahe, who developed an instrument called the *Life Events Survey* (also known as *The Social Readjustment Scale*) to assess the number and severity of life events that occur in a two-year period. They used the survey specifically to predict a person's risk of developing physical disease. However, the survey can also be used as a general measure of cumulative stress. You can get an estimate of your own level of cumulative stress by completing the *Life Events Survey* in this chapter.

Life Events Survey

Life Event	Average Stress Score
Death of spouse	100
Divorce	73
Marital separation	65
Jail term	63
Death of close family member	63
Personal injury or illness	53
Marriage	50
Being fired from work	47
Marital problems	45
Retirement	45
Change in health of family member	44
Pregnancy	40
Sexual difficulties	39
Gain of new family member	39
Business readjustment	39
Change in finances	38
Death of close friend	37
Change to different line of work	36
Change in number of arguments with spouse	35
Mortgage or loan for major purchase (such as a home)	31
Foreclosure of mortgage or loan	30
Change in responsibilities at work	29
Son or daughter leaving home	29
Trouble with in-laws	29
Outstanding personal achievement	28
Spouse begins or stops work	26
Beginning or finishing school	26
Change in living conditions	25
Revision of personal habits	24
Trouble with boss	23
Change in work hours or conditions	20
Change in residence	20
Change in school	20
Change in recreation	19
Change in church activities	19
Change in social activities	18
Mortgage or loan for lesser purchase (such as a car or TV)	17
Change in sleeping habits	16
Change in number of family get-together	15
Change in eating habits	15
Vacation	13
Christmas	12
Minor violations of the law	11

Determine which life events have occurred in your life over the past two years and add up your total stress score. For example, if you got married, changed to a different line of work, changed residence, and took two vacations, your total stress score would be $50 + 36 + 20 + 13 + 13 = 132$. If your total stress score is under 150, you are less likely to be suffering the effects of cumulative stress. If it is between 150 and 300, you may be suffering from chronic stress, depending on how you perceived and coped with the particular life events that occurred. If your score is over 300, it is likely you are experiencing some detrimental effects of cumulative stress. Please note that the stress scores on the above survey are averaged over many people. The degree to which any particular event is stressful to you will depend on how you perceive it.

For many years, it has been known that stress can increase your risk of developing psychosomatic disorders, such as high blood pressure, headaches, or ulcers. Only recently has it been recognized that *psychological disorders* may also be an outcome of cumulative stress. Over time, stress can affect the neuroendocrine regulatory systems of the brain, which play an important role in mood disorders, such as depression and anxiety disorders. Stress is nonspecific in its action; it simply has the greatest impact on the weakest point in your system. If this happens to be your cardiovascular system, you may develop high blood pressure or migraine headaches. If it is the neuroendocrine and neurotransmitter systems of your brain, you will be more subject to developing a behavior disorder such as mood swings, generalized anxiety, or panic disorder. In short, cumulative stress might produce headaches, fatigue, or panic attacks, depending on your particular point of greatest vulnerability. That point of vulnerability may, in turn, be influenced by heredity. It is likely then that genes, cumulative stress, and childhood circumstances all contribute to the genesis of a particular anxiety disorder, as suggested in this diagram:



When you examine long-term causes, it turns out that no *one* of them may be sufficient, by itself, to produce a particular anxiety disorder. You may live twenty years with a hereditary vulnerability to panic attacks and yet never have one. Then life events in your twenties might produce enough cumulative stress to activate what had been only a potential—and you have your first panic attack. If you grew up feeling insecure and were taught that the outside world is dangerous, you may go on to develop agoraphobia. If you grew up feeling ashamed when you performed, perhaps your particular type of phobic avoidance will be less territorial and more social (in other words, a social phobia).

Biological Causes

Biological causes refer to physiological imbalances in the body or brain that are associated with anxiety disorders. It is important to recognize that such imbalances are not necessarily the *ultimate causes* of anxiety disorders and may *themselves* be caused by

- A specific hereditary vulnerability
- Cumulative stress over time

- A hereditary vulnerability that is *brought out* by cumulative stress

Once again, it is likely that genes, life history, and stress all work together to bring about the disturbances underlying anxiety disorders.

Recent research has pointed to different types of biological explanations for different types of anxiety disorders. The type of malfunction associated with spontaneous panic attacks is probably different from the type associated with generalized anxiety disorder. And both of these, in turn, are different from physiological imbalances associated with obsessive-compulsive disorder. Each of these is discussed separately below.

I can't overemphasize that our state of knowledge about biological causes underlying anxiety disorders is still very tentative and incomplete. The brain mechanisms considered below, which are discussed after an initial section on the physiology of panic, should be viewed as hypothetical—not proven facts.

