

AMNESIA AND RELATED DISORDERS

INTRODUCTION

Amnesia and similar disorders are categorized by psychiatrists as dissociative disorders. They include dissociative amnesia, dissociative fugue, dissociative identity disorder, and depersonalization disorder. Dissociative disorders are usually triggered (precipitated) by overwhelming stress. The stress may be caused by experiencing or witnessing a traumatic event, accident, or disaster. Frequently, a person may experience inner conflict so intolerable that his mind is forced to separate incompatible or unacceptable information and feelings from conscious thought.

DEPERSONALISATION DISORDER

Depersonalization disorder is characterized by a persistent or recurring feeling of being detached from one's body or mental processes (depersonalization) and by a feeling of being an outside observer of one's mental processes, body and life. It causes significant distress or impairment in social, occupational and other areas of one's life.

The symptom of depersonalization is the third most common psychological symptom (after feelings of anxiety and feelings of depression) and often occurs after a person experiences life-threatening danger, such as an accident, assault, or serious illness or injury. Depersonalization disorder has not been studied widely, and its cause and occurrence in the population are unknown.

Symptoms and Diagnosis

People with depersonalization disorder have a distorted perception of their identity, body, and life that makes them uncomfortable. Symptoms may be temporary or persist or recur for many years. People with the disorder often have a great deal of difficulty describing their symptoms and may fear or believe that they are going crazy.

Depersonalization disorder can be a minor, passing disturbance with little noticeable effect on behaviour. Some people can adjust to it or even block its impact. Others are continually plagued with anxiety over their state of mind, worrying that they are going crazy or ruminating over the distorted perceptions of their body and their sense of estrangement from themselves and others. Mental anguish may disable them.

The diagnosis of depersonalization disorder is made on the basis of symptoms. A doctor evaluates the person to rule out physical disorders (such as a seizure disorder), drug abuse, and other mental health disorders. Psychological tests and clinical interview procedures may help the doctor recognize the problem.

Treatment and Prognosis

Depersonalization disorder often disappears without treatment. Treatment is warranted only if the disorder persists, recurs, or causes distress. Psychodynamic psychotherapy, behaviour therapy, and hypnosis have been effective for some people. Sedatives and antidepressants help some people with the disorder. Depersonalization disorder is often associated with or triggered (precipitated) by other mental health disorders, which require treatment. However, it should be noted that depersonalisation disorders do not necessarily occur in the presence of other

psychiatric disorders. Any stresses associated with the beginning (onset) of the depersonalization disorder must also be addressed.

Some degree of relief is usually achieved with treatment. Complete recovery is possible for many people, especially those whose symptoms occur in connection with stresses that can be addressed during treatment. Other people with depersonalization disorder do not respond well to treatment, although they may gradually improve on their own. A few remain unresponsive to all treatments.

DISSOCIATIVE AMNESIA

Dissociative amnesia is a type of amnesia caused by trauma or stress resulting in an inability to recall important personal information. It is too extensive to be explained by plain forgetfulness.

Dissociative amnesia is one type of amnesia. Amnesia is the total or partial inability to recall recent or remote experiences. When amnesia is caused by a psychological rather than a physical disturbance, it is called dissociative amnesia. Amnesia may also be a symptom of other disorders, such as acute stress disorder, dissociative identity disorder, dissociative fugue, posttraumatic stress disorder, or somatization disorder.

In dissociative amnesia, the lost memory usually involves information that is normally part of routine conscious awareness or "autobiographical" memory—who one is; what one did; where one went; to whom one spoke; what was said, thought, and felt; and so on. Sometimes the information, though forgotten, continues to influence the person's behaviour.

People with dissociative amnesia usually have one or more memory gaps spanning a few minutes to a few hours or days. However, memory gaps spanning years or even a person's entire life may occur. Most people with dissociative amnesia are aware that they have "lost some time," but some become aware of time loss only when they realize or are confronted with evidence that they have done things that they do not recall. Some people with dissociative amnesia forget some but not all events over a period of time; others cannot recall their entire previous life or forget things as they occur.

The disorder is most common among young adults, more commonly among people who have been involved in wars, accidents, or natural disasters. It may also block memories of childhood sexual abuse, later recalled in adulthood. Dissociative amnesia can occur for some time after a traumatic event. Whether such recovered memories reflect real events in the person's past remains unknown, unless confirmed by another person.

Symptoms and Diagnosis

The most common symptom of dissociative amnesia is memory loss. Shortly after becoming amnesic, a person may seem confused. Many people with dissociative amnesia are somewhat depressed or very distressed by their amnesia.

To make the diagnosis, the doctor carefully reviews the person's symptoms and performs a physical examination to exclude physical causes of amnesia. Tests, including electroencephalography and blood testing for toxins and drugs, are sometimes needed to exclude physical causes. A psychological examination is also performed. Special psychological tests often help the doctor better characterize and understand the person's dissociative experiences to develop a treatment plan.

Treatment and Prognosis

A doctor begins treatment by helping the person to feel safe and secure. If the missing memories are not spontaneously recalled, or if the need to recall the memories is urgent, memory retrieval techniques are often successful. Using hypnosis or drug-facilitated interviews (interviews conducted after the person is calmed and sedated with an intravenous drug such as amobarbital or midazolam) the doctor questions the amnesic person about the past.

A doctor uses hypnosis and drug-facilitated interviews to reduce anxiety associated with the period for which there is amnesia, and to penetrate or bypass the defences the amnesic person has created for protection from recalling painful experiences or conflicts. The doctor must be careful not to suggest what should be recalled or stimulate extreme anxiety. Memories recalled through such techniques may not be accurate and may require external corroboration. Therefore, before hypnosis or a drug-facilitated interview is performed, the doctor informs the amnesic person that memories retrieved with these techniques may or may not be accurate and obtains the person's consent to proceed.

Filling in the memory gap to the greatest extent possible helps restore continuity to the person's identity and sense of self. Once the amnesia has disappeared, continued psychotherapy helps the person understand the trauma or conflicts that caused the disorder and find ways to resolve them.

Most people recover what appears to be their missing memories and resolve the conflicts that caused the amnesia. However, some people never break through the barriers that prevent them from reconstructing their missing past.

DISSOCIATIVE FUGUE

Dissociative fugue is a disorder in which one or more episodes of sudden, unexpected, and purposeful travel from home (fugue) occur, during which a person cannot remember some or all of his past life.

Dissociative fugue affects about 3 of 1,000 people in the world. It is much more common in people who have been in wars, accidents, or natural disasters.

Causes

The causes of dissociative fugue are similar to those of dissociative amnesia. Dissociative fugue is often mistaken for malingering, because both conditions may occur under circumstances that a person might understandably wish to evade. However, dissociative fugue occurs spontaneously and is not faked. Malingering is a state in which a person feigns illness because it removes him from accountability for his actions, gives him an excuse to avoid responsibilities, or reduces his exposure to a known hazard, such as a dangerous job assignment. Many fugues seem to represent a disguised wish fulfilment (for example, an escape from overwhelming stresses, such as divorce or financial ruin). Other fugues are related to feelings of rejection or separation, or they may protect the person from suicidal or homicidal impulses.

When dissociative fugue recurs more than a few times, the person usually has an underlying dissociative identity disorder.

Symptoms and Diagnosis

A fugue may last from hours to weeks or months, or occasionally even longer. A person in a fugue state, having lost his customary identity, usually disappears from his usual haunts, leaving his

family and job. If the fugue is brief, the person may appear simply to have missed some work or come home late or, if confused, may come to the attention of medical or legal authorities. If the fugue lasts several days or longer, the person may travel far from home and begin a new job with a new identity, unaware of any change in his life. During the fugue, the person may appear normal and attract no attention. However, at some point, the person may become aware of the memory loss (amnesia) or confused about his identity.

Often the person has no symptoms or is only mildly confused during the fugue. However, when the fugue ends, the person may experience depression, discomfort, grief, shame, intense conflict, and suicidal or aggressive impulses.

A doctor may suspect dissociative fugue when a person seems confused about his identity or is puzzled about his past, or when confrontations challenge the person's new identity or absence of one. The doctor makes the diagnosis by carefully reviewing the person's symptoms and performing a physical examination to exclude physical disorders that might be contributing to or causing memory loss. A psychological examination is also performed.

Sometimes dissociative fugue cannot be diagnosed until the person abruptly returns to his pre-fugue identity and is distressed to find himself in unfamiliar circumstances. The diagnosis is usually made retroactively by a doctor reviewing the person's history and collecting information that documents the circumstances before the person left home, the travel itself, and the establishment of an alternate life.

Treatment and Prognosis

Most fugues last for hours or days and disappear on their own. Dissociative fugue is treated much the same as dissociative amnesia, and treatment may include the use of hypnosis or drug-facilitated interviews. However, efforts to restore memories of the fugue period usually are unsuccessful. A therapist may help the person to explore his patterns of handling the types of situations, conflicts, and moods that triggered (precipitated) the fugue episode to prevent subsequent fugue behaviour.

DISSOCIATIVE IDENTITY DISORDER

In dissociative identity disorder, formerly called multiple personality disorder, two or more identities or personalities alternate.

Dissociative identity disorder appears to be a rather common mental disorder. It can be found in 3 to 4% of people hospitalized for other mental health disorders and in a sizable minority of people in drug abuse treatment facilities. However, some authorities believe that many cases of this disorder reflect the influence of therapists on suggestible people.

Dissociative identity disorder appears to be caused by the interaction of several factors. These include overwhelming stress; an ability to separate one's memories, perceptions, or identity from conscious awareness; abnormal psychological development, and insufficient protection and nurture during childhood.

Human development requires that children be able to integrate complicated and different types of information and experiences. As children learn to achieve a cohesive, complex identity, they go through phases in which different perceptions and emotions of themselves and others are kept segregated. These different perceptions and emotions become involved in the generation of different selves, but not every child who suffers abuse or a major loss or trauma has the capacity to develop multiple personalities. Those who do have the capacity also have normal ways of

coping, and most of these vulnerable children are sufficiently protected and soothed by adults, so dissociative identity disorder does not develop.

Symptoms

People with dissociative identity disorder often describe an array of symptoms that can resemble those of other mental health disorders as well as many physical disorders. Some symptoms are an indication that another disorder is indeed present, but some symptoms may reflect the intrusions of past experiences into the present. For example, sadness may indicate coexisting depression, or it may be that one of the personalities is reliving emotions associated with past misfortunes.

Dissociative identity disorder is chronic and potentially disabling or fatal, although many with the disorder function very well and lead creative and productive lives. People with this disorder are prone to injuring themselves. They may engage in self-mutilation. Many attempt suicide.

In dissociative identity disorder, some of a person's personalities are aware of important personal information, whereas other personalities are unaware. Some personalities appear to know and interact with one another in an elaborate inner world. For example, personality A may be aware of personality B and know what B does, as if observing B's behaviour; personality B may or may not be aware of personality A. Other personalities may or may not be aware of personality B, and personality B may or may not be aware of them.

The switching of personalities and the lack of awareness of one's behaviour in the other personalities often makes life chaotic for people with dissociative identity disorder. Because the personalities often interact with each other, people with dissociative personality disorder report hearing inner conversations and the voices of other personalities commenting on their behaviour or addressing them. They experience distortion of time, with time lapses and amnesia. They have feelings of detachment from one's self (depersonalization) and feelings that one's surroundings are unreal (de-realization). They often have concern with issues of control, both self-control and the control of others. In addition, people with dissociative identity disorder tend to develop severe headaches or other bodily pain and may experience sexual dysfunction. Different clusters of symptoms occur at different times.

People with dissociative identity disorder may not be able to recall things they have done or account for changes in their behaviour. Often they refer to themselves as "we", "he", or "she". While most people cannot recall much about the first 3 to 5 years of life, people with dissociative identity disorder may have considerable amnesia for the period between the ages of 6 and 11 as well.

Diagnosis

To make the diagnosis of dissociative identity disorder, a doctor conducts a thorough psychological interview. A medical examination may be needed to determine if a physical disorder is present that would explain certain symptoms. Special questionnaires have been developed to help doctors identify dissociative identity disorder.

Interviews may need to be prolonged and involve careful use of hypnosis or drug facilitation. Hypnosis or drug-facilitated interviews may make the person more likely to allow the doctor to encounter other personalities or to reveal information about a period for which there is amnesia. However, some doctors feel that hypnosis and drug-facilitated interviews should not be performed because they believe the techniques can themselves generate symptoms of dissociative identity disorder.

Treatment and Prognosis

Some symptoms may come and go (fluctuate) spontaneously, but dissociative identity disorder does not clear up on its own. The goal of treatment is usually to integrate the personalities into a single personality. However, integration is not always possible. In these situations, the goal is to achieve a harmonious interaction among the personalities that allows more normal functioning.

Drug therapy can relieve some specific coexisting symptoms, such as anxiety or depression, but does not affect the disorder itself.

Psychotherapy is often arduous and emotionally painful. The person may experience many emotional crises from the actions of the personalities and from the despair that may occur when traumatic memories are recalled during therapy. Several periods of psychiatric hospitalization may be necessary to help the person through difficult times and to come to grips with particularly painful memories. Generally, two or more psychotherapy sessions a week for at least 3 to 6 years are necessary. Hypnosis may be helpful.

The prognosis of people with dissociative identity disorder depends on the symptoms and features they experience. For example, people who have additional serious mental health disorders, such as personality disorders, mood disorders, eating disorders, and substance abuse disorders, have a poorer prognosis.

DISSOCIATIVE IDENTITY DISORDER AND CHILDREN

About 97 to 98% of adults with dissociative identity disorder report having been abused during childhood. Abuse can be documented for 85% of the adults and 95% of the children and adolescents with dissociative identity disorder.

Although childhood abuse is a major cause of dissociative identity disorder, that does not mean all the specific abuses alleged by people with this disorder really happened. Some aspects of some reported experiences clearly are not accurate. In addition, some people were not abused at all, but rather, suffered an important early loss, such as the death of a parent, a serious physical illness, or some other very stressful experience.

Anxiety Disorders

DISSOCIATIVE IDENTITY DISORDER AND CHILDREN

INTRODUCTION

Anxiety Disorders involve a state of distressing chronic but fluctuating nervousness that is inappropriately severe for the person's circumstances.

Anxiety is a normal response to a threat or to psychological stress and is experienced occasionally by everyone. Normal anxiety has its root in fear and serves an important survival function. When someone is faced with a dangerous situation, anxiety induces the fight-or-flight response. With this response, a variety of physical changes, such as increased blood flow to the heart and muscles, provide the body with the necessary energy and strength to deal with life-threatening

situations, such as running from an aggressive animal or fighting off an attacker. However, when anxiety occurs at inappropriate times, occurs frequently, or is so intense and long-lasting that it interferes with a person's normal activities, then it is considered a disorder.

Anxiety Disorders are more common than any other category of mental health disorder and are believed to affect about 15% of adults in the world. However, Anxiety Disorders often are not recognized by people who have them or by health care professionals and consequently are seldom treated.

Causes

The causes of Anxiety Disorders are not fully known, but both physical and psychological factors are involved. Because Anxiety Disorders are prevalent in some families, heredity probably plays a role. Anxiety is viewed at a psychological level as a response to environmental stresses, such as the break up of a significant relationship or exposure to a life-threatening disaster. When a person's response to stresses is improper or a person is overwhelmed by events, an anxiety disorder can arise. For example, some people find speaking before a group exhilarating, while others dread it, becoming anxious with symptoms such as sweating, fear, rapid heart rate, and tremor.

Anxiety Disorders may also be caused by a physical disorder or the use of a drug. For example, an overactive thyroid gland, use of prescribed corticosteroids, or illicit use of cocaine may produce symptoms of an anxiety disorder.

Symptoms and Diagnosis

Anxiety can arise suddenly, as in panic, or gradually over minutes, hours, or days. The anxiety itself can last for any length of time, from a few seconds to years. Anxiety ranges in intensity from barely noticeable qualms to full-blown panic attack, during which a person may experience shortness of breath, dizziness, and increased heart rate.

Anxiety Disorders can be so distressing and interfere so much with a person's life that they can lead to depression. Sometimes depression develops first and an anxiety disorder develops later.

The diagnosis of an anxiety disorder is based largely on its symptoms. The ability to tolerate anxiety varies, and determining what constitutes abnormal anxiety can be difficult. A family history of an anxiety disorder (except posttraumatic stress disorder) may help a doctor make the diagnosis.

Treatment

Accurate diagnosis is important, since treatment varies from one anxiety disorder to another. Additionally, Anxiety Disorders must be distinguished from anxiety that occurs in many other mental health disorders, for which different treatment approaches are used. Depending on the anxiety disorder, drug therapy or psychotherapy (such as behaviour therapy), alone or in combination, can significantly relieve the distress and dysfunction for most people.

ACUTE STRESS DISORDER

Acute stress disorder is similar to posttraumatic stress disorder, except that it begins within 4 weeks of the traumatic event and lasts only 2 days to 4 weeks.

A person with acute stress disorder has been exposed to a terrifying event. The person mentally re-experiences the traumatic event, avoids things that remind him of it, and has increased anxiety. The person also has three or more of the following symptoms:

- A sense of numbing, detachment, or lack of emotional responsiveness
- Reduced awareness of surroundings (for example, being dazed)
- A feeling that things are not real
- A feeling that he himself is not real
- An inability to remember an important part of the traumatic event.

The number of people with acute stress disorder is unknown. The likelihood of developing acute stress disorder is greater when traumatic events are severe.

Treatment

Many people recover from acute stress disorder once they are removed from the traumatic situation and given appropriate support in the form of understanding, empathy for their distress, and an opportunity to describe what happened and their reaction to it. Some people benefit from describing their experience several times.

ANXIETY INDUCED BY DRUGS OR MEDICAL PROBLEMS

Anxiety can be caused by a medical disorder or the use or discontinuation of a drug. Examples of medical disorders that may cause anxiety include neurological disorders, such as a head injury, brain infection, or inner ear disorder; cardiovascular disorders, such as heart failure and abnormal heart rhythms (arrhythmias); endocrine disorders, such as an overactive adrenal or thyroid gland; and respiratory disorders, such as asthma and chronic obstructive pulmonary disease. Even fever can cause anxiety.

Drugs that can induce anxiety include alcohol, stimulants, caffeine, cocaine, and many prescription drugs, such as ephedrine (used, for example, in decongestants) and theophylline (used, for example, to treat asthma). Some over-the-counter weight-loss products contain both ephedrine and caffeine. Drugs that can induce anxiety when discontinued include benzodiazepines.

Anxiety may occur in dying people as a result of fear of death, pain, and difficulty breathing.

Treatment

A doctor aims to treat the primary causes rather than the secondary anxiety symptoms. Anxiety should subside after the medical disorder is treated or the drug has been discontinued long enough for any withdrawal symptoms to abate. A doctor can treat any remaining anxiety with appropriate anti-anxiety drugs or psychotherapy (such as behaviour therapy). For people who are dying, strong analgesics with potent anti-anxiety effects, such as morphine are often appropriate. No dying person should have to experience intense anxiety.

GENERALIZED ANXIETY DISORDER

Generalized anxiety disorder consists of excessive, usually daily, nervousness and worry (lasting 6 months or longer) about a variety of activities or events.

Generalized anxiety disorder is common; about 3% of adults have it during any 12-month period.