Finally, it is important to realize that even though there may be a physiological imbalance in the brain underlying your particular anxiety disorder, there is no reason to assume you can't correct it. *If you are willing to make lifestyle changes to reduce stress and upgrade your level of physical wellness, any physiological imbalances associated with panic, phobias, anxiety, or obsessions will tend to diminish and perhaps disappear altogether.* These lifestyle changes include making time for daily relaxation, an exercise program, good nutrition, social support, and self-nurturing activities (see the relevant chapters in this workbook). An alternative way to correct a biological imbalance is to rely on prescription medications that specifically alter the functioning of your brain. Medications work well in overcoming the physiological causes of anxiety disorders—though, in my opinion, they should be viewed as a last line of defense. It is often possible to correct physical imbalances *simply* by upgrading your level of health and wellness.

Later in this section you will read about mechanisms in the brain that are thought, based on recent research, to underlie panic attacks, generalized anxiety, and obsessive-compulsive disorder. First, however, is a description of the basic physiology of a panic attack—something that is much better understood.

The Physiology of Panic

What happens to your body during a panic attack? Panic is an extreme version of an alarm reaction your body *naturally* goes through in response to any type of threat. Years ago, Walter Cannon described this as the *fight-or-flight response*. It is a built-in mechanism that enables all higher animals to mobilize a great deal of energy quickly in order to cope with predators or other immediate threats to their survival. This alarm reaction serves us well in situations that are realistically dangerous. Unfortunately, most of us also experience the fight-or-flight reaction in response to any situation that is viewed as *psychologically* dangerous, threatening, or overwhelming. An argument with your spouse or having to get up and go to work after a bad night's sleep can cause a pronounced stress response because *you perceive* it as threatening or overwhelming, even though it poses no direct risk to your survival.

In the case of a panic attack, there may be no perceived threat at all—the reaction may come on “out of the blue,” without any noticeable provocation. Somehow the natural fight-

or-flight response has gotten out of control. That it occurs out of context and without apparent reason suggests that the brain mechanisms that control the response aren't functioning properly. The current hypothesis about the nature of this dysfunction is described in the next section. The physiology of panic itself, however, is better known.

Your nervous system has two separate actions: *voluntary* and *involuntary*. There is a voluntary nervous system that moves your muscles and obeys your direct command. Your involuntary nervous system, on the other hand, regulates automatic functions ordinarily outside voluntary control, such as your heartbeat, respiration, and digestion. This involuntary system is itself divided into two branches: the *sympathetic* and *parasympathetic* nervous systems. The sympathetic nervous system is responsible for mobilizing a number of reactions throughout your body whenever you're emotional or excited. The parasympathetic nervous system has an opposite function. It maintains normal, smooth functioning of your various internal organs during times when you are calm and at rest.

In a panic attack, your sympathetic nervous system sets off several different bodily reactions rapidly and intensely. First, it causes your adrenal glands to release large amounts of adrenaline. What you feel is a sudden "jolt," often accompanied by a feeling of dread or terror. Within seconds, the excess adrenaline can cause 1) your heart to race, 2) your respiration to become rapid and shallow, 3) profuse sweating, 4) trembling and shaking, and 5) cold hands and feet. Your sympathetic nervous system also produces muscle contractions (the most extreme case of this is when animals "freeze" in fear), possibly leading you to experience strong contractions in your chest or throat along with a fear of not being able to breathe. Other reactions caused by the sympathetic nervous system include excess release of stomach acid, inhibition of digestion, release of red blood cells by the spleen, release of stored-up sugar by the liver, an increase in metabolic rate, and dilation of the pupils.

All of these reactions occur to a lesser degree when you are emotional or excited. The problem in panic is that they peak to such an extreme level that you feel overwhelmed, feel terrified, and have a strong urge to run. It is important to realize that the adrenaline released during panic tends to be reabsorbed by the liver and kidneys within a few minutes. If you can "ride out" the bodily symptoms of panic without fighting them or telling yourself how horrible they are, they will tend to subside within a short time. Chapter 6 will describe strategies for learning to observe rather than react to the bodily symptoms of panic. By breathing properly and making supportive, calming statements to yourself, you can learn to manage panic instead of scaring yourself into a much more intense reaction.

While the physiology of panic is well understood, the mechanisms in the brain that initiate these physiological reactions are less well understood. The following section presents a recent hypothesis about a particular imbalance in the brain thought to be responsible for panic attacks.

Panic Attacks

Your brain is by far the most complex system in your body, consisting of over one hundred billion brain cells or neurons. At any given moment in time, millions of nerve impulses are being transmitted along multiple pathways which interconnect various regions of your brain.

Every time a single nerve impulse moves from one nerve cell to the next, it must cross a space. Individual nerve cells are not connected but are separated by tiny spaces called *synapses*. It has been known for some time that the process by which a nerve impulse moves across a synapse is chemical in nature. Microscopic amounts of chemicals secreted into the synapse allow transmission of a nerve impulse from one neuron to the next. These chemicals are called *neurotransmitters*; there are over twenty different types of them in the brain.

It appears that there are different systems in the brain that are especially sensitive to particular neurotransmitters. Each system consists of a vast network of nerve cells (*neurons*) that are sensitive to a particular neurotransmitter. One system, called the *noradrenergic system*, seems to be especially sensitive to a neurotransmitter substance called *norepinephrine*. Another system, the *serotonergic system*, contains neurons especially sensitive to a neurotransmitter substance called *serotonin*. Both systems have a large number of receptor sites (sites on nerve cells that respond to neurotransmitters) in some of the major structures of the brain that are activated during a panic attack. Specifically, the *amygdala*—a structure in your brain—is thought to play a key role in instigating panic. Research has found that the amygdala does not act alone but works in concert with a variety of other structures that all contribute to stimulating panic. These structures include “higher” brain centers such as the prefrontal cortex and insula, which serve to modulate sensory information, interpreting it as “dangerous” or “safe.” Such information is stored in memory in a part of the brain called the *hippocampus*. The higher brain centers and the hippocampus interface directly with the amygdala. The amygdala, in turn, instigates panic by stimulating a variety of other brain structures, including 1) the *locus coeruleus*, which contributes to general behavioral and physiological arousal, 2) the *hypothalamus*, which regulates the release of adrenaline (via the pituitary gland, stimulating your adrenal glands) and also stimulates your sympathetic nervous system (see the previous section), 3) the *periaqueductal gray region*, which stimulates defensive and avoidance behavior, and, finally, 4) the *parabrachial nucleus*, which stimulates increased respiration.

Within your brain, panic attacks are more likely to occur when this entire system is *overly sensitized*, perhaps from having been previously activated too frequently, too intensely, or both. Thus the neurological basis for panic is not exactly a “chemical imbalance,” as your doctor may have told you, but an overly sensitized “fear system,” including all of the above brain structures. Researchers believe that deficiencies of the neurotransmitters serotonin and norepinephrine may contribute to *insufficient inhibition* of the amygdala, locus coeruleus, and associated structures that make up this fear system. That is why SSRI (selective serotonin reuptake inhibitors) or tricyclic antidepressant medications, which increase the amounts of serotonin and norepinephrine available throughout your brain, can diminish panic attacks. Over a period of two to four weeks, these medications seem to be able to *stabilize* and *desensitize* an overly sensitized amygdala, locus coeruleus, and associated fear system.

What *causes* the original oversensitization of the fear system remains unclear at this time. One hypothesis is that changes in this system can take place as a result of acute stress or as the long-term result of multiple stressors over time. Although this hypothesis remains unproven, it seems likely that *cumulative stress contributes in an important way to the onset of panic attacks* (as discussed earlier in this chapter). If this hypothesis about stress altering the amygdala and the fear system turns out to be true, an important implication follows: *the most*

effective long-term treatment for brain dysfunctions associated with panic disorder is a consistent and comprehensive program for reducing stress in your life. Medications can certainly help restabilize structures in your brain that contribute to panic and anxiety in the short run. Yet without changes in your lifestyle (such as regular relaxation and exercise, good time management, proper nutrition, personal support, and constructive attitudes)—changes that allow you to live more simply and peacefully—panic and anxiety will tend to return after the medications are withdrawn.

Generalized Anxiety

Benzodiazepine tranquilizers, such as Xanax, Ativan, or Klonopin, can very effectively reduce generalized anxiety (as well as anticipatory anxiety in panic and phobic disorders). It has been discovered that a specific system in the brain, the GABA system, is uniquely sensitive to benzodiazepine drugs. This system consists of neurons that are sensitive to the neurotransmitter gamma-aminobutyric acid (GABA for short). GABA functions naturally in the brain as an inhibitory neurotransmitter—it tends to inhibit, or “tone down,” brain activity, particularly in the limbic system, which is the brain’s center for emotions. Thus GABA is associated with the brain’s own natural calming response. When you give people GABA directly, or give them drugs that increase the activity of the GABA system, their anxiety decreases.

It appears that benzodiazepine tranquilizers like Xanax stimulate the GABA system to be more active, just as the neurotransmitter GABA itself does. That is why these tranquilizers tone down anxiety, as well as any other form of emotional arousal.

What is going on with the GABA system in persons who are chronically anxious? Several hypotheses have been proposed. There may be a deficiency of GABA itself, resulting in less inhibitory activity of the GABA system. Or there may be a deficiency of some naturally occurring benzodiazepine substance in the brain (yet to be identified) which leads to reduced activity of the GABA system. Perhaps there are too many GABA receptors relative to the amount of GABA available. The situation is quite complicated because brain activation (hence anxiety) is controlled not only by the GABA system but by the serotonin and norepinephrine systems (and even other neurotransmitter systems) as well. Moreover, brain research has found that these systems all interact and modulate each other. Suffice it to say that the GABA system plays a major role in the neurobiological basis of generalized anxiety. Deficient activation of the GABA system results in insufficient inhibition of limbic system structures, such as the amygdala and locus coeruleus, which contributes to all forms of anxiety.