Women are twice as likely as men to have the disorder. It often begins in childhood or adolescence but may start at any age. For most people, the disorder fluctuates, worsening at times (especially during times of stress), and persists over many years.

People with generalized anxiety disorder constantly feel worried or distressed and find it difficult to control these feelings. The severity, frequency, or duration of the worries is disproportionately greater than the situation warrants. Worries are general in nature; common worries include work responsibilities, money, health, safety, car repairs, and chores. The focus of worry may shift from one topic to another over time.

For a doctor to make a diagnosis of generalized anxiety disorder, a person must experience worry or anxiety and three or more of the following symptoms: restlessness, easy fatigue, difficulty concentrating, irritability, muscle tension, and disturbed sleep.

Treatment

Optimal management is best achieved with a combination of some form of counselling and drug therapy. Counselling can address the root causes of anxiety and ways to cope.

Anti-anxiety drugs such as benzodiazepines are usually prescribed. However, because long-term use of benzodiazepines can lead to drug dependence, the drug, if discontinued, must be tapered off slowly rather than stopped abruptly. The relief that benzodiazepines bring usually outweighs any mild side effects and the possibility of drug dependence.

Buspirone is another anti-anxiety drug effective for some people with generalized anxiety disorder. Its use does not lead to drug dependence. However, Buspirone may take 2 weeks or longer to start working, in contrast to benzodiazepines, which begin to work within an hour.

Some antidepressants, such as Venlafaxine, Paroxetine, and other selective serotonin reuptake inhibitors, are also effective for treatment of generalized anxiety disorder. These antidepressants start to relieve anxiety quickly, sometimes after a few days.

Herbal products such as Kava and Valerian appear to have anti-anxiety effects, although their effectiveness for treating Anxiety Disorders such as generalized anxiety disorder requires further study.

Cognitive-behaviour therapy has been shown to be beneficial for generalized anxiety disorder. Relaxation, yoga, meditation, exercise, and biofeedback techniques may also be of some help

OBSESSIVE-COMPULSIVE DISORDER

Obsessive-compulsive disorder is characterized by the presence of recurring, unwanted, intrusive ideas, images, or impulses that may even seem silly, weird, nasty, or horrible (obsessions) to the person experiencing them, accompanied by urges to do something that will relieve the discomfort caused by the obsession (compulsions).

Obsessive-compulsive disorder occurs about equally in men and women and affects about 1.5% of the population during any 6-month period.

The obsessions are usually related to a sense of harm, risk, or danger. Common obsessions include concerns about contamination (for example, worrying that touching doorknobs will cause disease), doubts (for example, worrying that the front door was not locked), fear of loss, and fear of

physically injuring someone.

More than 95% of people with obsessive-compulsive disorder feel compelled to perform rituals—repetitive, purposeful, intentional acts. Rituals used to control an obsession include washing or cleaning to be rid of contamination, checking to allay doubt, hoarding to prevent loss, and avoiding the people who might become objects of aggression. Most rituals, such as excessive hand washing or repeated checking to make sure a door has been locked, can be observed. Other rituals, such as repetitive counting or making statements intended to diminish danger, cannot be observed. Obsessions are not always accompanied by compulsions.

Most people with obsessive-compulsive disorder are aware that their obsessive thoughts do not reflect actual risks and that their compulsive behaviours are ineffective. Obsessive-compulsive disorder, therefore, differs from psychotic disorders, in which people lose contact with reality. Obsessive-compulsive disorder also differs from obsessive-compulsive personality disorder in which specific personality traits are defined (for example, being a perfectionist). Because people with obsessive-compulsive disorder are aware that their compulsive behaviours are excessive to the point of being bizarre and are afraid they will be embarrassed or stigmatized, they often perform their rituals secretly, even though the rituals may occupy several hours each day.

About one third of people with obsessive-compulsive disorder are depressed at the time the disorder is diagnosed. Altogether, two thirds become depressed at some point.

Treatment

Exposure therapy is effective in treating obsessive-compulsive disorder. Exposure therapy involves exposing the person to the situations or people that trigger obsessions, rituals, or discomfort. The person's discomfort or anxiety will gradually diminish if he prevents himself from performing the ritual during repeated exposure to the provocative stimulus. In this way, the person learns that rituals are unnecessary for decreasing discomfort. The improvement usually persists for years, probably because people who have mastered this self-help approach continue to practice it as a way of life without much effort after formal treatment has ended.

Selective serotonin reuptake inhibitors and Clomipramine, a Tricyclic antidepressant, are effective. Certain other antidepressant drugs are also used, but much less often. Many experts believe that a combination of behaviour therapy and drug therapy is the best treatment for people with obsessive-compulsive disorder.

Psychodynamic psychotherapy and psychoanalysis have generally not been effective for people with obsessive-compulsive disorder.

PANIC ATTACKS AND PANIC DISORDER

Panic is acute, short-lived, extreme anxiety with accompanying physical symptoms.

Panic attacks may occur in any anxiety disorder, usually in response to a specific situation tied to the main characteristic of the disorder. For example, a person with a phobia of snakes may panic when encountering a snake. However, these situational panic attacks differ from the spontaneous, unprovoked ones that define a person's problem as panic disorder.

Panic attacks are common, occurring in more than one third of adults each year. Women are 2 to 3 times more likely than men to have panic attacks and panic disorder. Most people recover from panic attacks without treatment; a few develop panic disorder. Panic disorder is present in 2% of

the population during any 12-month period. Panic disorder usually begins in late adolescence or early adulthood.

A panic attack involves the sudden appearance of at least four of the following symptoms:

- Chest pain or discomfort
- Choking
- Dizziness, unsteadiness, or faintness
- Fear of dying
- Fear of "going crazy" or of losing control
- Feelings of unreality, strangeness, or detachment from the environment
- Flashes or chills
- Nausea, stomach ache, or diarrhoea
- Numbness or tingling sensations
- Palpitations or accelerated heart rate
- Shortness of breath or sense of being smothered
- Sweating
- Trembling or shaking.

Symptoms peak within 10 minutes and usually dissipate within minutes, leaving little for a doctor to observe except the person's fear of another terrifying attack. Since panic attacks sometimes are unexpected or occur for no apparent reason, especially when people experience them as part of panic disorder, people who have them frequently anticipate and worry about another attack—a condition called anticipatory anxiety—and try to avoid places where they have previously panicked.

Because symptoms of a panic attack involve many vital organs, people often worry that they have a dangerous medical problem involving the heart, lungs, or brain and seek help from a doctor or hospital emergency department. However, the correct diagnosis may not be made, leading to the additional worry that the medical problem is going untreated. Although panic attacks are uncomfortable—at times extremely so—they are not dangerous.

A diagnosis of panic disorder is made when a person experiences at least two unprovoked and unexpected panic attacks, which are followed by at least 1 month of fear that another attack will occur. The frequency of attacks can vary greatly; some people have weekly or even daily attacks that occur for months, whereas others have several daily attacks followed by weeks or months of remission.

Treatment

People who experience panic attacks as part of an anxiety disorder other than panic disorder and some people with panic disorder who have recurring panic attacks, anticipatory anxiety, and avoidance recover without formal treatment. For others, panic disorder follows a waxing and waning course over years.

People with panic disorder are more receptive to treatment if they understand that the disorder involves both physical and psychological processes and that treatment must address both. Drug therapy and behaviour therapy can generally control the symptoms.

Drugs that are used to treat panic disorder include antidepressants and anti-anxiety drugs such as benzodiazepines. Most types of antidepressants—Tricyclics, Monoamine Oxidase inhibitors (MAOIs), and Selective Serotonin Reuptake Inhibitors (SSRIs)—are effective. Benzodiazepines work faster

than antidepressants but can cause drug dependence and are probably more likely to cause sleepiness, impaired coordination, and slowed reaction time. SSRIs are preferred to other antidepressants and benzodiazepines because they are equally effective but have fewer side effects, especially considerably less sleepiness, and do not cause drug dependence.

When a drug is effective, it prevents or greatly reduces the number of panic attacks. A drug may have to be taken for a long time, because panic attacks often return once the drug is discontinued.

Supportive psychotherapy, which includes education and counselling, is beneficial because a therapist can provide general information about the disorder, its treatment, realistic hope for improvement, and the support that comes from a trusting relationship.

PHOBIC DISORDERS

Phobias involve persistent, unrealistic, intense anxiety and fear in response to specific external situations.

People who have a phobia avoid situations that trigger their anxiety and fear, or they endure them with great distress. However, they recognize that their anxiety is excessive and therefore are aware that they have a problem.

AGORAPHOBIA

Agoraphobia is characterized by anxiety about or avoidance of being trapped in situations or places with no way to escape easily if anxiety or panic develops.

Agoraphobia is diagnosed in about 4% of women and 2% of men during any 12-month period. Most people with this disorder develop it in their early 20s; agoraphobia rarely develops after age 40.

Although agoraphobia literally means "fear of the marketplace," the term more specifically describes the fear of being trapped, often in a busy place filled with people, without a graceful and easy way to leave if anxiety becomes severe. Typical situations that are difficult for people with agoraphobia include standing in line at a bank or supermarket, sitting in the middle of a long row in a theatre or classroom, and riding on a bus or airplane. Some people develop agoraphobia after experiencing a panic attack in one of these situations. Other people simply feel uncomfortable in these settings and may never, or only later, develop panic attacks. Agoraphobia often interferes with daily living, sometimes so drastically that it leaves the person housebound.

Treatment

If agoraphobia is not treated, it usually waxes and wanes in severity and may even disappear without formal treatment, possibly because the person has conducted some personal form of behaviour therapy.

Exposure therapy, a type of behaviour therapy in which the person is exposed repeatedly to the anxiety-provoking situation, is the best treatment for agoraphobia, helping more than 90% of people who practice this therapy faithfully.

People with agoraphobia who are deeply depressed may need to take an antidepressant. Substances that depress the central nervous system, such as alcohol or large doses of anti-anxiety

drugs, may interfere with behaviour therapy and are tapered off before therapy is begun.

SOCIAL PHOBIA

Social phobia (social anxiety disorder) is characterized by significant anxiety induced by exposure to certain social or performance situations, often resulting in avoidance.

Humans are social animals, and their ability to relate comfortably in social situations affects many important aspects of their lives, including family, education, work, leisure, dating, and mating.

Although some anxiety in social situations is normal, people with social phobia have so much anxiety that they either avoid social situations or endure them with distress. About 13% of people have social phobia sometime in their lives; the disorder affects about 9% of women and 7% of men during any 12-month period. Men are more likely than women to have the most severe form of social anxiety, avoidant personality disorders. Some people are shy by nature and show timidity early in life that later develops into social phobia. Others first experience anxiety in social situations around the time of puberty.

Some social phobias are tied to specific performance situations, producing anxiety only when the person must perform a particular activity in public. The same activity performed alone produces no anxiety. Situations that commonly trigger anxiety among people with social phobia include public speaking; performing publicly, such as reading in church or playing a musical instrument; eating with others; signing a document before witnesses; and using a public bathroom. People with social phobia are concerned that their performance or actions will seem inappropriate. Often they worry that their anxiety will be obvious—that they will sweat, blush, vomit, or tremble or that their voice will quaver; that they will lose their train of thought; or that they will not be able to find the words to express themselves.

A more general type of social phobia is characterized by anxiety in many social situations. In both types of social phobia, the person's anxiety comes from the belief that if his performance falls short of expectations, he will feel humiliated and embarrassed.

Treatment

Social phobia often persists if left untreated, causing many people to avoid activities in which they would otherwise like to participate.

Exposure therapy, a type of behaviour therapy in which the person is exposed repeatedly to the anxiety-provoking situation, is effective, but arranging for exposure to last long enough to permit getting used to the anxiety-provoking situation and growing comfortable in that situation may not be easy. For example, a person who is afraid of speaking in front of his boss may not be able to arrange a series of speaking sessions in front of that boss. Substitute situations may help, such as joining Toastmasters (an organization for those who have anxiety about speaking in front of an audience) or reading a book to nursing home residents.

Antidepressants, such as selective serotonin reuptake inhibitors (SSRIs) and monoamine oxidase inhibitors (MAOIs), and anti-anxiety drugs can often help people with social phobia. Many people use alcohol as a social lubricant; for some people, however, alcohol abuse and dependence can result. Beta-blockers are commonly used to reduce the increased heart rate, tremor, and sweating experienced by people who are distressed by performing in public.

SPECIFIC PHOBIA

A specific phobia is an irrational fear of specific objects or situations.

Specific phobias, as a group, are among the most common Anxiety Disorders but are often less troubling than other Anxiety Disorders. During any 12-month period, about 13% of women and 4% of men have a specific phobia.

Some specific phobias cause little inconvenience, while others severely interfere with functioning. For example, a city dweller who is afraid of snakes may have no trouble avoiding them. However, a city dweller who fears small, closed places such as elevators will have a problem working on an upper floor in a skyscraper.

Some specific phobias, such as fear of large animals, the dark, or strangers, begin early in life. Many phobias stop as the person gets older. Other phobias, such as fear of rodents, insects, storms, water, heights, flying, or enclosed places, typically develop later in life.

At least 5% of people are to some degree phobic about blood, injections, or injury. These people can actually faint due to a decrease in heart rate and blood pressure, which does not happen with other phobias and Anxiety Disorders. In contrast, many people with other phobias and Anxiety Disorders hyperventilate, which can cause them to feel as though they might faint, although they virtually never faint.

Treatment

A person can often cope with a specific phobia by avoiding the feared object or situation. When treatment is needed, exposure therapy is the treatment of choice. A therapist can help ensure that the therapy is carried out properly, although it can be done without a therapist. Even people with a phobia of blood or needles respond well to exposure therapy. For example, a person who faints while blood is drawn can have a needle brought close to a vein and then removed when the heart rate begins to slow down. Repeating this process allows the heart rate to return to normal. Eventually, the person should be able to have blood drawn without fainting.

Drug therapy is not very useful in helping people overcome specific phobias. However, benzodiazepines (anti-anxiety drugs) may give a person short-term control over a phobia, such as the fear of flying.

POST-TRAUMATIC STRESS DISORDER

Posttraumatic stress disorder is an anxiety disorder caused by exposure to an overwhelming traumatic event, in which the person later repeatedly re-experiences the event.

Experiences that threaten death or serious injury can affect people long after the experience is over. Intense fear, helplessness, or horror can haunt a person.

Traumatic events may involve having been threatened with death or serious injury or witnessing violence against another person. Examples include engaging in military combat, experiencing or witnessing sexual or physical assault, or being affected by a disaster, either natural (for example, a hurricane) or man-made (for example, a severe automobile accident). Sometimes symptoms do not begin until many months or even years after the traumatic event took place (delayed onset). If posttraumatic stress disorder has been present for 3 months or longer, it is considered chronic.

Posttraumatic stress disorder affects at least 8% of people sometime during their life, including

childhood. Many people who undergo or witness traumatic events, such as combat veterans and victims of rape or other violent acts, experience posttraumatic stress disorder.

In posttraumatic stress disorder, the traumatic situation is re-experienced repeatedly, usually in nightmares or flashbacks. Intense distress often occurs when the person is exposed to an event or situation that reminds him of the original trauma. Examples of such reminders are anniversaries of the traumatic event; seeing a gun after being pistol-whipped during a robbery; and being in a small boat after a near-drowning accident.

The person persistently avoids things that are reminders of the trauma. He may also attempt to avoid thoughts, feelings, or conversations about the traumatic event and avoid activities, situations, or people who serve as reminders. Avoidance may also include memory loss (amnesia) for a particular aspect of the traumatic event. The person has a numbing or deadening of emotional responsiveness and symptoms of increased arousal (such as difficulty falling asleep or being easily startled). Symptoms of depression are common, and the person shows less interest in previously enjoyed activities. Feelings of guilt are also common.

Treatment

Treatment of posttraumatic stress disorder involves psychotherapy (including exposure therapy) and drug therapy. Because of the often intense anxiety associated with traumatic memories, supportive psychotherapy plays an especially important role in treatment. The therapist is openly empathic and sympathetic in recognizing the person's psychological pain. The therapist reassures the person that his response is valid but encourages him to face his memories (as a form of exposure therapy). The person also is taught ways to control anxiety, which helps to modulate and integrate the painful memories into his personality.

Insight-oriented psychotherapy can help people with feelings of guilt understand why they are punishing themselves and help rid them of guilty feelings.

Antidepressants appear to provide some benefit, especially selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants, and monoamine oxidase inhibitors (MAOIs).

Chronic posttraumatic stress disorder may not disappear but often becomes less intense over time even without treatment. Nevertheless, some people remain severely handicapped by the disorder.

Depression and Mania

Introduction

Depression and Mania represent the two extremes, or poles, of mood disorders. Mood disorders are mental health disorders in which emotional disturbances consist of prolonged periods of excessive sadness (depression) or excessive joyousness or elation (mania).

Mood disorders are sometimes called affective disorders. Affect (emphasis on the first syllable) means emotional state as revealed through facial expressions and gestures.

Sadness and joy are part of the normal experience of everyday life and differ from the Depression and Mania that characterize mood disorders. Sadness is a natural response to loss, defeat, disappointment, trauma, or catastrophe. Sadness may be psychologically beneficial because it

permits a person to withdraw from offensive or unpleasant situations, which may aid recovery.

Grief or bereavement is the most common of the normal reactions to a loss or separation, such as the death of a loved one, divorce, or romantic disappointment. Bereavement and loss do not generally cause persistent, incapacitating depression except in people predisposed to mood disorders.

Joyousness or elation, usually linked to success and achievement, can sometimes be a defence against depression or a denial of the pain of loss. People who are dying sometimes have brief periods of elation and restless activity, and some recently bereaved people may even become elated rather than grieve normally. In people predisposed to mood disorders, these reactions may be the prelude to mania.

Depression or mania is diagnosed when sadness or elation is overly intense and continues beyond what would be expected for a particular event. Unlike normal emotional reactions, Depression and Mania greatly impair a person's ability to function physically, socially, and at work.

About 8% of the world's population experience depression severe enough to require medical attention. Of these people, one third have long-lasting (chronic) depression, and most of the remainder continue to have sporadic (recurring) episodes of depression separated by episodes of normal mood. Both chronic and recurring episodes of depression are termed unipolar. Nearly 1.5% of the world's population have a disorder called manic-depressive illness, or bipolar disorder, in which episodes of depression alternate with episodes of mania (or with episodes of less severe mania, known as hypomania). Mania without depression, also termed unipolar disorder, is very rare.

Depression

Depression is a feeling of intense sadness; it may follow a recent loss or other sad event but is out of proportion to that event and persists beyond an appropriate length of time.

After anxiety, depression is the most common mental health disorder. An estimated 10% of people who see their doctors for what they think is a physical problem are actually experiencing depression. People who become depressed typically do so in their 20s, 30s, or 40s, although depression can begin at almost any age. Depression affects a number of children and adolescents. People born in the latter part of the 20th century seem to have higher rates of depression and suicide than those of previous generations, in part because of higher rates of substance abuse.

An episode of depression typically lasts about 6 months if untreated, but sometimes it lasts for 2 years or more. Episodes generally tend to recur several times over a lifetime.

Causes

A number of factors may make a person more likely to experience depression, such as a family tendency (heredity), side effects of certain drugs, and emotionally distressing events, particularly those involving a loss. Despite commonly held beliefs, however, depression does not necessarily reflect a personality disorder, childhood trauma, poor parenting, or weakness of character. Depression may arise or worsen without any apparent or significant life stresses.