Obsessive-Compulsive Disorder

The same reasoning that applied to generalized anxiety disorder also applies to obsessive-compulsive disorder (OCD). The effectiveness of specific drugs, such as clomipramine (Anafranil) and SSRI antidepressants (selective serotonin reuptake inhibitors)—fluoxetine (Prozac), sertraline (Zoloft), paroxetine (Paxil), and fluvoxamine (Luvox)—in reducing obsessive-compulsive symptoms tells us something about the possible biological mechanisms for obsessive-compulsive disorder. These drugs are known to increase the amount of a specific

neurotransmitter substance, serotonin, in the brain. They do so more effectively than most other antidepressant medications. So we know that serotonin (and the serotonin system of the brain) plays an important role in the neurobiological basis of OCD.

Recent brain research has identified an OCD "neurocircuit" in the brain involving three brain structures: the *orbitofrontal cortex*, *thalamus*, and *caudate nucleus*. These structures define a circuit, or "loop," that brain imaging studies have found to be overly active in persons with OCD. When you worry, the orbitofrontal cortex sends a worry signal to the thalamus, which in turn sends the signal back (via the caudate) to the orbitofrontal cortex for interpretation. In normal people, this cycle happens only once or a few times. In people with OCD, however, because of a problem in the caudate nucleus, the signal goes back and forth and "loops" many, many times. It appears that SSRIs work by toning down excess activity of this OCD circuit. Many serotonin neurons in the brain are inhibitory in function, and there appears to be an abundance of these inhibitory neurons in the structures that make up the OCD loop. Thus increasing serotonin in the brain increases the activity of the inhibitory serotonin neurons, which in turn "brakes" excess activity in the OCD circuit.

Another brain structure involved in OCD is the *anterior cingulate gyrus*. One function of the cingulate is to enable you to flexibly shift attention from one topic to another. When the cingulate isn't functioning properly, you can more easily get "stuck" or get locked into a particular theme, as is the case when you are obsessing on something. It appears that SSRI medications help the cingulate to function better. Brain imaging research has also found that cognitive behavioral therapy, specifically exposure and response prevention, can normalize brain function in the structures associated with OCD. It's quite exciting to see that a strictly psychological intervention can result in lasting changes in brain function similar to what drugs can accomplish.

Medical Conditions That Can Cause Panic Attacks or Anxiety

The physiology of panic described at the beginning of this section is well established. But the various proposed explanations of the biological mechanisms involving different neurotransmitter systems of the brain are, at present, still hypothetical. It is important to keep in mind that these biological hypotheses apply to a majority *but not all cases* of panic attacks and generalized anxiety. Sometimes panic reactions or anxiety can arise from medical conditions that are quite separate from recognized anxiety disorders. Hyperthyroidism and hypoglycemia, for example, can cause panic attacks that are by all appearances identical to those seen in panic disorder. A calcium or magnesium deficiency or an allergy to certain food additives can also produce panic or anxiety. When these conditions are corrected, the anxiety disappears.

Any of the following conditions might be a cause of panic attacks or generalized anxiety. The first six are the ones most frequently seen.

- *Hyperventilation Syndrome*

Rapid, shallow breathing at the level of your chest can sometimes lead to excessive lowering of carbon dioxide in your bloodstream. This results in symptoms very similar to those of a panic attack, including light-headedness, dizziness, feelings of unreality, shortness of

breath, trembling, and/or tingling in your hands, feet, or lips. These symptoms, in turn, may be perceived as dangerous and may stimulate a bona fide panic attack. (See the section on abdominal breathing in chapter 4 for further discussion of hyperventilation.)

- ***Hypoglycemia***

For a large number of people, blood sugar levels can fall too low as a result of improper diet or simply stress. When this happens, such people experience a variety of symptoms similar to a panic reaction, including anxiety, shakiness, dizziness, weakness, and disorientation. Hypoglycemia can cause panic attacks, or, more often, can aggravate panic reactions that are caused by other factors. (See chapter 15 for a detailed discussion.)

- ***Hyperthyroidism***

Excessive secretion of thyroid hormone can lead to heart palpitations (rapid heartbeat), sweating, and generalized anxiety. Other symptoms of hyperthyroidism include weight loss, elevated body temperature, insomnia, and bulging eyes. If you have several of the above symptoms, you might want to have your doctor do a thyroid panel to see if this condition is contributing to your anxiety or panic symptoms. (See chapter 16 for more information about how thyroid conditions can affect anxiety.)