Social class, race, and culture do not appear to affect the chance that a person will experience depression in his or her lifetime. However, a person's sex does appear to have an effect: Women are twice as likely as men to experience depression, though the reasons are not entirely clear. Of

physical factors, hormones are the ones most involved. Changes in hormone levels, which can create mood changes shortly before menstruation and after childbirth, might play some role in women. Similarly, the use of oral contraceptives or hormone (estrogen) replacement therapy may contribute to or cause mood changes. Abnormal thyroid function, which is fairly common in women, may also be a factor.

Transient depression is when someone becomes temporarily depressed in reaction to certain holidays (holiday blues) or meaningful anniversaries, such as the anniversary of a loved one's death; during the premenstrual phase (premenstrual dysphoric disorder); or during the first 2 weeks after giving birth (postpartum depression). Such reactions are normal, but people with an increased predisposition to depression may develop significant depression during such times. Depression without an apparent precipitating event is called melancholia (formerly called endogenous depression). These distinctions, however, are not very important, since the effects and treatment of the depression are similar.

Depression may occur with, or be caused by, a number of physical disorders. Physical disorders may cause depression directly (such as when thyroid disease affects hormone levels, which can induce depression) or indirectly (such as when rheumatoid arthritis causes pain and disability, which can lead to depression). Often, depression that results from a physical disorder has both direct and indirect causes. For example, AIDS may cause depression directly if the human immunodeficiency virus (HIV), which causes AIDS, damages the brain; AIDS may cause depression indirectly by having an overall negative effect on the person's life.

The use of some prescription drugs can cause depression. For unknown reasons, corticosteroids often cause depression when they are produced in large amounts as part of a disease, as in Cushing's syndrome, but they tend to cause hypomania or, rarely, mania when they are given as medication.

A number of mental health disorders can predispose a person to depression, including certain Anxiety Disorders, alcoholism and other substance abuse disorders and schizophrenia.

Symptoms

Symptoms typically develop gradually over days or weeks and can vary greatly depending on what type of depression the person is experiencing. For example, a person who is becoming depressed may appear sluggish and sad or irritable and anxious.

A person who is withdrawn, speaks little, stops eating, and sleeps little is experiencing what doctors call vegetative symptoms. In contrast, a person who appears anxious and fearful (especially in the evening), has an increased appetite resulting in weight gain, and, although initially unable to sleep, sleeps for increasingly longer periods is experiencing depression with atypical symptoms. A person who, in addition, is very restless—wringing the hands and talking continuously—is experiencing agitation.

Many people with depression cannot experience emotions—including grief, joy, and pleasure—in a normal way; in the extreme, the world appears to have become colourless and lifeless. Thinking, speech, and general activity may slow down so much that all voluntary activities stop. Depressed people may be preoccupied with intense feelings of guilt and self-denigration and may not be able to concentrate. They may experience feelings of despair, loneliness, and low self-esteem. They are often indecisive and withdrawn, feel progressively helpless and hopeless, and think about death and suicide.

Sleep problems are common. Most depressed people have difficulty falling asleep and awaken repeatedly, particularly early in the morning. A loss of sexual desire or pleasure is common. Poor appetite and weight loss sometimes lead to emaciation, and in women, menstrual periods may stop. However, overeating and weight gain are common in people with mild depression.

In some depressed people, the symptoms are mild but the disorder lasts for years, often decades. This type of depression, called dysthymia, often begins early in life and is associated with distinct changes in personality. People with dysthymia are gloomy, pessimistic, humourless, or incapable of having fun; passive and lethargic; introverted; sceptical, hypercritical, or constantly complaining; and self-critical and full of self-reproach. They are preoccupied with inadequacy, failure, and negative events, sometimes to the point of morbid enjoyment of their own failures.

Some depressed people complain of having a physical illness, with various aches and pains or fears of calamity or of becoming insane. Others think they have illnesses they believe to be incurable or shameful, such as cancer or sexually transmitted diseases, and think they are infecting other people.

About 15% of depressed people, most commonly those with severe depression, have false beliefs (delusions), or they see or hear things that are not there (hallucinations). For example, they may believe that they have committed unpardonable sins or crimes or may hear voices accusing them of various misdeeds or condemning them to death. In rare cases, they may imagine that they see coffins or deceased relatives. Feelings of insecurity and worthlessness may lead people with severe depression to believe that they are being watched and persecuted. Depression with delusions or hallucinations is termed psychotic depression.

Thoughts of death are among the most serious symptoms of depression. Many depressed people want to die or feel they are so worthless that they should die. As many as 15% of untreated depressed people end their lives in suicide. A suicide threat represents an emergency situation. When a person threatens to kill himself, a doctor may hospitalize the person so that he is kept under supervision until treatment reduces the risk of suicide. The risk is especially high when the person with depression continues to have feelings of excessive sadness even while returning to normal activities. The risk is also high around personally significant anniversaries and among people in a mixed bipolar state.

Diagnosis

A doctor is usually able to diagnose depression from its signs and symptoms. A previous history of depression or a family history of depression helps to confirm the diagnosis. Excessive worrying, panic attacks, and obsession are common in depression and may lead the doctor to incorrectly think that the person has an anxiety disorder.

In older people, depression may be difficult to notice, especially among people who do not work or who have little social interaction. Depression may lead to slower thinking, decreased concentration, and memory impairment that simulates dementia. Indeed, the disorder can so resemble dementia that it is sometimes called pseudo-dementia.

Standardized questionnaires are used to help measure the degree of depression. Two such questionnaires are the Hamilton Depression Rating Scale, conducted verbally by an interviewer, and the Beck Depression Inventory, a self-administered questionnaire.

Laboratory tests may occasionally help a doctor determine if depression is caused by an endocrine or other physical disorder, but no simple laboratory test exists with which to diagnose depression.

In cases that are difficult to diagnose, doctors may perform other tests to confirm the diagnosis of depression. For example, because sleep problems are such a prominent sign of depression, doctors who specialize in diagnosing and treating mood disorders may use a sleep electroencephalogram to measure the time it takes for rapid eye movement sleep (the period during which dreaming occurs) to begin after the person falls asleep. Normally, progression to this stage of sleep takes about 90 minutes. In a person with depression, however, it usually takes less than 70 minutes.

Prognosis and Treatment

An untreated depression may last for about 6 months. Although mild symptoms persist in many people, functioning tends to return to normal. Nonetheless, most people with depression experience repeated episodes of depression, an average of 4 to 5 times over a lifetime. In older people, symptoms of pseudo dementia (such as confusion), if present, clear up with treatment for depression.

Depression today is usually treated without hospitalization. However, sometimes a person should be hospitalized, especially if he is contemplating suicide or has attempted it, is too frail because of weight loss, or is at risk of heart problems because of severe agitation.

Drug therapy is the cornerstone of treatment for depression. Other treatments include psychotherapy and electroconvulsive therapy. Sometimes a combination of therapies is used. Depression can usually be treated successfully and does not represent a character flaw or weakness of mental abilities.

Drug Therapy: Several types of drugs—tricyclic antidepressants, selective serotonin reuptake inhibitors (SSRIs), monoamine oxidase inhibitors (MAOIs), psycho stimulants, and other antidepressants—are available. Most must be taken regularly for at least several weeks before they begin to work. The chances that any given antidepressant will work for a particular person are about 65%. Side effects vary with each type of drug. Sometimes when treatment with one drug fails to relieve depression, a combination of antidepressant drugs is prescribed.

Tricyclic antidepressants: once the mainstay of treatment, are now used infrequently. They often cause sedation and lead to weight gain. They can also cause an increase in heart rate and a decrease in blood pressure when the person stands. Other side effects include blurred vision, dry mouth, confusion, constipation, and difficulty in starting to urinate. These other effects are called anticholinergic effects and are often more pronounced in older people

Selective serotonin reuptake inhibitors (SSRIs): are now the most commonly used class of antidepressants. SSRIs are effective in treating depression and dysthymia as well as other mental health disorders that often coexist with depression. Although SSRIs can cause nausea, diarrhoea, tremor, weight loss, and headache, these side effects are usually mild or go away with continued use. Most people tolerate the side effects of SSRIs better than the side effects of tricyclics. SSRIs are safer than the tricyclics in their side effects on the heart. However, with long term use, SSRIs may cause additional side effects, such as weight gain. Abrupt discontinuation of some of the SSRIs may result in a withdrawal syndrome that includes dizziness, anxiety, irritability, and flu-like symptoms.

Monoamine oxidase inhibitors (MAOIs): represent another class of antidepressant drug. MAOIs may be effective when other antidepressants have failed but are rarely the first choice in treatment. People who use MAOIs must adhere to a number of dietary restrictions and follow special precautions. For example, they should not eat foods or beverages that contain tyramine, such as

beer on tap, red wines (including sherry), liqueurs, overripe foods, salami, broad beans, yeast extracts (marmite), and soy sauce. They must avoid pseudo ephedrine, found in many over-the-counter cough and cold remedies. This drug, when combined with MAOIs, can cause a sudden and severe rise in blood pressure with a severe, throbbing headache (hypertensive crisis). People who take MAOIs should also avoid many other types of drugs, including tricyclic antidepressants, SSRIs, Bupropion, Mirtazapine, Venlafaxine, Nefazodone, Dextromethorphan (a cough suppressant), and Meperidine (an analgesic).

People taking MAOIs usually are instructed to carry an antidote, such as chlorpromazine or Nifedipine, at all times. If a severe, throbbing headache occurs, they should take the antidote at once and go to the nearest emergency room. Because of the risk of stroke and difficult dietary restrictions and necessary precautions, MAOIs are rarely prescribed except for depressed people whose condition has not improved with other antidepressants.

Psycho stimulants: such as Dextroamphetamine and Methylphenidate, as well as other drugs, are sometimes used, often in combination with antidepressants.

Newer antidepressants have become available that are as effective and safe as SSRIs but may have fewer and less severe side effects for some people.

St. John's Wort, an herbal dietary supplement, may help relieve mild depression. However, due to potentially harmful interactions between St. John's Wort and many prescription drugs, people interested in taking this herbal supplement need to discuss possible drug interactions with their doctor.

Psychotherapy: Individual or group psychotherapy can help people with depression gradually resume former responsibilities and adapt to the normal pressures of life, building on the improvement made by antidepressant drug treatment. Interpersonal psychotherapy can provide the people with supportive guidance while adjusting to changes in life roles. Cognitive therapy can help change hopelessness and negative thinking. Psychotherapy alone may be just as effective as drug therapy for mild depression.

Electroconvulsive Therapy: Electroconvulsive therapy is sometimes used to treat people with severe depression, particularly when the person is psychotic, is threatening to commit suicide, or is refusing to eat. This type of therapy is usually very effective and can relieve depression quickly, unlike most antidepressants, which can take up to several weeks. The speed with which electroconvulsive therapy takes effect can save lives.

MANIA

Mania is characterized by excessive physical activity and feelings of extreme elation that are grossly out of proportion to any positive event. Hypomania is a less severe form of mania.

Mania most commonly occurs as a part of manic-depressive illness (bipolar disorder (see Depression and Mania: Manic-Depressive Illness)). The few people who appear to experience only mania (unipolar disorder) may actually have mild or brief episodes of depression. Mania and hypomania are less common than depression, and they are also less easily recognized. Whereas extreme and protracted sadness may prompt a visit to a doctor, elation much less commonly does, because people with mania are unaware that anything is wrong with their mental state or behaviour. A doctor must rule out an underlying physical disorder in a person who is experiencing mania for the first time without a previous episode of depression.

Symptoms and Diagnosis

Manic symptoms typically develop rapidly over a few days. In the early (milder) stages of mania, the person feels better than normal, exuberant, and energetic.

A person who is manic may be irritable, cantankerous, or hostile. He typically believes he is quite well. A lack of insight into his condition, along with a huge capacity for activity, can make the person impatient, intrusive, meddlesome, and aggressively irritable when crossed. Mental activity speeds up (a condition called flight of ideas). The person is easily distracted and constantly shifts from one theme or endeavour to another. The person may have false convictions of personal wealth, power, inventiveness, and genius and may temporarily become delusional or assume a grandiose identity, sometimes believing that he is God.

The person may believe he is being assisted or persecuted by others or have hallucinations, hearing and seeing things that are not there. The need for sleep decreases. A manic person is inexhaustibly, excessively, and impulsively involved in various activities (such as risky business endeavours, gambling, or perilous sexual behaviour) without recognizing the inherent social dangers. In extreme cases, mental and physical activity is so frenzied that any clear link between mood and behaviour is lost in a kind of senseless agitation (delirious mania). Immediate treatment is then required, because the person may die of sheer physical exhaustion. In less severe mania, hospitalization may be needed during periods of over-activity to protect the person and his family from ruinous financial or sexual behaviour.

Mania is diagnosed by its symptoms. However, because people with mania are notorious for denying that there is anything wrong with them, doctors usually have to obtain information from family members.

Treatment

Untreated episodes of mania end more abruptly than those of depression and are typically shorter, lasting from a few weeks to several months. Because mania is a medical and social emergency, a doctor makes all attempts to treat the person in a hospital.

The drug lithium can reduce the symptoms of mania. Because lithium takes 4 to 10 days to work, a drug that works rapidly, such as haloperidol, is often given at the same time to control excited thought and activity. However, haloperidol causes muscle stiffness and unusual movements. Therefore, haloperidol is given in small doses, in combination with a benzodiazepine, such as lorazepam or clonazepam which enhances the antimanic effects of haloperidol while reducing its unpleasant side effects. Haloperidol usually is stopped after about a week.

Side effects of drugs

- Amphetamines
- Antidepressants (most)
- Antidepressant withdrawal
- Bromocriptine
- Cocaine
- Corticosteroids
- Levodopa
- Methylphenidate

Infections

- AIDS

- Encephalitis
- Influenza
- Syphilis (late stage)

Hormonal disorders

- High levels of thyroid hormone

Connective tissue disease

- Systemic lupus Erythematosus

Neurological disorders

- Brain tumours
- Head injury
- Huntington's disease
- Multiple sclerosis
- Stroke
- Sydenham's disease
- Temporal lobe epilepsy

MANIC DEPRESSIVE ILLNESS

In manic-depressive illness, also called bipolar disorder, episodes of depression alternate with episodes of mania or lesser degrees of joyousness or elation.

Manic-depressive illness affects slightly less than 2% of the U.S. population to some degree. The disorder is believed to be hereditary, although the exact genetic defect is still unknown. Manic-depressive illness affects men and women equally. However, women are more likely to have symptoms of depression, whereas men are more likely to have symptoms of mania. Manic-depressive illness is more common among people in upper socioeconomic classes and usually begins in a person's teens, 20s, or 30s.

Symptoms and Diagnosis

Manic-depressive illness usually begins with depression and includes at least one episode of mania at some time during the disorder. Episodes of depression typically last for 3 to 6 months. In the most severe form of the disorder, called bipolar I disorder, depression alternates with intense mania. In the less severe form, called bipolar II disorder, short episodes of depression alternate with hypomania. The depressive and manic episodes often recur according to the season; for example, depression occurs in the fall and winter, and mania occurs in the spring or summer.

In an even less severe form of manic-depressive illness, called cyclothymic disorder, episodes of elation and sadness are less intense, typically last for only a few days, and recur fairly often at irregular intervals. Although cyclothymic disorder may ultimately evolve into a more severe form, these of manic-depressive illness, in many people cyclothymic disorder never progresses. Having cyclothymic disorder may contribute to a person's success in business, leadership, achievement, and artistic creativity. However, it may also cause uneven work and school records, frequent change of residence, repeated romantic break ups or marital failure, and alcohol and drug abuse. In about one third of people with cyclothymic disorder symptoms can lead to a mood disorder that requires treatment.

The diagnosis of manic-depressive illness is based on the distinctive pattern of symptoms. A doctor determines whether the person is experiencing an episode of mania or depression so that the

correct treatment can be given. About one of three people with manic-depressive illness experiences symptoms of mania (or hypomania) and depression simultaneously. This condition is known as a mixed bipolar state.

Prognosis and Treatment

Manic-depressive illness recurs in nearly all cases. Episodes may sometimes switch from depression to mania, or vice versa, without any period of normal mood in between. Some people cycle more rapidly through episodes than do others. Up to 15% of people with manic-depressive illness, mostly women, have four or more episodes a year. People who cycle rapidly are more difficult to treat.

All antidepressants can cause swings from depression to hypomania or mania and sometimes cause rapid swings between them. Therefore, these drugs are used only for short periods, and their effect on mood is closely monitored. At the first sign of a swing to hypomania or mania, the antidepressant is discontinued. Optimally, most people with manic-depressive illness should be given mood-stabilizing drugs, such as lithium or an anticonvulsant, when they are treated with antidepressants.

Lithium has no effect on normal mood but reduces the tendency toward mood swings in about 70% of people with manic-depressive illness. A doctor monitors the level of lithium in the blood with blood tests. Possible side effects of lithium include tremor, fine muscle twitching, nausea, vomiting, diarrhoea, thirst, excessive urination, and weight gain. However, these side effects are usually temporary, and the doctor can often lessen or relieve them by adjusting the dosage. Lithium can make acne or psoriasis worse and can cause the blood levels of thyroid hormone to fall, requiring the addition of thyroid hormone replacement. Reducing the dosage may lessen side effects, but sometimes lithium must be discontinued, in which case the undesirable side effects resolve. In rare cases, long-term use of lithium can affect kidney function. Therefore, kidney function must be monitored with blood and urine tests every 3 to 4 months.

A very high level of lithium in the blood can cause persistent headaches, mental confusion, drowsiness, seizures, and abnormal heart rhythms. Side effects are more likely to occur in older people. Women who are trying to become pregnant must stop taking lithium, because lithium can in rare cases cause heart defects in a developing fetus.

Newer drug treatments have evolved over the past several years. Sudden manic episodes are increasingly treated with Risperidone, Quetiapine, or Olanzapine (drugs referred to as "atypical antipsychotics"), because they have a minimal risk of serious side effects. Other commonly used drugs for mania include the anticonvulsants Carbamazepine and Divalproex. However, Carbamazepine can seriously reduce the number of red and white blood cells, and Divalproex can cause liver damage (primarily in children) and in rare cases can cause severe damage to the pancreas. With close monitoring by a doctor, these problems can be caught in time, making Carbamazepine and useful alternatives to lithium, especially for people who have not responded to other treatments.

Recently, the anticonvulsant Lamotrigine has begun to be used to treat manic-depressive illness, especially in the depressed phase. Lamotrigine eliminates the need for antidepressants in some people.

Psychotherapy: is often recommended for people taking mood-stabilizing drugs, mostly to help them stay with their treatment. Group therapy is often useful for helping people and their spouses or relatives understand the manic-depressive illness and better cope with it.

Phototherapy: which involves exposure to artificial light, is sometimes used to treat people with manic-depressive illness, especially those who have milder and more seasonal depression: autumn-winter depression and spring-summer hypomania (seasonal affective disorder). However, if the dose of light is excessive, the person may swing to hypomania or, in some cases, eye damage can occur. Therefore, phototherapy should be supervised by a doctor who specializes in the treatment of mood disorders.

PERSONALITY DISORDERS

PERSONALITY DISORDERS

Personality disorders are characterized by patterns of perceiving, reacting, and relating that are relatively inflexible and socially maladaptive.

Everyone has characteristic patterns of perceiving and relating to other people and events (personality traits). Put another way, people tend to cope with stresses in an individual but repetitive style. For example, some people respond to a troubling situation by seeking someone else's help, whereas others prefer to deal with problems on their own. Some people minimize problems; others exaggerate them. Regardless of their usual style, however, mentally healthy people are likely to try an alternative approach if their first response is ineffective.

In contrast, people with personality disorders are rigid and tend to respond inappropriately to problems, to the point that relationships with family, friends, and co-workers are affected. These maladaptive responses usually begin in adolescence or early adulthood and do not change over time.

People with personality disorders are unaware that their thought or behaviour patterns are inappropriate; thus they tend not to seek help on their own. Instead, they may be referred by their friends, their family, or a social agency because their behaviour is causing difficulty for others. When they do seek help on their own, usually because of troubling symptoms (for example, anxiety, depression, or substance abuse), they tend to believe their problems are caused by other people or by circumstances beyond their control.

Personality disorders are grouped into three clusters. Cluster A personality disorders involve odd or eccentric behaviour; cluster B, dramatic or erratic behaviour; and cluster C, anxious or inhibited behaviour.

Cluster A: Odd or Eccentric Behaviour

Paranoid Personality People with a paranoid personality are distrustful and suspicious of others. They suspect on the basis of little or no evidence that others are out to harm them, and they may retaliate at any time. This behaviour often leads to rejection by others, which seems to justify their original feelings. They are generally cold and distant in their relationships.

People with a paranoid personality often take legal action against others, especially if they feel righteously indignant. They are unable to see their own role in a conflict. Although they usually work in relative isolation, they may be highly efficient and conscientious.

Sometimes people who already feel alienated because of a defect or handicap (such as deafness) are more likely to suspect that other people have negative ideas or attitudes toward them. Such

heightened suspicion, however, is not evidence of a paranoid personality unless it involves wrongly attributing malevolence to others.

Schizoid Personality People with a schizoid personality are introverted, withdrawn, and solitary. They are emotionally cold and socially distant. They are most often absorbed with their own thoughts and feelings and are fearful of closeness and intimacy with others. They talk little, are given to daydreaming, and prefer theoretical speculation to practical action. Fantasizing is a common coping mechanism (defence mechanism).

Schizotypal Personality People with a schizotypal personality, like those with a schizoid personality, are socially and emotionally detached. In addition, they display oddities of thinking, perceiving, and communicating similar to those of people with schizophrenia. Although schizotypal personality is sometimes found in people with schizophrenia before they become ill, most adults with a schizotypal personality do not develop schizophrenia.

Some people with a schizotypal personality show signs of magical thinking—that is, they believe that a particular thought or action can control something or someone. For example, a person may believe that he can cause harm to others by thinking angry thoughts. People with a schizotypal personality may also have paranoid ideas.

Cluster B: Dramatic or Erratic Behaviour

Histrionic (Hysterical) Personality People with a histrionic personality conspicuously seek attention, are dramatic and excessively emotional, and are overly concerned with appearance. Their lively, expressive manner results in easily established but often superficial and transient relationships. Their expression of emotions often seems exaggerated, childish, and contrived to evoke sympathy or attention (often erotic or sexual) from others.

People with a histrionic personality are prone to sexually provocative behaviour or to sexualizing nonsexual relationships. However, they may not really want a sexual relationship; rather, their seductive behaviour often masks their wish to be dependent and protected. Some people with a histrionic personality also are hypochondriacal and exaggerate their physical problems to get the attention they need.

Narcissistic Personality People with a narcissistic personality have a sense of superiority, a need for admiration, and a lack of empathy. They have an exaggerated belief in their own value or importance, which is what therapists call "grandiosity." They may be extremely sensitive to failure, defeat, or criticism. When confronted by a failure to fulfil their high opinion of themselves, they can easily become enraged or severely depressed. Because they believe themselves to be superior in their relationships with other people, they expect to be admired and often suspect that others envy them. They believe they are entitled to having their needs met without waiting, so they exploit others, whose needs or beliefs they deem to be less important. Their behaviour is usually offensive to others, who view them as being self-centered, arrogant, or selfish. This personality disorder typically occurs in high achievers, although it may also occur in people with few achievements.

Antisocial Personality People with an antisocial personality (previously called psychopathic or sociopathic personality), most of whom are male, show callous disregard for the rights and feelings of others. Dishonesty and deceit permeate their relationships. They exploit others for material gain or personal gratification (unlike narcissistic people, who exploit others because they think their superiority justifies it).

Characteristically, people with an antisocial personality act out their conflicts impulsively and irresponsibly. They tolerate frustration poorly, and sometimes they are hostile or violent. Often they do not anticipate the negative consequences of their antisocial behaviours and, despite the problems or harm they cause others, do not feel remorse or guilt. Rather, they glibly rationalize their behaviour or blame it on others. Frustration and punishment do not motivate people with an antisocial personality to modify their behaviours or improve their judgment and foresight but, rather, usually confirm their harshly unsentimental view of the world.

People with an antisocial personality are prone to alcoholism, drug addiction, sexual deviation, promiscuity, and imprisonment. They are likely to fail at their jobs and move from one area to another. They often have a family history of antisocial behaviour, substance abuse, divorce, and physical abuse. As children, many were emotionally neglected and physically abused. People with an antisocial personality have shorter life expectancies than the general population. The disorder tends to diminish or stabilize with age.

Borderline Personality People with a borderline personality, most of whom are women, are unstable in their self-image, moods, behaviour, and interpersonal relationships. Their thought processes are more disturbed than those of people with an antisocial personality, and aggression is more often turned against the self. They are more angry, more impulsive, and more confused about their identity than are people with a histrionic personality. Borderline personality becomes evident in early adulthood, but prevalence decreases with age.

People with a borderline personality often were neglected or abused as children. Consequently, they feel empty, angry, and deserving of nurturing. They have far more dramatic and intense interpersonal relationships than people with cluster A personality disorders. When they feel cared for, they appear lonely and waiflike, often needing help for past mistreatment, depression, substance abuse, and eating disorders. However, when they fear being abandoned by a caring person, their mood shifts dramatically and is frequently expressed as inappropriate and intense anger. This shift in mood is accompanied by extreme changes in their view of the world, themselves, and others—things are black or white, good or evil, but never neutral.

People with a borderline personality who feel abandoned and alone may wonder whether they actually exist (that is, they do not feel real). They can become desperately impulsive, engaging in reckless promiscuity or substance abuse. At times they are so out of touch with reality that they have brief episodes of psychotic thinking, paranoia, and hallucinations.

People with a borderline personality are commonly seen by primary care doctors. Additionally, borderline personality is the most common personality disorder treated by therapists, because people with the disorder relentlessly seek someone to care for them. However, after repeated crises, vague unfounded complaints, and failures to comply with therapeutic recommendations, caretakers—including doctors—often become very frustrated with them and view them as help-rejecting complainers.

Cluster C: Anxious or Inhibited Behaviour

Avoidant Personality People with an avoidant personality are overly sensitive to rejection, and they fear starting relationships or anything new. They have a strong desire for affection and acceptance but avoid intimate relationships and social situations for fear of disappointment and criticism. Unlike those with a schizoid personality, they are openly distressed by their isolation and inability to relate comfortably to others. Unlike those with a borderline personality, they do not respond to rejection with anger; instead, they withdraw and appear shy and timid. Avoidant personality is similar to generalized social phobia.

Dependent Personality People with a dependent personality routinely surrender major decisions and responsibilities to others and permit the needs of those they depend on to supersede their own. They lack self-confidence and feel intensely insecure about their ability to take care of themselves. They often protest that they cannot make decisions and do not know what to do or how to do it. This behaviour is due partly to a belief that others are more capable and partly to a reluctance to express their views for fear of offending the people whom they need. People with other personality disorders often have aspects of a dependent personality, but these traits are usually hidden by the more dominant traits of the other disorder. Sometimes adults with prolonged illnesses develop a dependent personality.

Obsessive-Compulsive Personality People with an obsessive-compulsive personality are preoccupied with orderliness, perfectionism, and control. They are reliable, dependable, orderly, and methodical, but their inflexibility makes them unable to adapt to change. Because they are cautious and weigh all aspects of a problem, they have difficulty making decisions. They take their responsibilities seriously, but because they cannot tolerate mistakes or imperfection, they often have trouble completing tasks. Unlike the mental health disorder called obsessive-compulsive disorder, obsessive-compulsive personality does not involve repeated, unwanted obsessions and ritualistic behaviour.

People with an obsessive-compulsive personality are often high achievers, especially in the sciences and other intellectually demanding fields in which order and attention to detail are desirable. However, their responsibilities make them so anxious that they can rarely enjoy their successes. They are uncomfortable with their feelings, with relationships, and with situations in which they lack control or must rely on others or in which events are unpredictable.

Diagnosis

A doctor bases the diagnosis of a personality disorder on a person's history, specifically, repetitive displays of maladaptive thought or behaviour patterns. These patterns tend to become apparent because the person stubbornly resists changing them despite their negative consequences. In addition, a doctor is likely to notice the person's inappropriate use of mental coping mechanisms (defence mechanisms). Although everyone unconsciously uses coping mechanisms, people with personality disorders use them in immature and maladaptive ways, such that it interferes with their daily functioning.

Consequences of Personality Disorders

People with personality disorders are at high risk of behaviours that can lead to physical illness, such as alcohol or drug addiction; self-destructive behaviour; reckless sexual behaviour; hypochondriasis; and clashes with society's values.

People with personality disorders may have inconsistent, detached, overemotional, abusive, or irresponsible styles of parenting, leading to medical and psychiatric problems in their children.

People with personality disorders are vulnerable to mental breakdowns (a period of crisis when the person has difficulty performing even routine mental tasks) as a result of stress; the type of mental health disorder (for example, anxiety, depression, or psychosis) depends in part on the type of personality disorder.

People with personality disorders are less likely to follow a prescribed treatment regimen; even when they follow the regimen, they are usually less responsive than most people to medications.

People with personality disorders often have a poor relationship with their doctors because they refuse to take responsibility for their behaviour or feel overly distrustful, deserving, or needy. The doctor may then become blaming, distrusting, and ultimately rejecting of the person.

Treatment

Personality traits take many years to develop, thus the treatment of maladaptive traits takes many years as well. No short-term treatment can cure a personality disorder, although some changes may be accomplished faster than others. For example, drug therapy or reduction of environmental stresses can quickly relieve symptoms such as anxiety and depression. Behavioural changes can occur within a year; interpersonal changes take longer. For example, for a person with a dependent personality, a behavioural change might be to stop stating that he cannot make decisions; the interpersonal change might be to interact with others in a workplace or family setting in such a way that he actually seeks out or at least accepts some decision-making responsibilities.

Although treatments differ according to the type of personality disorder, some general principles apply to all treatments. Because the person with a personality disorder usually does not see a problem with his own behaviour, he must be confronted with the harmful consequences of his maladaptive thoughts and behaviours. To do this, a therapist needs to repeatedly point out the undesirable consequences of the person's thought and behaviour patterns. Sometimes the therapist finds it necessary to set limits on behaviour (for example, the person might be told that he cannot raise his voice in anger but instead must use a regular speaking voice). The involvement of family members is helpful and often essential because they can act in ways that either reinforce or diminish the person's problematic behaviour or thoughts. Group and family therapy, group living in designated residential settings, and participation in therapeutic social clubs or self-help groups can all be valuable in helping to change socially undesirable behaviours.

Psychotherapy (talk therapy) remains the cornerstone of most treatments and usually must continue for more than 1 year to effect change in a person's maladaptive behaviour or interpersonal patterns. In the context of an intimate, cooperative, non-exploitative doctor-patient relationship, the person can begin to understand the sources of his distress and recognize his maladaptive behaviour. Psychotherapy can help him more clearly recognize the attitudes and behaviours that lead to interpersonal problems, such as dependency, distrust, arrogance, and manipulativeness.

For some people with personality disorders, primarily those that involve maladaptive attitudes, expectations, and beliefs (such as narcissistic or obsessive-compulsive personality), psychoanalysis is recommended and is usually continued for at least 3 years. Behaviour therapy is helpful in changing behaviours such as recklessness, social isolation, lack of assertiveness, and temper outbursts. Behavioural change is most important for people with a borderline, antisocial, or avoidant personality. However, people with an antisocial or paranoid personality are rarely successfully treated by any therapy.

Drug therapy is sometimes appropriate for people with a personality disorder who have depression, phobia, or panic disorder. However, drugs usually provide only limited relief. In contrast, the feelings of anxiousness and sadness that result from a personality disorder are rarely satisfactorily relieved by drugs. Drug therapy for people with a borderline personality is frequently complicated by misuse of the drugs or by suicide attempts.

Common Coping Mechanisms

Mechanism	Definition	Result	Personality Disorders Involved
Projection	Attributing one's own feelings or thoughts to others	Leads to prejudice, suspiciousness, and excessive worrying about external dangers	Typical of paranoid and schizotypal personalities; used by people with borderline, antisocial, or narcissistic personality when under acute stress
Splitting	Use of black-or-white, all-or-nothing thinking to divide people into groups of idealized all-good saviours and vilified all-bad evildoers	Allows a person to avoid the discomfort of having both loving and hateful feelings for the same person as well as feelings of uncertainty and helplessness	Typical of borderline personality
Acting out	A direct behavioural expression of an unconscious wish or impulse that enables a person to avoid thinking about a painful situation or experiencing a painful emotion	Leads to acts that are often irresponsible, reckless, and foolish. Includes many delinquent, promiscuous, and substance-abusing acts, which can become so habitual that the person remains unaware and dismissive of the feelings that initiated the acts	Very common in people with antisocial or borderline personality
Turning aggression against self	Expressing the angry feelings one has toward others by hurting one's self directly (for example, through self-mutilation) or indirectly (for example, body dysmorphic disorder); when indirect, it is called passive aggression	Includes failures and illnesses that affect others more than oneself and silly, provocative clowning	Dramatic in people with borderline personality
Fantasizing	Use of imaginary relationships and private belief systems to resolve conflict and to escape from painful realities, such as loneliness	Is associated with eccentricity, avoidance of interpersonal intimacy, and avoidance of involvement with the outside world	Used by people with avoidant or schizoid personality, who, in contrast to people with psychoses, do not believe and thus do not act on their fantasies
Hypochondria	Use of health	Provides one with	Used by people with

riasis	complaints to gain attention	nurturant attention from others; may be a passive expression of anger toward others	dependent, histrionic, or borderline personality
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SCHIZOPHRENIA AND DELUSIONAL DISORDERS

Introduction

Schizophrenia and delusional disorder are distinct disorders that may share certain features, such as paranoia, suspiciousness, and unrealistic thinking. However, schizophrenia is associated with psychosis—a loss of contact with reality—and with a decline in general functioning. In contrast, in delusional disorder, contact with reality is preserved except for the very specific and focused unrealistic thinking that comprises the delusions; functioning is much less impaired. In addition, schizophrenia is relatively common, whereas delusional disorder is rare.

Delusional Disorder

Delusional disorder is characterized by one or more false beliefs that persist for at least 1 month.

Delusional disorder generally first affects people in middle or late adult life. Delusions tend to be non-bizarre and involve situations that could conceivably occur in real life, such as being followed, poisoned, infected, loved at a distance, or deceived by a spouse or lover. Several subtypes of delusional disorder are recognized.

In the erotomanic subtype, the central theme of the delusion is that another person is in love with the individual. Efforts to contact the object of the delusion through telephone calls, letters, or even surveillance and stalking may be common. Behaviour related to the delusion may come in conflict with the law.

In the grandiose subtype, the person is convinced that he has some great talent or has made some important discovery.

In the jealous subtype, the person is convinced that a spouse or lover is unfaithful. This belief is based on incorrect inferences supported by dubious "evidence." Under such circumstances, physical assault may be a significant danger.

In the persecutory subtype, the person believes that he is being plotted against, spied on, maligned, or harassed. The person may repeatedly attempt to obtain justice by appealing to courts and other government agencies. Rarely, violence may be resorted to in retaliation for imagined persecution.

In the somatic subtype, the person is preoccupied with a bodily function or attribute, such as an imagined physical deformity or odour. The delusion can also take the form of an imagined general medical condition, such as a parasitic infection.

Symptoms and Diagnosis

A delusional disorder may arise from a pre-existing paranoid personality disorder. Beginning in early adulthood, people with a paranoid personality disorder demonstrate a pervasive distrust and suspiciousness of others and their motives. Early symptoms may include feeling exploited, being preoccupied with the loyalty or trustworthiness of friends, reading threatening meanings into benign remarks or events, bearing grudges for a long time, and responding readily to perceived slights.

After ruling out other specific conditions that are associated with delusions, a doctor bases the diagnosis of delusional disorder largely on the person's history. It is particularly important for the doctor to assess the degree of dangerousness, particularly the extent to which the person is willing to act on his delusions.

Prognosis and Treatment

Delusional disorder does not generally lead to severe impairment. However, the person may become progressively involved with the delusion. Most people are able to remain employed.

A good doctor-patient relationship helps in the treatment of delusional disorder. Hospitalization may be needed if the doctor believes the person is dangerous. Antipsychotic drugs are not generally used but are sometimes effective in suppressing symptoms. A long-term treatment goal is to shift the person's focus away from the delusion to a more constructive and gratifying area, although this goal is frequently difficult to achieve.

Schizophrenia

Schizophrenia is a mental disorder characterized by loss of contact with reality (psychosis), hallucinations (usually, hearing voices), delusions (false beliefs), abnormal thinking, flattened affect (restricted range of emotions), diminished motivation, and disturbed work and social functioning.

Schizophrenia is a major health problem throughout the world. The disorder typically strikes young people at the very time they are establishing their independence and can result in lifelong disability and stigma. In terms of personal and economic costs, schizophrenia has been described as among the worst disorders afflicting humankind.

Schizophrenia is listed by the World Health Organization as the ninth leading cause of disability worldwide and affects about 1% of the population, although pockets where schizophrenia is more or less common have been identified. Schizophrenia affects men and women equally. Schizophrenia is more common than Alzheimer's disease and multiple sclerosis.

Determining when onset occurs is often difficult because unfamiliarity with symptoms may delay medical care for several years. The average age for the onset of schizophrenia is 18 for men and 25 for women. Onset in childhood or early adolescence is uncommon. Onset is also uncommon late in life.

Deterioration in social functioning can lead to substance abuse, poverty and homelessness. People with untreated schizophrenia may lose contact with their families and friends and often find themselves living on the streets of large cities.

Causes

What precisely causes schizophrenia is not known, but current research suggests a combination of hereditary and environmental factors. Fundamentally, however, it is a biologic problem, not one caused by poor parenting or a mentally unhealthy environment. People who have a parent or sibling with schizophrenia have about a 10% risk of developing the disorder, compared with a 1% risk among the general population. An identical twin whose co-twin has schizophrenia has about a 50% risk of developing schizophrenia. These statistics suggest a hereditary risk.

Other causes may include problems that occurred before, during, or after birth, such as influenza infection during the 2nd trimester of pregnancy, oxygen deprivation at birth, low birth weight, and mother-infant blood type incompatibility.