- ***Mitral Valve Prolapse***

Mitral valve prolapse is a harmless condition that causes heart palpitations. It is caused by a slight defect in the valve separating the upper and lower chambers on the left side of your heart. Blood moves through the mitral valve as it passes from the upper to the lower chamber. With mitral valve prolapse, the valve doesn't close completely and some of the blood can flow back from the lower to upper chamber, causing the heart to beat out of rhythm. The resulting rhythm disturbance can be disconcerting enough to cause some people to panic—but it is *not* dangerous. Mitral valve prolapse is *not* a cause of heart attacks.

For reasons that are unclear, mitral valve prolapse occurs more frequently in people with panic disorder than in the population at large. In severe cases, it can be treated through the use of beta-blocking drugs such as Inderal.

- ***Premenstrual Syndrome (PMS)***

If you are a woman, it is important to observe whether your panic reactions (or generalized anxiety) worsen around the time just before your period. If so, treating your PMS may be enough to alleviate your problem with panic or anxiety. Treatment usually involves improvements in diet and exercise, taking supplements such as vitamin B₆, and in some cases taking natural progesterone. (See chapter 16 for a more detailed discussion.)

- ***Inner Ear Disturbances***

For a small proportion of the population, panic attacks seem to be associated with a disturbance in balance caused by swelling of the inner ear (due to infection, allergy, Ménière's syndrome, or other problems). If dizziness, light-headedness, and/or unsteadiness are a *promi-*

ment part of your problem with anxiety or panic, you may want to consult an otolaryngologist to check the labyrinth system of your inner ear.

Other medical conditions that can cause panic or anxiety include the following:

- Acute reaction to cocaine, amphetamines, caffeine, aspartame, appetite suppressants, asthma medications, steroids, or other stimulants
- Withdrawal from alcohol, sedatives, or tranquilizers
- Thyrotoxicosis
- Cushing's syndrome
- Adrenal tumor
- Parathyroid disease
- Partial complex seizures (temporal lobe epilepsy)
- Post-concussion syndrome
- Deficiencies of calcium, magnesium, potassium, niacin, vitamin B₁₂
- Emphysema
- Pulmonary embolism
- Cardiac arrhythmias
- Congestive heart failure
- Essential hypertension
- Environmental toxins such as mercury, carbon dioxide, hydrocarbons, food additives, pesticides

To adequately rule out any medical conditions that could be causing or aggravating your particular problem, have your doctor give you a thorough physical examination, including a blood panel, before adopting behavioral and psychological strategies for recovery. Keep in mind, though, that the above medical conditions (with the exception of hyperventilation and hypoglycemia) contribute to panic or anxiety in only a minority of cases.

Short-Term, Triggering Causes

Long-term causes such as heredity, childhood environment, and cumulative stress create a *predisposition* to anxiety disorders. Yet it takes more specific conditions, operating over a short period of time, to actually trigger panic attacks or cause a phobia to develop. In this section we will briefly consider

- Specific stressors that often precede a first panic attack

- Conditioning processes that produce phobias
- The role of trauma in certain simple phobias and post-traumatic stress disorder

Stressors That Precipitate Panic Attacks

A first panic attack is often preceded by a stressful event or situation. In my experience with people already vulnerable to panic disorder as a result of the predisposing factors previously described, I have found that the following three types of stressors often preceded their first panic attack:

- ***Significant Personal Loss***

Loss of a significant person through death, divorce, or separation seems very frequently to be a trigger of a first panic attack. Other major losses, such as loss of employment, loss of health through illness, or a major financial reversal, can also precipitate a first panic attack.

- ***Significant Life Change***

A major life event causing a period of adjustment lasting several months can sometimes precipitate a first panic attack. Examples of such an event might include getting married, having a baby, going off to college, changing jobs, going into the military, making a geographical move, or developing a protracted physical illness.

It may be that *any major stressor*, whether it is a significant loss or a major life change, can trigger a first panic attack in an individual who is already vulnerable for other reasons.

- ***Stimulants and Recreational Drugs***

It is not uncommon for a first panic attack to occur after excessive intake of caffeine. Often people are unaware that their use of caffeine is excessive until a full-blown panic attack brings it to their attention.

Even more common is the incidence of panic attacks in people using cocaine. Cocaine is such a strong stimulant that it may cause panic attacks even in people who are *not* predisposed to panic disorder by the long-term factors previously described. Amphetamines ("speed"), PCP, LSD, high doses of marijuana, and withdrawal from narcotics, barbiturates, or tranquilizers can also jolt a person into a first panic attack.

Conditioning and the Origin of Phobias

A phobia is a persistent and unreasonable fear of a specific object, activity, or situation that results in a compelling desire to avoid that dreaded object, activity, or situation. There are three characteristics that distinguish a phobia from ordinary, everyday fears. First, you are *persistently* afraid of the object or situation over a long period of time. Second, you know that your fear is *unreasonable*, even though this recognition does not help to dispel it. Finally, what is most characteristic of a phobia is your *avoidance* of the feared situation. Being unreasonably

afraid of something is not yet a phobia; the phobia begins when you actually start avoiding what you fear.