Symptoms

The onset of schizophrenia may be sudden, over a period of days or weeks, or slow and insidious, over a period of years. Although the severity and types of symptoms vary among different people with schizophrenia, the symptoms are usually sufficiently severe as to interfere with the ability to work, interact with people, and care for oneself. In some people with schizophrenia, mental ability declines, leading to an impaired ability to pay attention, think in the abstract, and solve problems. The severity of mental impairment is a major determinant of overall disability in people with schizophrenia.

Symptoms may be triggered or worsened by environmental stresses, such as stressful life events. Drug use, including use of marijuana, may trigger or worsen symptoms as well. Overall, the symptoms of schizophrenia fall into three major groups: positive (nondeficit) symptoms, negative (deficit) symptoms, and cognitive impairment. A person may have symptoms from one, two, or all three groups.

Positive symptoms include delusions, hallucinations, thought disorder, and bizarre behaviour. Delusions are false beliefs that usually involve a misinterpretation of perceptions or experiences. For example, people with schizophrenia may experience persecutory delusions, believing that they are being tormented, followed, tricked, or spied on. They may have delusions of reference, believing that passages from books, newspapers, or song lyrics are directed specifically at them. They may have delusions of thought withdrawal or thought insertion, believing that others can read their mind, that their thoughts are being transmitted to others, or that thoughts and impulses are being imposed on them by outside forces. Hallucinations of sound, sight, smell, taste, or touch may occur, although hallucinations of sound (auditory hallucinations) are by far the most common. A person may "hear" voices commenting on his behaviour, conversing with one another, or making critical and abusive comments.

Thought disorder refers to disorganized thinking, which becomes apparent when speech is rambling, shifts from one topic to another, and loses its goal-directed quality. Speech may be mildly disorganized or completely incoherent and incomprehensible. Bizarre behaviour may take the form of childlike silliness, agitation, or inappropriate appearance, hygiene, or conduct. Catatonia is an extreme form of bizarre behaviour in which a person maintains a rigid posture and resists efforts to be moved or, in contrast, displays purposeless and unstimulated motor activity.

Negative symptoms of schizophrenia include blunted affect, poverty of speech, anhedonia, and asociality. Blunted affect refers to a flattening of emotions. The person's face may appear immobile; he makes poor eye contact and lacks emotional expressiveness. Events that would normally make a person laugh or cry produce no response. Poverty of speech refers to a diminishment of thoughts reflected in a decreased amount of speech. Answers to questions may be terse, perhaps one or two words, creating the impression of an inner emptiness. Anhedonia

refers to a diminished capacity to experience pleasure; the person may take little interest in previous activities and spend more time in purposeless ones. Asociality refers to a lack of interest in relationships with other people. These negative symptoms are often associated with a general loss of motivation, sense of purpose, and goals.

Cognitive impairment refers to difficulty in concentrating and remembering, organizing, planning, and problem solving. Some people are unable to concentrate sufficiently to read, follow the story line of a movie or television show, or follow directions. Others are unable to ignore distractions or remain focused on a task. Consequently, work that involves attention to detail, involvement in complicated procedures, and decision making may be impossible.

Types of Schizophrenia

Paranoid schizophrenia is characterized by a preoccupation with delusions or auditory hallucinations; disorganized speech and inappropriate emotions are less prominent. Hebephrenic or disorganized schizophrenia is characterized by disorganized speech, disorganized behaviour, and flat or inappropriate emotions. Catatonic schizophrenia is dominated by physical symptoms such as immobility, excessive motor activity, or the assumption of bizarre postures.

Undifferentiated schizophrenia is characterized by a mixture of symptoms from the other subtypes: delusions and hallucinations, thought disorder and bizarre behaviour, and negative symptoms.

Diagnosis

No definitive test exists to diagnose schizophrenia. A doctor makes the diagnosis on the basis of a comprehensive assessment of the person's history and symptoms. For a diagnosis of schizophrenia to be made, symptoms must persist for at least 6 months and be associated with significant deterioration of work, school, or social functioning. Information from family, friends, or teachers is often important in establishing when the disorder began.

Laboratory tests are often performed to rule out substance abuse or an underlying medical, neurological, or hormonal disorder that can have features of psychosis. Examples of such disorders include brain tumors, temporal lobe epilepsy, thyroid disease, autoimmune disorders, Huntington's disease, liver disease, and side effects of drugs. Testing for drug abuse is sometimes warranted.

People with schizophrenia have brain abnormalities that may be seen on a computed tomography (CT) or magnetic resonance imaging (MRI) scan. However, the abnormalities are not specific enough to be of help in diagnosing schizophrenia.

Prognosis

Adherence to treatment is very important for people with schizophrenia. Without drug treatment, 70 to 80% of people with schizophrenia experience substantial recurrence of symptoms within the first year after diagnosis. Drugs taken continuously can reduce the relapse rate to about 20 to 30% and can lessen symptoms significantly in most people. After discharge from a hospital, a person with schizophrenia who does not take prescribed drugs is very likely to be readmitted within the year; taking drugs as directed dramatically reduces the likelihood of being readmitted.

Despite the proven benefit of drug therapy, half of people with schizophrenia do not take their prescribed drugs. Some do not recognize their illness and resist taking drugs. In other instances, unpleasant side effects lead people to decide to stop taking their drugs. Memory problems, disorganization, or simply a lack of money prevents others from taking their drugs.

Improving adherence to drug therapy is most successful when specific barriers to adherence are addressed. If side effects of drugs are a major problem, a change to a different drug may help. A consistent, trusting relationship with a doctor or other therapist helps some people with schizophrenia to accept their illness more readily and recognize the need for adhering to prescribed treatment.

Over longer periods, the prognosis of schizophrenia varies. In general, one third of people achieve significant and lasting improvement, one third achieve some improvement with intermittent relapses and residual disabilities, and one third experience severe and permanent incapacity. Factors associated with a better prognosis include sudden onset of the disorder, late age at onset, a good level of skills and accomplishments before becoming ill, and having the positive (nondeficit) subtype of the disorder. Factors associated with a poor prognosis include early age of onset, poor social and vocational functioning before becoming ill, a family history of schizophrenia, and having the negative (deficit) subtype of the disorder.

About 10% of people with schizophrenia commit suicide.

Treatment

The general goals of treatment are to reduce the severity of psychotic symptoms, prevent the recurrence of symptomatic episodes and the associated deterioration in functioning, and provide support to allow functioning at the highest level possible. Antipsychotic drugs, rehabilitation and community support activities, and psychotherapy represent the three major components of treatment.

Antipsychotic Drugs: Drugs can be effective in reducing or eliminating symptoms, such as delusions, hallucinations, and disorganized thinking. After the immediate symptoms have cleared, the continued use of antipsychotic drugs substantially reduces the probability of future episodes.

Unfortunately, antipsychotic drugs have significant side effects that can include sedation, muscle stiffness, tremors, weight gain, and motor restlessness. Antipsychotic drugs may also cause tardive dyskinesia, an involuntary movement disorder most often characterized by puckering of the lips and tongue or writhing of the arms or legs. Tardive dyskinesia may not go away even after the drug is discontinued. For tardive dyskinesia that persists, there is no effective treatment. Another side effect of antipsychotic drugs, although rare but potentially fatal, is neuroleptic malignant syndrome, which is characterized by muscle rigidity, fever, high blood pressure, and changes in mental function (for example, confusion and lethargy).

A number of new antipsychotic drugs that cause fewer side effects have become available. These drugs may relieve positive symptoms (such as hallucinations), negative symptoms (such as lack of emotion), and cognitive impairment (such as reduced mental functioning and attention span) to a greater extent than the older antipsychotic drugs.

Clozapine has proven to be effective in up to half of the people for whom other drugs do not work. However, Clozapine can cause serious side effects, such as seizures or potentially fatal bone marrow suppression; thus, it is generally used only for people who have not responded to other antipsychotic drugs. People who take clozapine must have their white blood cell count measured weekly, at least for the first 6 months, so that can be discontinued at the first indication that the number of white blood cells is dropping.

Rehabilitation and Community Support Activities Community support activities, such as on-the-job

coaching, are directed at teaching the skills needed to survive in the community. These skills enable a person with schizophrenia to work, shop, care for himself, manage a household, and get along with others. Although hospitalization may be needed during severe relapses, and involuntary hospitalization may be needed if the person poses a danger to himself or others, the general goal is to have the person live in the community. To achieve this goal, some people may need to live in a supervised apartment or group home where someone can ensure that drugs are taken as prescribed.

A small number of people with schizophrenia are unable to live independently, either because they have severe and unresponsive symptoms or because they lack the skills necessary to live in the community. They usually require full-time care in a safe and supportive setting.

Psychotherapy Generally, the goal of psychotherapy is to establish a collaborative relationship between the person, family, and doctor. That way the person might learn to understand and manage his disorder, to take antipsychotic drugs as prescribed, and to manage stresses that can aggravate the disorder. A good doctor-patient relationship is often a major determinant of successful treatment. Psychotherapy reduces symptoms in some cases and helps prevent relapse in others.

What Is Neuroleptic Malignant Syndrome?

Neuroleptic malignant syndrome is a state of unresponsiveness caused by use of certain antipsychotic drugs. It develops in up to 3% of people who are treated with antipsychotic drugs, usually within the first few weeks of treatment. The syndrome is most common among men who, because they are agitated, are given rapidly increased doses of the drugs or high doses initially.

Symptoms include muscle rigidity, a high temperature, a fast heart rate, a fast breathing rate, high blood pressure, and coma. Damaged muscles release the protein myoglobin, which is excreted in the urine. Myoglobin turns the urine brown (myoglobinuria), and myoglobinuria can result in kidney damage or even kidney failure.

People with this syndrome are usually treated in an intensive care unit. The antipsychotic drug is discontinued, fever is controlled (usually with ice baths and wet towels or with special cooling blankets), and a muscle relaxant is given. Giving sodium bicarbonate intravenously helps prevent myoglobinuria by making the urine alkaline. Most people recover completely; however, almost 30% of people with this syndrome die. After recovery, up to 30% of people develop the syndrome again if they are given the same antipsychotic drug.

SEXUALITY

Introduction

Sexuality is a normal part of the human experience. However, the types of sexual behaviour that are considered normal vary greatly within and among different cultures. In fact, it may be impossible to define "normal" sexuality. There are wide variations not only in "normal" sexual behaviour but also in the frequency of or need for sexual release. Some people desire sexual activity several times a day, whereas others are satisfied with infrequent activity (for example, a few times a year).

Although younger people are often reluctant to view older people as sexually interested, most older people remain interested in sex and report quite satisfying sex lives well into old age.

Problems with sexual function, such as erectile dysfunction in men and dyspareunia, vaginismus, or anorgasmia in women, affect people of all ages, although such problems tend to be more common in older people.

Societal attitudes about sexuality change with time. Examples of such changes can be seen regarding masturbation, homosexuality, and frequent sexual activity with different sex partners.

Masturbation, which was once regarded as a perversion and even a cause of mental disease, is now recognized as a normal sexual activity throughout life. It is estimated that more than 97% of males and 80% of females have masturbated. In general, males masturbate more frequently than females, even if involved in a sexually gratifying relationship. Although masturbation is normal and is often recommended as a "safe sex" option, it may cause guilt and psychological suffering that stems from the disapproving attitudes of others. This can result in considerable distress and can even affect sexual performance.

Homosexuality As with masturbation, homosexuality, once considered abnormal by the medical profession, is no longer considered a disorder; it is widely recognized as a sexual orientation that is present from childhood. An estimated 4 to 5% of adults are involved exclusively in homosexual relationships throughout their lives, with an additional 2 to 5% of people periodically engaging in sex with someone of the same sex (bisexuality). Adolescents may experiment with same-sex play, but this does not necessarily indicate an enduring interest in homosexual or bisexual activity as adults.

Homosexuals discover that they are attracted to people of the same sex, just as heterosexuals discover that they are attracted to people of the opposite sex. The attraction appears to be the end result of biologic and environmental influences and is not a matter of choice. Therefore, the popular term "sexual preference" makes little sense in matters of sexual orientation.

Most homosexuals adjust well to their sexual orientation, although they must overcome widespread societal disapproval and prejudice. This adjustment may take a long time and may be associated with substantial psychological stress. Many homosexual men and women experience bigotry in social situations and in the workplace, adding to their stress. Discrimination based on sexual orientation (or perceived sexual orientation) remains widespread.

Frequent Sexual Activity With Different Partners For some heterosexuals and homosexuals, frequent sexual activity with different partners is a common practice throughout life. This behaviour may serve as a reason to seek professional counselling, because the transmission of certain diseases (for example, HIV infection, hepatitis, syphilis, gonorrhoea, cervical cancer) is linked to having many sex partners and because having many sex partners may signify difficulty in forming meaningful, lasting relationships.

Gender Identity

Gender identity is how a person sees himself or herself, whether masculine, feminine, or somewhere in-between. Gender role is the objective, public presentation in our culture as masculine, feminine, or mixed. For most people, gender identity is consistent with gender role (as when a man has an inner sense of his masculinity and publicly acts in ways that support this feeling).

Gender identity is well established by early childhood (18 to 24 months of age). During childhood, boys come to know they are boys, and girls come to know they are girls. Children sometimes prefer activities considered to be more appropriate for the other sex. However, this does not mean that a young girl who likes to play baseball and wrestle, for example, has a gender identity

problem, as long as she sees herself as, and is content with being, female. Similarly, a boy who plays with dolls and prefers cooking to sports or to rough types of play does not have a gender identity problem as long as he identifies himself as, and is comfortable with being, male.

Children born with genitals that are not clearly male or female do not have a gender identity problem if they are decisively reared as one sex or the other, even if they are raised in the gender role that is opposite their biologic sex pattern. There have been some highly publicized cases, however, in which this approach has failed.

Gender Identity Disorder and Transsexuality

People who experience a significant discrepancy between their anatomy and their inner sense of self as masculine, feminine, mixed, or neutral often have a gender identity disorder. The extreme form of gender identity disorder is called trans-sexuality.

People who are transsexuals believe that they are victims of a biologic accident and that they are cruelly imprisoned within a body incompatible with their gender identity. Most transsexuals are biologic males who identify themselves as females, usually early in childhood, and regard their genitals and masculine features with repugnance. Trans-sexuality appears to occur in about 1 of 30,000 males and 1 of 100,000 females.

Transsexuals may seek psychological help, either to assist them in coping with the difficulties of living in a body that they do not feel comfortable with or to help them through a gender transition. Many transsexuals appear to be helped most by a combination of counselling, hormone therapy, electrolysis, and genital surgery.

Some transsexuals are satisfied with changing their gender role by working, living, and dressing in society as a member of the opposite sex, which may include obtaining 987+identification (such as a driver's license) that reinforces their change in gender role. They may never seek to actually alter their anatomy in any way. Many of these people, who are sometimes referred to as "transgenderists," meet no criteria for a mental health disorder.

Other transsexuals, in addition to adopting the behaviour, dress, and mannerisms of the opposite sex, also receive hormone treatments to change their secondary sex characteristics. In biologic males, use of the female hormone oestrogen causes breast growth and other body changes, such as wasting of the genitals (genital atrophy) and the inability to maintain an erection. In biologic females, use of the male hormone testosterone causes such changes as the growth of facial hair, deepening of the voice, and changes in body odour.

Still other transsexuals seek to undergo sex reassignment surgery. For biological males, this involves removal of the penis and testes and the creation of an artificial vagina. For biological females, this involves removal of the breasts and the internal reproductive organs (uterus and ovaries), closure of the vagina, and creation of an artificial penis. For both sexes, surgery is preceded by use of the appropriate sex hormone (oestrogen in male-to-female transformation, testosterone in female-to-male transformation).

Although transsexuals who undergo sex reassignment surgery are unable to have children, many are able to have quite satisfactory sexual relations. The ability to achieve orgasm is often retained after surgery, and some people report feeling comfortable sexually for the first time. However, few transsexuals endure the sex reassignment process for the sole purpose of being able to function sexually in the opposite sex. Confirmation of gender identity is the usual motivator.

Paraphilias

Paraphilias are attractions that in extreme forms are socially unacceptable deviations from the traditionally held norms of sexual relationships and attractions.

The key features of a paraphilia include repetitive, intense, sexually arousing fantasies or behaviours that usually involve objects (for example, shoes, underwear, leather or rubber products), the infliction of suffering or pain on oneself or one's partner, or having sex with non-consenting people (for example, with children, with helpless people, or in rape situations). Once these arousal patterns are established, usually in late childhood or near puberty, they are often lifelong.

Some degree of variety is very common in healthy adult sexual relationships and fantasies. When people mutually agree to engage in them, non-injurious sexual behaviours of an unusual nature may be an intrinsic part of a loving and caring relationship. When taken to the extreme, however, such sexual behaviours are paraphilias, psychosexual disorders that seriously impair the capacity for affectionate, reciprocal sexual activity. Partners of people with a paraphilia may feel like an object or as if they are unimportant or unnecessary in the sexual relationship.

Paraphilias may take the form of fetishism, transvestic fetishism, pedophilia, exhibitionism, voyeurism, masochism, or sadism, among others. Most people with paraphilias are men, and many have more than one type of paraphilia.

Fetishism

In fetishism, sexual activity makes use of physical objects (the fetish), sometimes in preference to contact with humans. People with fetishes may become sexually stimulated and gratified by wearing another person's undergarments, wearing rubber or leather, or holding, rubbing, or smelling objects, such as high-heeled shoes. People with this disorder may not be able to function sexually without their fetish.

Transvestic Fetishism

In transvestic fetishism, a man prefers to wear women's clothing, or, far less commonly, a woman prefers to wear men's clothing (cross-dressing). In neither case, however, does the person wish to change his or her sex, as transsexuals do. Cross-dressing is not always considered a mental health disorder and may not adversely affect a couple's sexual relationship.

Transvestic fetishism is a disorder only if it causes distress, results in impairment of some type, or involves "daredevil" behaviour likely to lead to injury, loss of a job, or imprisonment. Transvestites also cross-dress for reasons other than sexual stimulation, for example, to reduce anxiety, to relax, or, in the case of male transvestites, to experiment with the feminine side of their otherwise male personalities.

Paedophilia

Paedophilia is a preference for sexual activity with young children. In Western societies, paedophilia is defined as sexual fantasy about or sexual relations with a child younger than 13 by a person 16 or older. Some paedophiles are attracted only to children, often of a specific age range or developmental stage, whereas others are attracted to both children and adults.

Although state laws vary, the law generally considers a person older than 18 to be committing

statutory rape if the victim is 16 or younger. Statutory rape cases often do not meet the definition of paedophilia, highlighting the somewhat arbitrary nature of selecting a specific age cut off point in a medical or legal definition.

Paedophilia is much more common among men than among women. Both boys and girls can be victims, although more reported cases involve girls. Paedophiles may focus only on children within their families (incest), or they may prey on children in the community. Force or coercion may be used to engage children sexually, and threats may be invoked to prevent disclosure by the victim.

Paedophilia can be treated with psychotherapy and drugs that alter the sex drive, with varying results. Such treatment may be sought voluntarily or only after criminal apprehension and legal action. Incarceration, even long-term, does not change paedophilic desires or fantasies.

Exhibitionism

In exhibitionism, a person (usually male) exposes his genitals to unsuspecting strangers and becomes sexually excited when doing so. Further sexual contact is almost never sought, so exhibitionists rarely commit rape. Most exhibitionists are younger than 40 and may or may not be married. Exposure of genitals to unsuspecting strangers for sexual excitement is rare among women. Provocative dressing by women is increasingly accepted by society as normal. In addition, social venues in which women can expose themselves are not uncommon, and such behaviour may not constitute a mental health disorder.

Voyeurism

In voyeurism, a person becomes sexually aroused by watching someone who is disrobing, naked, or engaged in sexual activity. It is the act of observing (peeping) that is arousing, not sexual activity with the observed person. Some degree of voyeurism is particularly common, more among boys and men but increasingly among women. Society often regards mild forms of this behaviour as normal. As a disorder, voyeurism is much more common among men; it may become the preferred method of sexual activity and consume countless hours of watching. The amount and variety of sexually explicit materials and shows available to men and women have increased significantly, but engaging in these activities lacks the element of secret observation that is the hallmark of voyeurism. The Internet has made voyeurism easier to engage in without the neighbourhood prowling traditionally associated with this behaviour.

Sexual Masochism and Sadism

Sexual masochism involves acts in which a person derives sexual excitement from being humiliated, beaten, bound, or otherwise abused. Sexual sadism involves acts in which a person derives sexual pleasure from inflicting physical or psychological suffering on another person. Some people act out their sadistic urges with a consenting partner (who may have sexual masochism); rarely, some act them out on non-consenting victims. Fantasies of total control and dominance are often important, and the sadist may bind and gag the partner in elaborate ways.

Some amount of sadism and masochism is commonly play-acted in healthy sexual relationships, and mutually compatible partners often seek one another out. For example, the use of silk handkerchiefs for simulated bondage and mild spanking during sexual activity are common practices between consenting partners and are not considered sadomasochistic.

In contrast, the disorder of sexual masochism or of sexual sadism takes these acts to an extreme and can result in severe bodily or psychological harm and even death. For example, masochistic

sexual activity may involve asphyxiophilia, whereby the person is partially choked or strangled (either by a partner or by the self-application of a noose around the neck). A temporary decrease in oxygen to the brain at the point of orgasm is sought as an enhancement to sexual release, but the practice may accidentally result in death.

SOMATIFORM DISORDERS

Introduction

Somatiform disorders encompass several mental health disorders in which people report physical symptoms or concerns that suggest but are not explained by a physical disorder or report a perceived defect in appearance. These symptoms or concerns cause significant distress or interfere with daily functioning.

Somatiform disorder is a relatively new term for what many people used to refer to as psychosomatic disorder. In somatiform disorders, the physical symptoms cannot be explained by any underlying physical disease. In some cases of somatiform disorders, a physical disease is present that might explain the occurrence but not the severity or duration of the physical symptoms. People with somatiform disorders are not faking illness; they sincerely believe that they have a serious physical problem.

The most commonly diagnosed somatiform disorders are somatization disorder, conversion disorder, hypochondriasis, body dysmorphic disorder, and pain disorder. The individual people who are diagnosed with a somatiform disorder vary greatly. Treatment approaches also vary according to which somatiform disorder a person has.

Body Dysmorphic Disorder

In body dysmorphic disorder, a preoccupation with a perceived defect in appearance results in significant distress or impaired functioning.

People with body dysmorphic disorder believe they have a defect in appearance that in reality is nonexistent or slight. The disorder usually begins in adolescence and is believed to occur in men and women equally.

Symptoms

Symptoms may develop gradually or abruptly, vary in intensity, and tend to persist without treatment. Concerns commonly involve the face or head but may involve any body part or several parts and may change from one body part to another. A person may be concerned about hair thinning, acne, wrinkles, scars, colour of complexion, or excessive facial hair. Or a person may focus on the shape or size of a body part, such as the nose, eyes, ears, mouth, breasts, or buttocks. Some young men with athletic builds think that they are puny and obsessively try to gain weight and muscle.

Most people with body dysmorphic disorder have difficulty controlling their preoccupation and spend hours each day thinking about their perceived defect. Many people check themselves often in mirrors, others avoid mirrors, and still others alternate between the two behaviours. Most try to camouflage their imagined defect—for example, by growing a beard to hide "scars" or by wearing a hat to cover "thinning" hair. Many undergo medical, dental, or surgical treatment, sometimes repeatedly, to correct their perceived defect, which may intensify their preoccupation.

Because people with body dysmorphic disorder feel self-conscious, they may avoid appearing in public, including going to work and participating in social activities. Some leave their homes only at night; others not at all. This behaviour can result in social isolation. Distress and dysfunction associated with the disorder can lead to repeated hospitalization and suicidal behaviour.

Diagnosis and Treatment

Because people with body dysmorphic disorder are reluctant to reveal their symptoms, the disorder may go undiagnosed for years. It is distinguished from normal concerns about appearance because it is time-consuming and causes significant distress or impairs functioning.

Information regarding effective treatment is limited. Treatment with serotonin reuptake inhibitors, a class of antidepressants, is often effective. Cognitive-behaviour therapy may also diminish symptoms.

Conversion Disorder

In conversion disorder, physical symptoms that are caused by psychological conflict are unconsciously converted to resemble those of a neurological disorder.

Conversion disorder, once referred to as hysteria, is caused by psychological stress and conflict, which people with this disorder unconsciously convert into physical symptoms. Although conversion disorder tends to occur during adolescence or early adulthood, it may first appear at any age. The disorder is generally believed to be somewhat more common in women than in men.

Symptoms and Diagnosis

The symptoms of conversion disorder are limited to those that suggest a nervous system dysfunction—usually paralysis of an arm or leg or loss of sensation in a part of the body. Other symptoms may include simulated seizures and the loss of one of the special senses, such as vision or hearing.

Generally, the onset of symptoms is linked to some distressing social or psychological event. A person may have only a single episode in his lifetime or sporadic episodes, but usually the episodes are brief. If people with conversion symptoms are hospitalized, they generally improve within 2 weeks. However, 20 to 25% of those people who are hospitalized have recurrences within a year, and for some people, symptoms become chronic.

The diagnosis tends to be initially difficult for a doctor to make because the person believes that the symptoms stem from a physical problem and does not want to be seen by a therapist. Also, doctors take great care to be certain no physical disorder is responsible for the symptoms. Thus, the diagnosis is usually considered only after extensive physical examinations and tests fail to reveal a physical disorder that can fully account for the symptoms.

Treatment

A trusting doctor-patient relationship is essential. As the doctor evaluates a possible physical disorder and reassures the person that the symptoms do not indicate a serious underlying disease, the person usually begins to feel better and the symptoms fade. When a psychologically distressing situation has preceded the onset of symptoms, psychotherapy can be particularly effective.

Various treatment methods have been tried. Although some may be helpful, none of them have been uniformly effective. In one method, hypnotherapy, the person is hypnotized, and psychological issues that may be responsible for the symptoms are identified and discussed. Discussion continues after the hypnosis, when the person is fully alert. Another (rarely used) method is narcoanalysis, a procedure similar to hypnosis except that the person is given a sedative to induce a state of semisleep. Behaviour therapy, including relaxation training, has also been effective for some people.

Hypochondriasis

Hypochondriasis is a disorder in which a person is preoccupied with the fear of having a serious disease.

Hypochondriasis occurs most commonly between the ages of 20 and 30 and appears to affect both sexes equally. Some people with hypochondriasis also have depression or anxiety.

In hypochondriasis, the person's concerns about having a serious disease are often based on a misinterpretation of normal bodily functions. Examination and reassurance by a doctor do not relieve their concerns; people with hypochondriasis tend to believe that the doctor has somehow failed to find the underlying disease.

Symptoms and Diagnosis

Hypochondriasis is suspected when a healthy person with minor symptoms is preoccupied with the significance of those symptoms and does not respond to reassurance after thorough evaluation. Personal relationships and work performance often suffer as the person becomes increasingly concerned with health issues. The diagnosis of hypochondriasis is confirmed when the situation persists for at least 6 months and the person's symptoms cannot be attributed to depression or another mental health disorder.

Treatment

Treatment is difficult, because a person with hypochondriasis is convinced that something inside the body is seriously wrong. Reassurance does not relieve these concerns. However, a trusting relationship with a caring doctor is beneficial, especially if regular visits are scheduled. If the person's symptoms are not adequately relieved, the person may benefit from referral to a therapist for further evaluation and treatment, along with continuation of the primary doctor's care. Treatment with serotonin reuptake inhibitors, a class of antidepressants, may be effective. Cognitive-behaviour therapy may also relieve symptoms.

Somatization Disorder

Somatization disorder is a chronic, severe disorder characterized by many recurring physical symptoms, particularly some combination of pain and digestive, sexual, and neurological symptoms, that cannot be explained by a physical disorder.

Somatization disorder often runs in families and occurs predominantly in women. Male relatives of women with the disorder tend to have a high incidence of socially disapproved behaviour (antisocial personality) and substance-related disorders. People with somatization disorder tend to also have personality disorders and exaggerated dependence on others (dependent personality).

The physical symptoms that people with somatization disorder experience appear to be a way of

communicating a plea for help and attention. The intensity and persistence of the symptoms reflect the person's intense desire to be cared for in every aspect of life. The symptoms may also serve other purposes, such as allowing the person to avoid the responsibilities of adulthood. The symptoms tend to be uncomfortable and prevent the person from engaging in many enjoyable pursuits, suggesting that the person also suffers feelings of worthlessness and guilt.

Symptoms

Symptoms appear first in adolescence or early adulthood. A person with somatization disorder has many vague physical complaints, often described as "unbearable," "beyond description," or "the worst imaginable." Any part of the body may be affected, and specific symptoms and their frequency vary among different cultures. Typical symptoms include headaches, nausea and vomiting, abdominal pain, diarrhoea or constipation, painful menstrual periods, fatigue, fainting, pain during intercourse, and loss of sexual desire. Men frequently complain of erectile or other sexual dysfunction. Anxiety and depression also occur.

People with somatization disorder increasingly demand help and emotional support and may become enraged when they feel their needs are not being met. In an attempt to manipulate others, they may threaten or attempt suicide. Often dissatisfied with their medical care, they go from doctor to doctor.

Diagnosis

People with somatization disorder are not aware that their basic problem is psychological, so they press their doctors for diagnostic tests and treatments. The doctor usually conducts many physical examinations and tests to determine whether the person has a physical disorder that adequately explains the symptoms. Referrals to specialists for consultations are common, even if the person has developed a reasonably satisfactory relationship with one doctor.

Once a doctor determines that the problem is psychological, somatization disorder can be distinguished from similar mental health disorders by its many symptoms and their tendency to persist over a period of years. Adding to the diagnosis are the dramatic nature of the complaints and the person's dependent and sometimes suicidal behaviour.

Prognosis and Treatment

Somatization disorder tends to fluctuate in severity but persists throughout life. Complete relief of symptoms for an extended period is rare. Some people become more depressed after many years. Suicide is a risk.

Treatment is extremely difficult. People with somatization disorder tend to be frustrated and angered by any suggestion that their symptoms are psychological. Therefore, doctors cannot deal directly with the problem as a psychological one, even when they recognize it. Drug therapy does not help much, and even if the person agrees to a mental health consultation, specific psychotherapeutic techniques are not likely to be beneficial. Usually, a person with this disorder is best helped by a trusting relationship with a doctor, who can offer symptomatic relief and protect the person from very costly and possibly dangerous diagnostic or therapeutic procedures. However, the doctor must remain alert to the possibility that the person may develop an actual physical disorder.

SUICIDAL BEHAVIOUR

Suicidal behaviour

Suicidal behaviour is characterized by a successful or unsuccessful attempt to kill oneself.

Suicidal behaviour is an unmistakable signal that a person has feelings of desperation and hopelessness. Suicidal behaviour includes attempted suicide, suicide gestures, and completed suicide. An attempted suicide is a suicidal action that is not fatal. If an attempted suicide involves a suicidal action unlikely to have any potential of being fatal, it is called a suicide gesture. A person taking such an action (for example, ingesting six acetaminophene (tablets) may be making a plea for help or attention without having any intention of actually ending his life. A completed suicide is a suicidal action that results in death.

Information on the frequency of suicide comes mainly from death certificates and inquest reports and probably underestimates the true rate. Even so, suicidal behaviour clearly is an all-too-common health problem. Although most suicidal behaviour does not result in death, 10% of people who try to kill themselves using a potentially fatal means do die from their actions.

Suicidal behaviour occurs in people of all ages and of both sexes. Suicide is the second leading cause of death among adolescents and is one of the top 10 causes of death among adults in the United States. The highest rate of completed suicide is among men older than 70. In contrast, suicide attempts are more common before middle age. Attempted suicide is particularly common among adolescent girls and single men in their 30s. Across all age groups, women attempt suicide 2 to 3 times more often than men, but men are more apt to die in their attempts.

Married people of either sex, particularly those in a secure relationship, have a much lower suicide rate than single people. People who live alone because of separation, divorce, or a spouse's death have higher rates of attempted and completed suicides. Having a family member who has attempted suicide may increase the risk as well.

Suicide among black women has increased 80% in the last 20 years, so that the overall rate for blacks now equals that for whites, especially in urban areas. Among Native Americans, the rate has also risen recently; in some tribes, it is 5 times the national average. Suicide rates are higher in urban areas than in rural areas worldwide. Many suicides take place in prisons.

Practicing members of most religious groups (particularly Roman Catholics and Jews) are less likely to commit suicide. Such people are generally supported by their beliefs and are provided with close social bonds protecting against acts of self-destruction. However, religious affiliation and strong religious beliefs do not necessarily prevent individual impetuous, unpremeditated suicidal acts during times of frustration, anger, and despair, especially when accompanied by delusions of guilt and unworthiness.

Suicide notes are left by about one of four people who complete suicide. The notes often refer to personal relationships and events that will follow the person's death. Notes left by older people often express concern for those left behind, whereas those of younger people may express anger or vindictiveness. The content of the note may indicate that the person had a mental health disorder that led to the suicidal act.

Causes

Suicidal behaviours usually result from the interaction of several factors, the most common of which is depression. In fact, depression is involved in over 50% of attempted suicides. Marital

problems, unhappy or ended love affairs, disputes with parents (among adolescents), or the recent loss of a loved one (particularly among older people) may precipitate the depression. Often, one factor, such as a disruption of an important relationship, is the last straw.

Depression associated with a medical disorder may lead to a suicide attempt. Most medical disorders associated with increased suicide rates either directly affect the nervous system and brain (such as AIDS, dementia, or temporal lobe epilepsy) or involve treatments that can cause depression (such as certain drugs used to treat high blood pressure). People whose depression includes anxiety or features of psychosis, such as false beliefs (delusions), may be at higher risk of suicide than those whose depression does not include these features.

People who have had traumatic childhood experiences, particularly the distresses of a broken home, parental deprivation, or abuse, are more likely to attempt suicide, perhaps because they are at higher risk of becoming depressed. Attempted suicide is also more likely among battered wives, many of whom were abused as children.

Depression may be intensified by the use of alcohol, which in turn makes suicidal behaviour more likely. The use of alcohol diminishes self-control as well. About 30% of people who attempt suicide drink alcohol before the attempt. Because alcoholism, particularly binge drinking, often causes deep feelings of remorse during dry periods, alcoholics are suicide-prone even when sober.

In addition to depression, other mental health disorders put people at risk of suicide. People with schizophrenia and other psychotic disorders may hear voices (auditory hallucinations) commanding them to kill themselves. People with borderline personality disorder or antisocial personality disorder, especially those with a history of violent behaviour, may use suicide gestures or attempted suicide as a means of getting back at someone or of making a statement.

Methods

The choice of method often is influenced by cultural factors and availability and may or may not reflect the seriousness of intent. Some methods (for example, jumping from a tall building) make survival virtually impossible, whereas other methods (for example, overdosing on drugs) make rescue possible. However, even if a person uses a method that proves not to be fatal, the intent may have been just as serious as that of a person whose method was fatal.

Drug overdose and self-poisoning are two of the most common methods used in suicide attempts. Acetaminophen is now the most commonly used drug in attempted suicide, but antidepressants or a combination of drugs are also commonly used.

Violent methods, such as gunshots and hanging, are uncommon among attempted suicides because they usually result in death. Of completed suicides, a gunshot is the method most frequently used in the United States. It is a method predominantly used by males. Females are more likely to use non-violent methods, such as poisoning, drug overdose, or drowning.

Prevention

Although some attempted or completed suicides come as a shock even to family and friends, clear warnings are given in most cases. Any suicide threat or suicide attempt is a plea for help and must be taken seriously. If the threat or attempt is ignored, a life may be lost.

If a person is threatening or has already attempted suicide, the police should be contacted immediately so that emergency services can arrive as soon as possible. Until help arrives, the

person should be spoken to in a calm, supportive manner.

A doctor usually hospitalizes a person who has threatened or attempted suicide. Even if the person does not agree to hospitalization, most states allow a doctor to hospitalize a person against his wishes if the doctor believes that the person is at high risk of harming himself.

Impact of Suicide

Any suicidal act has a marked emotional effect on all involved. The person's family, friends, and doctor may feel guilt, shame, and remorse at not having prevented the suicide. They may also feel anger toward the person. Eventually, they may realize that they could not have prevented the suicide. Sometimes a grief counsellor or a self-help group, such as Survivors of Suicide, can help family and friends deal with their feelings of guilt and sorrow. The primary care doctor or local mental health services (for example, at the county or state level) can often help locate these resources. In addition, national organizations, such as the American Foundation for Suicide Prevention, often maintain directories of local support groups. Resources are available on the Internet as well.

The effect of attempted suicide is similar. However, family members and friends have the opportunity to resolve their feelings by responding appropriately to the person's cry for help.

High-Risk Factors for Suicide

Over age 55

Male

Painful or disabling illness

Living alone

Debt or poverty

Bereavement

Humiliation or disgrace

Depression, especially associated with psychosis or anxiety

Persistence of sadness even when other symptoms of depression are getting better

History of drug or alcohol abuse

History of prior suicide attempts

Family history of suicide

Family violence, including

physical or sexual abuse

Suicidal preoccupation and talk

Well-defined plans for suicide

ALCOHOL AND DRUG USE, ABUSE AND DEPENDENCE

Introduction

Drugs are an integral part of everyday life for many people, and drug use among adolescents remains high. The legality and social acceptance of a particular drug often depend on what it is used for, what its effects are, and who is using it. For example, use of marijuana for pleasure is illegal and considered socially unacceptable by many people, but use of marijuana to relieve nausea in a person with advanced cancer has been legalized by some governments and is viewed as acceptable by some people. The legality and social acceptance of a drug often vary among

different societies or countries. Legality and acceptance may also change within a society or country over time, as has happened with alcohol in the United States.

Many drugs, some legal and some not, alter the mind. Some mind-altering drugs affect brain function each time they are used, regardless of how much is used. Other mind-altering drugs affect brain function only if a large amount is used or if it is used continually. Some drugs affect the brain in such a way that a person wants or feels a need to use the drug again and again (craving).

Doctors may suspect problems created by the use of mind-altering drugs when they notice changes in mood or behaviour. Specific questions may then be asked about potential consequences of prolonged use of specific drugs. Blood and urine tests are sometimes used to confirm suspicions that a person has been taking certain mind-altering drugs.

The problems created by use of mind-altering drugs are given many different terms, for example, drug abuse, drug dependence, and drug addiction. Doctors and other experts, in treating these problems, often disagree about the exact meaning of these terms.