What is avoided tends to vary among the different types of phobias. If you are agoraphobic, you tend to avoid situations where you're afraid you can't easily escape if you have a panic attack—examples include checkout lines in grocery stores, freeways, elevators, and bridges. If you have a social phobia, you tend to avoid situations where you fear you might humiliate or embarrass yourself in front of others—examples include public speaking, parties, public restrooms, and job interviews. Simple phobias cause you to fear potential death or injury from causes such as natural disasters or certain animals. Or you may have an enormous fear of being trapped.

How do these phobias develop? There are two types of processes that are most commonly responsible: *conditioning* and *trauma*. Trauma isn't always involved in the creation of a phobia, but conditioning processes are always present. There are two types of conditioning that contribute to the formation of a phobia: 1) *conditioning by association* and 2) *conditioning by avoidance*.

In *conditioning by association*, a situation that was originally neutral begins to elicit strong anxiety because on one particular day you panicked or had a strong anxiety reaction in that same situation. For example, you're driving on the freeway and spontaneously have a panic attack. The panic is made worse by fearful thoughts, such as "How do I get out of here?" or "What if I get into an accident?" Your mind forms a strong association between being on the freeway and experiencing anxiety, so that later, being on, being near, or even thinking about freeways elicits anxiety. In short, you have *learned* an association between freeways and anxiety. By the same token, experiencing strong anxiety the first time you try public speaking may lead to an association between the two. Subsequently, every time you attempt to speak before others, or even think about doing so, strong anxiety is automatically triggered.

Conditioning by association may cause you to develop a fear toward a particular situation or object, but it does not by itself create a phobia. Only when you start to *avoid* that situation or object do you "learn" to be phobic. A time-honored principle in behavioral psychology is that any behavior that is rewarded tends to be repeated. Avoiding a situation you're anxious about is obviously rewarded—the reward being the reduction of anxiety. Each time you avoid the situation, the reward of being relieved of anxiety follows, and so your avoidance behavior gets strengthened and tends to be repeated. Your avoidance works very well in saving you from anxiety.

Learning to stay away from a fearful situation because it is rewarding to do so is what constitutes *conditioning by avoidance*. Avoidance conditioning is the most critical process in the formation of any phobia. It is directly reversed and overcome by the processes of imagery and real-life exposure described in chapter 7.

Trauma, Simple Phobias, and Post-Traumatic Stress Disorder

Agoraphobia and social phobia tend to develop primarily as a result of the conditioning processes just described. Certain simple phobias, on the other hand, can develop in the wake of specific traumatic experiences. As a child, I had a phobia about bees as a result of having

picked up a bee and getting stung when I was two years old. This is really an example of conditioning by association. The fear I felt at the time I got stung caused me to develop an association between bees and fear. Avoidance conditioning came into play when I later started running away from bees whenever I saw them near me. By the same token, being in an auto accident can cause a person to subsequently fear driving or even being in a car. Or nearly drowning may lead to a subsequent phobia about water. Many simple phobias can be traced back to some kind of traumatic incident in childhood. Others—especially those we have from a very early age, like the fear of darkness or fears of insects—may be part of our evolutionary heritage. Such fears may have been biologically programmed into the nervous systems of all mammals to promote survival of the species. These inborn fears people often grow up with cannot be considered phobias unless 1) they lead to persistent avoidance and 2) they persist into adulthood.

A different outcome of trauma is the occurrence of post-traumatic stress disorder, which was described in chapter 1. No specific phobias develop; instead you tend to develop an array of symptoms that “re-create” the original trauma. Distressing recollections and dreams about what happened are the mind’s attempt to gain control of the original event and to neutralize the emotional charge it carries.

Maintaining Causes

The maintaining causes of anxiety disorders are what tend to keep them going. They involve ways of thinking, feeling, and coping that serve to perpetuate anxiety, panic, or phobias. Much of this workbook is devoted to helping you deal with these maintaining causes. Of the four types of causes we are considering, only the maintaining ones operate in the here and now and are thus the easiest to deal with. The following list of maintaining causes isn’t exhaustive and includes only those that are most obvious. Maintaining causes will be considered in greater detail throughout the rest of this workbook.

Avoidance of Phobic Situations

Phobias develop because it is very rewarding to avoid facing situations that cause you anxiety. As long as you continue to avoid dealing with a phobic situation, activity, or object, the phobia will remain securely in place. Trying to think or reason your way out of a phobia simply won’t work if you continue to avoid confronting it directly. As long as you avoid a situation, you will be prone to worry about whether you can ever handle it.

Overcoming a phobia means that you unlearn certain responses while relearning others. When you finally begin to face the situation, you *unlearn* both 1) the “fear-in-advance,” the anticipatory anxiety about possibly panicking in the situation, and 2) the avoidance of the situation itself. At the same time, you give yourself the opportunity to *learn* that you can enter—and remain in—a phobic situation without undue anxiety. You can learn to tolerate and eventually be comfortable in any phobic situation if you approach it in sufficiently small

steps. The imagery and real-life desensitization processes discussed in chapter 7 are intended to foster this type of learning.

Anxious Self-Talk

Self-talk is what you say to yourself in your own mind. It is the internal monologue that you engage in much of the time, although it may be so automatic and subtle that you don't notice it unless you step back and pay attention. Much of your anxiety is created by statements you make to yourself beginning with the words "what if"—for example, "What if I have another panic attack?" "What if I lose control of myself while driving?" "What will people think if I get anxious while standing in line?" This type of self-talk *anticipates* the worst before it even happens. The more common term for it is simply *worry*.

Self-talk can also contribute to creating a full-blown panic attack. Such an attack may start off with bodily symptoms such as tightness in the chest and heart palpitations. If you can accept and "flow with" these symptoms without letting them scare you, they will soon peak and then subside. However, all too often you tell yourself such things as "Oh no—I'm going to panic!" "What if I have a heart attack?" "I've got to get out of here, but I can't!" "People will think I'm weird if I have to rest or lean on something for a minute because my legs feel weak." This scare-talk only aggravates the physical symptoms, which in turn produce even more extreme scare-talk, leading to a vicious circle that produces a full-blown panic attack.

The good news is that you can learn to recognize anxiety-provoking self-talk, stop it, and replace it with more supportive and calming statements to yourself. The subject of self-talk is dealt with in detail in chapter 8.

Mistaken Beliefs

Your negative self-talk comes from underlying mistaken beliefs about yourself, others, and "the way the world is." For example, if you believe that you can't be safely alone, you will talk yourself and everyone else into assuming that there must always be someone with you. If you truly believe that life is always a struggle, then you will tell yourself that something is wrong when you start to feel better or when others offer you help. A belief that the outside world is dangerous does not promote an attitude of trust or a willingness to take risks necessary to overcome a condition like agoraphobia.

Revamping your basic beliefs about yourself and your life takes more time and work than simply reversing anxious self-talk. Yet to do so will have far-reaching effects on your self-esteem, your willingness to accept imperfections in yourself and others, and your long-term peace of mind. The subject of mistaken beliefs is considered in detail in chapter 9.

Withheld Feelings

Denying feelings of anger, frustration, sadness, or even excitement can contribute to a state of *free-floating anxiety*. Free-floating anxiety is when you feel vaguely anxious without

knowing why. You may have noticed that after you let out your angry feelings or have a good cry you feel calmer and more at ease. Expressing feelings can have a distinct physiological effect that results in a reduced level of anxiety.

As mentioned earlier, anxiety-prone people are often born with a predisposition to be more emotionally reactive or volatile. Yet they often grow up in families where obtaining parental approval takes precedence over expressing their needs and feelings. As adults, they still feel it is more important to attain perfection or always be pleasing than to express strong feelings. This tendency to deny deep emotions can lead to a chronic state of tension and anxiety. It is believed by some that the *external* danger avoided by the phobic is actually a stand-in for a deeper-lying *internal* danger: the fear of long-repressed feelings resurfacing. Panic may occur when such feelings "threaten" to break through. For example, if you have a phobia about water, this might be viewed as a stand-in for a deeper-lying fear of denied feelings. Or a fear of ferocious animals might symbolize a deeper-lying fear of experiencing your own anger and the unmet needs from which it flows. In my view, this emotion-based theory of phobias may be at least partially right.

Fortunately, it is possible to *learn* to recognize and express your feelings more easily and frequently. Excessive ventilation of feelings, especially anger, may not always be productive, yet it is important to at least know *what* you are feeling and then allow your feelings some form of expression. Doing so will substantially lower your level of anxiety and reduce your tendency to panic. This topic is dealt with in chapter 12.

Lack of Assertiveness

In order to express feelings to other people, it is important that you develop an assertive style of communicating that allows you to express yourself in a direct, forthright manner. Assertive communication strikes the right balance between submissiveness, where you are afraid to ask for what you want at all, and aggressiveness, where you demand what you want through coercion or threat. If you are prone to anxiety and phobias, you will tend to act submissively. You avoid asking directly for what you want and are afraid to express strong feelings, especially anger. Often you are afraid of imposing on others; you don't want to compromise your self-image as someone who is pleasing and nice. Or you are afraid that assertive communication will alienate the one person you feel dependent on for your basic sense of security. The problem with a lack of assertiveness is that it breeds feelings within yourself of resentment and confinement. And resentment and a sense of confinement are notorious for aggravating anxiety and phobias.