Drug Abuse Drug abuse is the use of a mind-altering drug without medical need, in an amount large enough or over a period long enough to threaten the quality of life or health and safety of the user or others. Many people use drugs without medical need but keep that use under control so that it does not threaten their health or adversely affect their functioning.

Taking a drug that does not usually alter the mind is still considered abusive if the drug is taken without medical need and if the drug endangers the quality of life or health and safety of the user or others. Drug abuse occurs in all socioeconomic groups and involves highly educated and professional people as well as those who are uneducated and unemployed.

Overdose of a drug may occur as part of abuse. With some drugs, an overdose may be profoundly frightening or even fatal.

Other Drugs of Abuse

Although mind-altering drugs typically are those that have potential for abuse, several other drugs that do not alter the mind (or do so only occasionally) are often taken without medical need, even when doing so endangers the quality of life or health and safety of the user. Using a drug this way is considered drug abuse.

People who stop abusing any of these drugs do not experience withdrawal symptoms, but they may experience medical problems when the drug is discontinued abruptly (problems that are usually preventable if discontinuation is supervised by a doctor).

Anabolic Steroids

Anabolic steroids are very similar to the hormone testosterone. Anabolic steroids have many physical effects on the body, including muscle growth and increased strength as well as increased energy level. Thus, anabolic steroids are often abused to gain a competitive edge in sports. Users are often athletes, typically football players, wrestlers, or weight lifters, and almost all users are male.

Many side effects are associated with the abuse of anabolic steroids. Very high doses of anabolic steroids may cause erratic mood swings, irrational behaviour, and increased aggressiveness (often

called steroid rage). Anabolic steroids can damage the liver and cause jaundice. Regular use of any amount also tends to increase body hair. Acne commonly gets worse with anabolic steroid use and is one of the few side effects for which an adolescent may visit a doctor. Laboratory tests can measure anabolic steroid breakdown products in the urine.

Growth Hormone

Growth hormone is produced by the brain to help the body control how protein, carbohydrates, and fats are used to stimulate growth. Growth hormone is also manufactured as a drug and is sometimes given to children of small stature because their body is unable to make enough growth hormone. Some athletes abuse growth hormone because they believe it will increase their muscle growth and strength while decreasing their body fat.

Use of growth hormone without medical need over a long period can cause an increase in fat levels in the blood, diabetes, and an increase in heart size that may result in heart failure. Laboratory tests to measure growth hormone not made by a person's body are not routinely available.

Erythropoietin and Darbepoietin

Erythropoietin is a hormone produced by the kidney that stimulates the bone marrow to produce red blood cells. Erythropoietin is also manufactured as a drug and is routinely given to many people with anemia resulting from kidney failure as well as to people with certain other types of anemia. Darbepoietin is a drug similar to erythropoietin that is also used for people with certain kinds of anemia. Some athletes abuse these drugs because they believe that with more red blood cells more oxygen will get to their muscles, enabling them to perform better.

Erythropoietin or darbepoietin use without medical need may change the body's regulation of red blood cell production, so that the number of red blood cells suddenly decreases when erythropoietin or darbepoietin use is discontinued. Laboratory tests to measure erythropoietin not made by a person's body are not routinely available.

Diuretics

Diuretics are drugs that speed elimination of salt and water by the kidneys. Diuretics are used to treat a variety of diseases, including heart failure and high blood pressure. However, some people, including athletes and people with eating disorders such as anorexia nervosa, abuse diuretics to help them lose weight quickly. Inappropriate use of diuretics may cause dehydration and severe deficiencies of electrolytes such as potassium.

Ipecac Syrup

Ipecac syrup is a drug that triggers vomiting. It is used to treat children who have swallowed chemicals or poisons. However, people with eating disorders such as anorexia nervosa often abuse ipecac syrup to help them lose weight. Inappropriate use of ipecac may cause diarrhoea, severe deficiencies of electrolytes, weakness, irregular heart rhythms, and heart failure.

Laxatives

Laxatives are drugs that promote bowel movements and are used to treat constipation. However, people who falsely believe they must have frequent bowel movements as part of being healthy often abuse laxatives. In addition, people with eating disorders such as anorexia nervosa sometimes abuse laxatives because they believe doing so will help them lose weight.

Laxatives used often and without medical need may cause dehydration and severe deficiencies of electrolytes. Regular use of laxatives can also interfere with absorption of other drugs, causing them to stop working. Inappropriate use of laxatives over a long period can damage the muscle layers of the large intestine, which can lead to severe constipation.

Drug dependence is a compelling need to continue taking a mind-altering drug to induce pleasure or to relieve anxiety and tension and avoid discomfort. Drug dependence is caused by a combination of biologic and psychological factors. Drugs that cause dependence may produce euphoria, feelings of increased mental and physical ability, and altered sense perceptions.

Dependence can be very powerful and difficult to overcome. The body adapts to the continuous use of a drug that produces dependence, leading to tolerance and to withdrawal symptoms when use stops. Tolerance is the need to use progressively larger amounts of a drug to reproduce the effects originally achieved with the starting amount.

Withdrawal symptoms occur when drug use is stopped or when the drug's effects are blocked by another drug. A person undergoing withdrawal feels sick and may develop headaches, diarrhoea, or shaking (tremors). Withdrawal can evoke a serious and even life-threatening illness.

Drug Addiction is the disruptive behaviour or activity associated with obtaining and using a drug that a person is dependent on. Addiction generally interferes with the ability to work, study, or interact normally with family and friends. A person can become dependent on illegal drugs or legal ones and can become dependent when a drug is used for a medical need or for less acceptable reasons. However, the behaviour or activity associated with obtaining and using a drug is likely to vary tremendously based on the legality and acceptance of that drug. Obtaining a legal drug to meet a medical need is often as unremarkable as going to the doctor, getting a prescription, and then going to the pharmacy. However, for an illegal drug or a legal drug used without medical need and for unacceptable reasons, the behaviour or activity may include lying and stealing.

When a person with advanced cancer becomes dependent on an opioid drug such as morphine, his behaviour is not usually considered an addiction. However, when a person dependent on, for example, heroin steals to have money to buy heroin and lies to family and friends about his whereabouts or what he is doing, his behaviour is considered an addiction.

At times, family members or friends may behave in ways that allow an addict to continue to use drugs or alcohol; these people are called enablers (also referred to as co-dependents when their own needs are intertwined with perpetuating the addict's use of his addictive substance). Enablers may call in sick for an addict or make excuses for the addict's behaviour. The enabler may plead with the addict to stop using drugs or alcohol but rarely does anything else to help the addict change his behaviour.

A pregnant addict exposes her foetus to the drugs she is using. Often, a pregnant addict does not admit to her doctor that she is using drugs or alcohol. The foetus may become dependent and may develop serious defects as a result of the mother's drug use. Soon after delivery, the newborn can experience severe or even fatal withdrawal, particularly when the doctor has not been informed of the mother's addiction.

ALCOHOLISM

Nearly 8% of adults in the United States have some problem with alcohol use. Alcoholism is the most extreme alcohol use disorder. It is characterized by excessive drinking, unsuccessful attempts at stopping drinking, and continued drinking despite adverse social and occupational consequences. Men are 4 times more likely than women to become alcoholics.

Of the people who drink alcohol, about 10% become alcoholics. People who become alcoholics have been regularly using alcohol in excessive amounts over a prolonged period of time and are

dependent on alcohol. The amount of drinking that takes place on an average day before a person becomes an alcoholic varies widely, but it may be as little as two drinks per day for women and three drinks for men (one drink is equivalent to 12 ounces of beer, 5 ounces of wine, or 1½ ounces of liquor, such as whiskey). Many alcoholics are also binge drinkers, meaning that they may drink five or more drinks on many days and little or none on a few days.

People of all ages are susceptible to alcoholism and other alcohol use disorders. Blood relatives of alcoholics have a higher rate of alcohol use disorders than do people at random, and alcohol use disorders are more likely to develop in biologic children of alcoholics than in adopted children. Increasingly, adolescents have alcohol problems, with especially disastrous consequences. Older adults develop higher alcohol levels in the blood per amount of alcohol consumed compared with younger adults. This tendency is primarily due to a decrease in muscle tissue and an increase in fat tissue that occurs in most people as they age.

Alcoholism leads to many destructive behaviours. Drunkenness may disrupt family and social relationships; married couples often divorce. Extreme absenteeism from work can lead to unemployment. Alcoholics often cannot control their behaviour, tend to drive while drunk, and suffer physical injury from falls, fights, or motor vehicle accidents. Some alcoholics become violent. Alcoholism in men is often associated with domestic violence against women. Other alcohol use disorders may fall just short of the definition of alcoholism. A person can have a significant problem with alcohol use but be able to fulfil work and family responsibilities. However, the excessive alcohol use involved in these alcohol use disorders still exacts a terrible toll on the person's body, leading to many physical and mental health problems.

Causes

Alcohol use disorders involve heredity to some extent. Some research suggests that people at risk of alcoholism are less easily intoxicated than non-alcoholics; that is, their brains are less sensitive to the effects of alcohol.

Aside from a possible hereditary risk, certain background and personality traits may predispose a person to alcohol use disorders. Alcoholics frequently come from broken homes, and relationships with their parents are often disturbed. Alcoholics tend to feel isolated, lonely, shy, depressed, or hostile. They may exhibit self-destructive behaviour and may be sexually immature. Whether such traits are the cause of alcoholism or the result is not certain.

Symptoms and Complications

Because alcohol is absorbed faster than it is processed (metabolized) and eliminated from the body, alcohol levels in the blood rise rapidly. Effects can occur within a few minutes of drinking.

Small amounts (for example, ½ to 1½ ounces of pure alcohol, or one to three drinks—resulting in a blood level of about 0.05 grams per decilitre, or 0.05%) can act as a stimulant, often making the person giddy and talkative, and perhaps even boisterous and violent. Larger amounts (usually resulting in blood levels above 0.08 grams per decilitre or 0.08%) depress brain function, resulting in slowed, impaired movements, unsteadiness, and sleepiness. As the alcohol is slowly metabolized, the process may reverse, such that a sedated person once again becomes agitated and violent. Very large amounts (resulting in blood levels above 0.30 grams per decilitre, or 0.3%) can lead to coma and death.

Prolonged use of excessive amounts of alcohol damages many organs of the body, particularly the liver, brain, and heart. Like many other drugs, alcohol tends to induce tolerance, so that people

who regularly have more than two drinks a day can drink more alcohol than non-drinkers without becoming intoxicated. People who drink excessively over longer periods also can become tolerant to other drugs that depress brain function, such as barbiturates or benzodiazepines.

If an alcoholic who has been drinking continually for a period of time suddenly stops drinking, withdrawal symptoms are likely. Alcohol withdrawal usually begins 12 to 48 hours after drinking stops. Mild symptoms include tremor, weakness, sweating, and nausea. Some people develop seizures (called alcoholic epilepsy or rum fits). Heavy drinkers who stop drinking may develop alcoholic hallucinosis, in which they hear voices that seem accusatory and threatening, causing apprehension and terror. Alcoholic hallucinosis may last for days and can be controlled with antipsychotic drugs, such as chlorpromazine or thioridazine.

AMPHETAMINES

Among the drugs classified as amphetamines are amphetamine, methamphetamine (speed, crystal), and methylenedioxymethamphetamine (MDMA, Ecstasy, or Adam). Methamphetamine is the most commonly used amphetamine in the United States. Use of MDMA is growing in popularity. Amphetamines are usually taken by mouth but can be snorted, smoked, or injected. Amphetamines may be used almost continuously or used intermittently. Some amphetamines are not approved for medical use, and some are manufactured and used illegally.

Some amphetamine abusers are depressed and seek the mood-elevating effects of these stimulants to temporarily relieve the depression. Others tend to use them in high energy activities, such as at dance parties. Amphetamines cause the release of increased amounts of dopamine in the brain, which is the likely cause of mood elevation. MDMA differs from the other amphetamines, in that it interferes with the reuptake of serotonin (one of the body's neurotransmitters) in the brain. Amphetamine users frequently develop dependence.

Symptoms and Complications

Amphetamines increase alertness (reduce fatigue), heighten concentration, decrease appetite, and enhance physical performance. They may induce a feeling of well-being, euphoria, and loss of inhibition.

In addition to stimulating the brain, amphetamines increase blood pressure and heart rate. Heart attacks have occurred, even in healthy young athletes. Blood pressure may become so high that a blood vessel in the brain ruptures, causing a stroke. Complications are more likely when drugs such as MDMA are used in warm rooms with little ventilation, when the user is very active physically (for example, dancing fast), or when the user sweats heavily and does not drink enough water to restore lost fluids.

People who habitually use amphetamines rapidly develop tolerance as part of their dependence. The amount used ultimately may exceed several hundred times the original dose. Most people using very high doses may become psychotic, because amphetamines can cause severe anxiety, paranoia, and a distorted sense of reality. Psychotic reactions include auditory and visual hallucinations (hearing and seeing things that are not there) and a feeling of having unlimited power (omnipotence). Although these effects can occur in any user, people with a mental health disorder, such as schizophrenia, are more vulnerable to them.

Symptoms opposite to the drug's effects occur when an amphetamine is suddenly discontinued. A person dependent on amphetamines becomes tired or sleepy—an effect that may last for 2 or 3 days after stopping the drug. Some people are severely anxious and restless, and some, especially those with a tendency toward depression, become depressed when they stop. They may become

suicidal but may lack the energy to attempt suicide for several days.

Treatment

Emergency treatment is needed only rarely. A person experiencing delusions and hallucinations may be given an antipsychotic drug, such as chlorpromazine, which has a calming effect and relieves distress. However, an antipsychotic drug may sharply lower blood pressure. Usually, reassurance and a quiet, non-threatening environment help a person to recover.

Treatment may be needed to correct dehydration and other complications of use. Long-term users may need to be hospitalized during drug withdrawal for observance of suicidal behaviour. Otherwise, no treatment is generally needed for people experiencing withdrawal.

ANTI-ANXIETY DRUGS AND SEDATIVES

Prescription drugs used to treat anxiety (anti-anxiety drugs) and induce sleep (sedatives or sleep aids) can cause dependence. Such drugs include benzodiazepines, barbiturates, glutethimide, chloral hydrate, and meprobamate. Each works in a different way, and each has a different dependency and tolerance potential. Most people dependent on anti-anxiety drugs and sedatives started out taking them for a medical reason. Dependency can develop within as little as 2 weeks of continual use.

Symptoms and Complications

Anti-anxiety drugs and sedatives decrease alertness and can result in slurred speech, poor coordination, confusion, and slowed breathing. These drugs may make a person alternately depressed and anxious. Some people experience memory loss, faulty judgment, a shortened attention span, and frightening shifts in their emotions. Older people may appear demented, speaking slowly and have difficulty in thinking and in understanding others. Falls may occur that result in broken bones, especially hip fractures.

People who have used sedatives for more than a few days often feel that they cannot sleep without them. They may become anxious and nervous at bedtime without the drugs and may awaken irritable.

Abrupt withdrawal from anti-anxiety drugs and sedatives can produce a severe, frightening, and potentially life-threatening reaction, much like alcohol withdrawal (delirium tremens). The time course of withdrawal reactions varies from drug to drug. Within the first 12 to 24 hours, the person may become nervous, restless, tremulous, and weak. Seizures may occur in those taking high doses. Occasionally, a seizure may occur even 1 to 3 weeks after withdrawal.

Other effects that can occur during withdrawal include dehydration, delirium, insomnia, confusion, and visual and auditory hallucinations (seeing and hearing things that are not there). Serious withdrawal reactions are more common with barbiturates or glutethimide than with benzodiazepines. The person is usually hospitalized during the withdrawal process because of the possibility of a severe reaction.

Treatment

Emergency Treatment: A person who has overdosed on anti-anxiety drugs or sedatives requires hospitalization, usually in the intensive care unit. Benzodiazepines do have an antidote—flumazenil. Supportive care is given; which may include intravenous administration of fluids, drugs

if blood pressure drops, and a ventilator.

Detoxification and Rehabilitation: People with mild withdrawal symptoms require social and psychological support to help them overcome a strong urge to begin using the drug again to stop the feelings of anxiety. People with severe withdrawal symptoms usually need to begin taking the drug again at a lower dose and under close medical supervision, sometimes in the hospital. The dose is decreased gradually over days or weeks and then discontinued. Even with the best treatment, a person may not feel normal for a month or more.

COCAINE

Cocaine produces effects similar to those of amphetamines but is a much more powerful stimulant. It may be taken by mouth, inhaled as a powder through the nose (snorted), or injected, usually directly into a vein (mainlining). When boiled with sodium bicarbonate, cocaine is converted into a freebase form called crack cocaine, which can then be smoked. Crack cocaine acts almost as fast as cocaine injected intravenously.

Symptoms and Complications

Cocaine produces a sense of extreme alertness, euphoria, and great power when injected intravenously or inhaled. Because cocaine's effects may last only about 30 minutes, the user takes repeated doses. Cocaine also increases blood pressure and heart rate and narrows (constricts) blood vessels. These effects can cause a heart attack, even in healthy young athletes. Other effects include constipation; intestinal damage; extreme nervousness; the feeling that something is moving under the skin (cocaine bugs), which is a sign of possible nerve damage; seizures; hallucinations; insomnia; paranoid delusions; and violent behaviour. Long-term users may damage the tissue separating the two halves of the nose (septum), causing sores (ulcerations) that may require surgery.

Women who become pregnant while addicted to cocaine are more likely than non-addicts to miscarry. If the woman does not miscarry, the foetus may be damaged by the cocaine, which easily travels into its bloodstream from the mother's blood. A baby born to an addicted mother may have abnormal sleep patterns and poor coordination. Crawling, walking, and speech development may be delayed, although this may be the result of nutritional deficiencies, poor prenatal care, and maternal abuse of other drugs as well.

Withdrawal reactions include extreme fatigue and depression—the opposite of the drug's effects. Suicidal urges emerge when the addict stops taking the drug. After several days, when mental and physical strength have returned, the addict may attempt suicide.

Treatment

Emergency Treatment: Cocaine is a very short-acting drug, so treatment of uncomfortable reactions usually are not necessary. Emergency medical staff watch the person closely to see if the life-threatening effects subside. Drugs such as beta-blockers may be given to lower blood pressure or heart rate. Other drugs may be given to stop seizures. A very high fever may also need to be treated.

Detoxification and Rehabilitation: Withdrawing from long-term cocaine use may require close supervision because the person can become depressed and suicidal. Entering a hospital or a drug treatment centre may be necessary. The most effective method of treating cocaine addiction is psychotherapy. Sometimes the mental health disorders common to cocaine addicts, such as

depression, are treated with appropriate drugs.

GAMMA HYDROXYBUTYRATE

Gamma hydroxybutyrate (GHB) is taken by mouth. It is similar to ketamine in its effects.

GHB produces feelings of relaxation and tranquility. It may also cause fatigue and feelings of being uninhibited. At higher doses, GHB may produce dizziness and loss of coordination, nausea, and vomiting. Seizures and coma may also occur and can lead to respiratory failure and death. Combining GHB and any other sedative, especially alcohol, is extremely dangerous. Most deaths have occurred when GHB was taken with alcohol.

Withdrawal symptoms occur if GHB is not taken for several days after previous frequent use.

Treatment

Treatment is needed only for overdose. Use of a ventilator may be needed if breathing is affected. Most people recover rapidly.