It's possible to *learn* to be assertive and directly express your wants and feelings. An introduction to this type of communication is presented in chapter 13.

Lack of Self-Nurturing Skills

Common to the background of many people with anxiety disorders is a pervasive sense of insecurity. This is especially apparent in agoraphobia, where the need to stay close to a safe place or safe person can be so strong. Such insecurity arises from a variety of conditions in

childhood, including parental neglect, abandonment, abuse, overprotection, or overcriticism, as well as alcoholism or chemical dependency in the family. Since they never received consistent or reliable nurturing as children, adult survivors of these various forms of deprivation often lack the capacity to properly take care of their own needs. Unaware of how to love and nurture themselves, they suffer low self-esteem and may feel anxious or overwhelmed in the face of adult demands and responsibilities. This lack of self-nurturing skills only serves to perpetuate anxiety.

The most lasting solution to parental abuse and deprivation is to become a good parent to yourself. Methods for gaining awareness of your needs, healing the “child within,” and becoming more nurturing toward yourself are presented in chapter 14.

Muscle Tension

When your muscles are tense, you feel “uptight.” Muscle tension tends to restrict your breathing. And when your breathing is shallow and restricted, you are more likely to experience anxiety. Tense muscles also help to keep your feelings suppressed, which, as discussed above, can increase anxiety. You may have noticed that when your body is tense, your mind has a greater tendency to race. As you relax the muscles throughout your body, your mind will begin to slow down and become calmer. A founder of systematic methods of relaxation, Edmund Jacobson, once said, “An anxious mind cannot exist in a relaxed body.” Body and mind are inextricably related in anxiety.

You can reduce your level of muscle tension on a consistent basis by maintaining daily programs of deep relaxation as well as vigorous exercise. Either one of these alone can reduce muscle tension, but the combination has an even more profound effect. Detailed guidelines for incorporating relaxation and exercise into your lifestyle are presented in chapters 4 and 5.

Stimulants and Other Dietary Factors

Stimulants such as caffeine and nicotine can aggravate anxiety and leave you more vulnerable to panic attacks. You may not even be aware of their impact until you reduce or eliminate them from your life. In two cases, I have seen panic attacks go away completely when clients eliminated caffeine from their diet (this was caffeine from not only coffee but also tea, cola beverages, and over-the-counter medications). For some people, other dietary factors, such as sugar and food additives, can aggravate or occasionally even cause panic reactions.

The nutrition–anxiety connection has hardly been explored in either popular or technical books on anxiety disorders. Chapter 15 of this book takes a detailed look at this connection.

High-Stress Lifestyle

The role of stress both as a predisposing agent and as a short-term cause of anxiety disorders has been described earlier. It is not surprising that a stressful lifestyle perpetuates problems with anxiety. The frequency of panic attacks and severity of phobias tends to

wax and wane depending on how well you cope with the daily stresses of living. Getting a handle on all of the maintaining causes of anxiety discussed in this section—self-talk, mistaken beliefs, withheld feelings, lack of assertiveness, lack of support, muscle tension, and diet—will go a long way toward reducing stress in your life. Other factors associated with stress that are not dealt with in this workbook include time management, Type A personality, and communication. These have been discussed in many excellent popular books on stress management. I can recommend the following: *Guide to Stress Reduction* by John Mason and *The Relaxation & Stress Reduction Workbook* by Martha Davis, Elizabeth Eshelman, and Matthew McKay. (See the reading list at the end of this chapter.)

Lack of Meaning or Sense of Purpose

It has been my repeated experience that clients experience relief from anxiety as well as phobias when they come to feel that their life has meaning, purpose, and a sense of direction. Until you discover something larger than self-gratification—something that gives your life a sense of purpose—you may be prone to feelings of boredom and a vague sense of confinement because you are not realizing all your potential. This sense of confinement can be a potent breeding ground for anxiety, phobias, and even panic attacks.

Issues of meaninglessness and purposelessness, and their relationship to psychological well-being, have been dealt with in depth by existential psychologists such as Victor Frankl and Rollo May. Several ways of confronting and working on these issues in your own life are presented in chapter 20.

Exercise

1. Which of the following factors do you feel might be helping to maintain your particular difficulty?
 - Avoidance of phobic situations
 - Anxious self-talk
 - Mistaken beliefs
 - Withheld feelings
 - Lack of assertiveness
 - Lack of self-nurturing skills
 - Muscle tension
 - Stimulants and other dietary factors
 - High-stress lifestyle
 - Lack of meaning or sense of purpose

2. Can you rank these maintaining causes according to how much you feel they influence your condition? Which ones do you feel are most important for you to work on?
3. Specify three maintaining causes that you would seriously be willing to work on in the next month.

Further Reading

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