HALLUCINOGENS

Hallucinogens include LSD (lysergic acid diethylamide), psilocybin (magic mushroom), mescaline (peyote), and 2,5-dimethoxy-4-methylamphetamine (DOM, STP), an amphetamine derivative. Many new compounds are being synthesized, and the list of hallucinogens is growing.

Symptoms and Complications

Hallucinogens distort auditory and visual sensations. The actual effect can depend on the user's mood when the drug is taken and the setting in which the drug is taken. For example, users who were depressed before the drug was taken are likely to feel sadder when the drug takes effect. The chief dangers of using these drugs are the psychological effects and impaired judgment they produce, which can lead to dangerous decision making or accidents. For example, a user might think he can fly and may even jump out a window to prove it.

The user's ability to cope with the visual and auditory distortions also affects the experience, often referred to as a "trip." An inexperienced, frightened user is less able to cope than someone who is more experienced and not afraid of the trip. A user under the influence of a hallucinogen, usually LSD, can develop extreme anxiety and begin to panic, resulting in a bad trip. The user may want to stop the trip, which is not possible.

Some users remain psychotic for many days (or longer) after the drug's effects have worn off. A prolonged psychosis is more likely in a user with a pre-existing mental health disorder.

Some people—especially long-term or repeated users of hallucinogens, particularly LSD—may experience flashbacks after they have discontinued the drugs. Flashbacks are similar to but generally less intense than the original experience. Generally, flashbacks disappear over a 6- to 12-month period but can recur as long as 5 years after the last use of LSD, especially when the user still suffers from an anxiety or other mental health disorder.

Treatment

Most hallucinogen users never seek treatment. A quiet, dark room and calm, non-threatening talk can help a user who is having a bad trip. The user needs reassurance that the effects are caused by the drug and will end. A person who experiences a prolonged psychosis may need mental health treatment.

KETAMINE

Ketamine induces a lack of awareness to pain and to one's general surroundings, leading to a scattered feeling or to a feeling of detachment. Ketamine is usually snorted but may be injected intravenously.

Ketamine reduces pain perception and causes sedation. Ketamine distorts the user's perceptions of his body, the environment, and time. At higher doses, hallucinations, paranoid delusions, and a complete sense of detachment from the world may occur (ketamine users often refer to these experiences as a k-hole). Ketamine also can disrupt memory for several hours.

Treatment

Usually, reassurance and a quiet, non-threatening environment help a person to recover. The drug's effects generally abate in less than 2 hours.

MARIJUANA

Marijuana (cannabis) use is widespread. Surveys of high school students have periodically shown increases, decreases, and then increases in its use. Marijuana is commonly smoked in the form of cigarettes (joints) made from the stems, leaves, and flowering tops of the dried plant (*Cannabis sativa* or *Cannabis indica*). Marijuana is also used as hashish, the pressed resin (tarry substance) of the plant. The active ingredient of marijuana is tetrahydrocannabinol (THC), which occurs in many variations, the most active being delta-9-THC.

As with the use of alcohol, marijuana can be used intermittently by many people without causing noticeable social or psychological dysfunction or dependence. However, some people become dependent on marijuana, and among those who become dependent, many will exhibit the characteristics of addiction.

Symptoms and Complications

Marijuana depresses brain activity, producing a dreamy state in which ideas seem disconnected and uncontrollable. It is mildly psychedelic, causing time, colour, and spatial perceptions to distort and be enhanced. Colours may seem brighter, sounds may seem louder, and appetite may be increased. Marijuana generally relieves tension and provides a sense of well-being. The sense of exaltation, excitement, and inner joyousness (a high) seems to be related to the setting in which the drug is taken—such as whether the smoker is alone or in a group and the prevailing mood. Motor abilities decrease during marijuana use, so driving or operating heavy equipment is dangerous.

People who use large quantities of marijuana may become confused and disoriented. They may develop a toxic psychosis, not knowing who they are, where they are or what time it is. Some people, particularly those with mental illness, are especially susceptible to these effects, and there is compelling evidence that schizophrenia may become worse with marijuana use.

Occasionally, panic reactions occur, particularly in new users. Other effects include an increased heart rate, bloodshot eyes, and dry mouth.

Prolonged heavy use of marijuana among men may reduce testosterone levels, the size of the testes, and sperm count. Long-term use among women may lead to irregular menstrual cycles. However, these effects do not always occur, and the effects on fertility are uncertain. Pregnant women who use marijuana may have smaller babies than nonusers, and delta-9-THC passes into the breast milk and may intoxicate a breastfed infant.

Marijuana is eliminated from the body slowly over several weeks, so withdrawal reactions tend to be mild. Heavy users who stop abruptly may experience jerkiness and insomnia.

Diagnosis and Treatment

Urine test results for marijuana generally remain positive for several days or weeks after use, even for casual users. For regular users, test results may remain positive for several weeks or longer while the drug is slowly released from body fat. Urine testing is an effective means of identifying marijuana use, but a positive urine test result means only that the person has used marijuana; it does not prove that the user is currently impaired (intoxicated).

For those who want to stop using marijuana, counselling may be helpful. However, success relies heavily on the user's motivation to stop and for some willingness to disassociate from his social circle of regular users.

NICOTINE

Nicotine is the substance in cigarettes that smokers become dependent on. Thus, nicotine dependence is essentially dependence on cigarettes. About 70% of smokers have acknowledged that they desire to quit smoking but are unable to do so. Of people who quit, 90% do so on their own, but only about 3 to 4% successfully quit in any given year.

Symptoms and Complications

Nicotine, when obtained through smoking, generally produces few noticeable effects. Some people experience flushing. Nicotine withdrawal may result in many unpleasant symptoms, including craving for nicotine, irritability, anxiety, poor concentration, restlessness, headaches, drowsiness, and stomach upset. Many people gain weight while trying to stop smoking. Withdrawal is most troublesome in severely dependent people.

Treatment

Most smokers who quit do so for health or economic reasons. Behaviour modification is a common method used in helping people to quit smoking. A behaviour modification regimen may be established with the help of a professional, although other sources include the Internet and the package inserts in nicotine replacement products. Behaviour modification deals with changing the habit patterns that are cues to smoking during the person's normal activities of daily living. These cues may be phone conversations, coffee breaks, meals, sexual activity, boredom, or traffic problems or other frustrations. People who recognize smoking cues may modify the cues (for example, taking a walk in place of a coffee break) or substitute oral activity (for example, sucking on candy or chewing on a toothpick or on chewing gum).

Quitting smoking abruptly (cold turkey) is generally preferable to tapering off. Selection of a quit

date is very helpful. The quit date may be random or on a special occasion (for example, a holiday or anniversary). A stressful time, such as when a deadline (for example, tax deadline) needs to be met, is not a good time to try to quit.

Substituting a non-smoked version of nicotine for some period of time helps many people break the habit of smoking. Many over-the-counter and prescription nicotine-replacement products are available, including nicotine chewing gum, a nicotine patch, nicotine nasal spray, and a nicotine inhaler.

Bupropion can be combined with a nicotine-replacement product. Together, they have a higher success rate. The results of both drugs are best when used in conjunction with a behaviour modification program.

Weight gain is a concern, particularly among women. Nicotine suppresses appetite and slightly increases the rate at which calories are burned. Exercise helps prevent weight gain and may also reduce the craving for nicotine.

A person with significant problems with depression who attempts to quit smoking should receive counselling. Bupropion is an antidepressant, making it particularly useful for people who are depressed or at risk of depression.

Many people dependent on nicotine relapse after the first attempt at quitting smoking. In fact, five to seven failures commonly precede success. The more often a person makes a serious attempt to quit smoking, the more likely the person ultimately will succeed.

OPIOIDS

Opioids have a legitimate medical use as powerful pain relievers. They include codeine (which has a low dependence potential), oxycodone (alone and in various combinations, such as oxycodone plus acetaminophen), meperidine, morphine, pentazocine, and hydromorphone. Heroin, which is illegal in the United States but is used in very limited treatment applications in other countries, is one of the strongest opioids. A person can become dependent on any opioid.

Some people become dependent on opioids after starting their use for appropriate medically prescribed control of pain. Although many people who use opioids for pain relief for more than several days feel some symptoms of withdrawal when they stop, serious dependence and addiction rarely occur when opioid use is medically supervised.

Tolerance can develop after 2 to 3 days of continued opioid use. People who have developed tolerance may show few signs of drug use and function normally in their usual activities as long as they have access to drugs.

Symptoms and Complications

Opioids have many effects. They are strong sedating drugs and cause people to become quiet and introspective. Opioids may also produce euphoria, sometimes simply because severe pain has finally been relieved. They dull pain and may enhance sexual pleasure. They also cause constipation; flushed or warm skin and lowered blood pressure; itching; constricted pupils; slow, shallow breathing; a slow heart rate; and low body temperature. Opioids may cause confusion, especially in older people.

Many complications can arise from opioid addiction, especially if the drugs are injected with shared unsterilized needles. For example, viral hepatitis, which causes liver damage, can be

spread through shared needles. Infections can occur at the site of injection or be carried through the bloodstream (sepsis), causing infections in the brain and bones.

Drug abuser's elbow (myositis ossificans) is caused by repeated, inept needle punctures; the muscle around the elbow is replaced with scar tissue. Subcutaneous injections (skin popping) can cause skin sores. Intravenous injections lead to scarring of veins (tracks), which makes the veins more and more difficult to inject.

Opioid addicts can develop lung problems, such as lung irritations from aspiration (inhaling saliva or vomit), pneumonia, abscesses, pulmonary emboli, and scarring, which can develop from the talc in impure injections. Problems with the immune system can develop. Because the human immunodeficiency virus (HIV) can spread through shared needles, many people who inject opioids also develop AIDS. Needle sharing is now becoming the principal route of HIV infection in the United States.

Opioid addicts can develop neurological problems, usually as the result of inadequate blood flow to the brain. Coma may result. Quinine, a common heroin contaminant, can cause double vision, paralysis, and other nerve injury symptoms, including Guillain-Barré syndrome. A contaminant sometimes present in homemade meperidine (MPTP) damages the brain and leads to severe parkinsonism. Drug overdose presents a serious threat to life. Opioids suppress breathing and can cause the lungs to fill with fluid.

Opioid use during pregnancy is especially serious. Heroin and methadone easily cross the placenta into the foetus. A baby born to an addicted mother may quickly develop withdrawal symptoms, including tremors, high-pitched crying, jitters, seizures, and rapid breathing.

Withdrawal symptoms can appear as early as 4 to 6 hours after the opioid use stops and generally peak within 36 to 72 hours. However, each opioid is eliminated from the body at a different rate, which alters the rate at which withdrawal occurs. The withdrawal symptoms are worse in people who have used large doses for longer times.

The first sign of withdrawal is generally rapid breathing, usually accompanied by yawning, perspiration, crying, and a runny nose. Other signs include hyperactivity, a sense of heightened alertness, rapid breathing, agitation, an increased heart rate, fever, dilated pupils, gooseflesh, tremors, muscle twitching, hot and cold flashes, aching muscles, loss of appetite, abdominal cramps, and diarrhea.

Treatment

Emergency Treatment An opioid overdose is a medical emergency that must be treated quickly to prevent death. Breathing may require support, sometimes with a ventilator, if the overdose has suppressed breathing. A drug called naloxone is given intravenously as an antidote to the opioid.

Detoxification and Rehabilitation Treatment is usually needed to lessen the symptoms of withdrawal. Symptoms of opioid withdrawal can also be relieved with a drug called clonidine. However, clonidine may cause some side effects, including low blood pressure, drowsiness, restlessness, insomnia, irritability, faster heartbeat, and headaches. Substituting methadone for the opioid provides another treatment for withdrawal. Methadone, itself an opioid, is taken by mouth and alters brain function less than do other opioids. Because methadone's effects last much longer than those of other opioids, it can be taken less frequently, usually once a day. The dose can then be decreased slowly.

Buprenorphine, another maintenance drug, can be prescribed by doctors in their offices. This allows for treatment similar to methadone detoxification or maintenance without having to go to a methadone clinic.

Naltrexone is a drug that blocks the effects of opioids. Depending on the dose, naltrexone's effects last from 24 to 72 hours. Because of this, an addict who has a stable social background can take this drug daily (or possibly as few as 3 times a week) to avoid the temptation of using opioids.

The therapeutic community concept emerged nearly 25 years ago in response to the problems of heroin addiction. Treatment involves a communal, relatively long-term (usually 15- to 18-month) stay in a residential setting to help addicts build new lives through training, education, and redirection. These programs have helped many people, but questions about precisely how well they have worked and how widely they should be applied remain unanswered.

The AIDS epidemic has motivated some people to suggest that sterile needles and syringes be provided to addicts who inject opioids intravenously. Such distribution has been shown to reduce HIV transmission.

PHENCYCLIDINE PHOSPHATE (PCP)

Phencyclidine (PCP, angel dust) is most often smoked after being sprinkled on plant material, such as parsley, mint leaves, tobacco, or marijuana. Occasionally PCP is taken by mouth or injected.

Symptoms and Complications

PCP depresses brain function, and users usually become confused and disoriented shortly after taking the drug. They may not know where they are, who they are, or what time or day it is. They may go into a trance as if hypnotized. PCP users can be combative, and because they do not feel pain, they may continue fighting even when hit hard. Salivation, sweating, blood pressure, and heart rate also increase. Muscle tremors (shaking) are common. High doses can cause hallucinations, seizures, a life-threatening high fever (hyperthermia), coma, and possibly death. Long-term PCP use may damage the brain, kidneys, and muscles.

Treatment

When PCP users become agitated (as most do when brought for treatment), they are put in a quiet room and allowed to relax, although their blood pressure, heart rate, and breathing are monitored frequently. Soothing talk does not help; in fact, the person may become even more agitated. If quiet surroundings do not calm an agitated person, the doctor may give a sedative such as diazepam. The treatment of an adverse reaction may require drugs to lower high blood pressure or to stop seizures. The stomach may be pumped and drugs given to hasten the excretion of PCP from the body.

SOLVENT INHALANTS

Among teenagers, inhalants are used more frequently than cocaine or LSD but less frequently than marijuana or alcohol. Inhalant use is particularly a problem among children aged 12 and younger. Inhalants are found in many common household products.

The product may be sprayed into a plastic bag and inhaled (bagging, sniffing, or snorting), or a cloth soaked with the product may be placed next to the nose or in the mouth (huffing).

Symptoms and Complications

Users of solvent inhalants rapidly become intoxicated. Dizziness, drowsiness, confusion, slurred speech, and a reduced ability to stand and walk (unsteady gait) have been observed. These effects can last anywhere from a few minutes to more than an hour. The user may also become excited—not because the chemicals are stimulants. Death can occur, even the first time one of these products is directly inhaled, because of severely depressed breathing or an irregular heartbeat (cardiac arrhythmia).

Some people, usually teenagers or even young children, ignite the inhaled fumes with matches, producing a fire that travels right through the nose and mouth into the lungs. The severe burns to the skin and internal organs can be fatal. Others have died of oxygen deprivation (asphyxiation) because the inhaled spray coated the lungs, preventing oxygen from entering the bloodstream.

Chronic use or exposure to these chemicals (including exposure in the workplace) can severely damage the brain, heart, kidneys, liver, and lungs. In addition, the bone marrow may be damaged, affecting red blood cell production and causing anaemia.

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Treatment

Treating children and teenagers who use inhalants involves evaluating any organ damage. It also involves education and counselling to address mental health and sociologic problems. Recovery rates from inhalant use are among the poorest for any mood-altering substance.

COMMON SUBSTANCES USED AS INHALANTS

Adhesives

Airplane glue

Rubber cement

Polyvinyl chloride cement

Aerosols

Spray paint

Hair spray

Solvents and gases

Nail polish remover

Paint remover

Paint thinner

Typing correction fluid and thinner

Fuel gas

Cigarette lighter fluid

Gasoline

Cleaning agents

Dry cleaning fluid

Spot remover

Degreaser

EATING DISORDERS

Introduction

Eating disorders are grouped into three categories: refusing to maintain a minimally normal body weight (anorexia nervosa), bingeing and purging (bulimia nervosa), and bingeing without purging (binge eating disorder). Bingeing is the rapid consumption of large amounts of food in a short period of time accompanied by a feeling of loss of control. Purging is self-induced vomiting or misuse of laxatives or enemas.

Eating disorders are far more common among women, especially younger women, than among men.

ANOREXIA NERVOSA

Anorexia nervosa is characterized by a distorted body image, an extreme fear of obesity, refusal to maintain a minimally normal body weight, and in women, the absence of menstrual periods.

Hereditary factors have been shown to play a role in the development of anorexia nervosa. Social factors are also important. The desire to be thin pervades Western society, and obesity is considered unattractive, unhealthy, and undesirable. Even before adolescence, children are aware of these attitudes, and two thirds of all adolescent girls diet or take other measures to control their weight. Yet only a small percentage of these girls develop anorexia nervosa. Other factors, such as psychologic susceptibility, probably predispose certain people to developing anorexia nervosa. In areas with a genuine food shortage, anorexia nervosa is rare.

About 95% of people who have anorexia nervosa are female. The disorder usually begins in adolescence, occasionally earlier, and less commonly in adulthood. Anorexia nervosa primarily affects people in middle and upper socioeconomic classes. In Western society, the number of people who have this disorder seems to be increasing: it has been estimated to affect about 1% of girls aged 12 to 18.

Symptoms

Anorexia nervosa may be mild and transient or severe and persistent. Because many people who develop anorexia nervosa are meticulous, compulsive, and intelligent, with very high standards for achievement and success, an eating disorder may easily go undetected. The first indications of the

impending disorder may be a subtle increased concern with diet and body weight. Such concerns seem out of place, because most people who have anorexia nervosa are already thin. Preoccupation and anxiety about weight intensify as the person becomes thinner. Even when emaciated, the person claims to feel fat, denies that anything is wrong, does not complain about weight loss, and usually resists treatment. The person usually does not see a doctor until brought to one by concerned family members.

Anorexia means "lack of appetite," but people who have anorexia nervosa are actually hungry and preoccupied with food. They study diets and count calories; they hoard, conceal, and deliberately waste food; they collect recipes; and they prepare elaborate meals for others. Half of the people who have anorexia nervosa binge and then purge by vomiting or taking laxatives. The other half simply restrict the amount of food they eat. They also frequently lie about how much they have eaten and conceal their vomiting and their peculiar dietary habits. Many also take diuretics to treat perceived bloating.

Women with anorexia nervosa stop having menstrual periods, sometimes before losing much weight. Women and men with the disorder may lose interest in sex. Typically, they have a low heart rate, low blood pressure, low body temperature, swelling of tissues caused by fluid accumulation (edema), and fine, soft hair or excessive body and facial hair. People with anorexia nervosa who become very thin tend to remain active, often exercising excessively to control their weight. Until they become emaciated, however, they have few symptoms of nutritional deficiencies. Depression is common.

Hormonal changes resulting from anorexia nervosa include markedly reduced levels of estrogen (in women) and thyroid hormone and increased levels of cortisol. If a person becomes seriously malnourished, every major organ system in the body is likely to be affected. When weight loss has been rapid or severe—for example, to more than 25% below the ideal body weight—restoring body weight quickly is crucial; such weight loss and the associated changes in electrolytes and fluid balance can be life threatening. Problems with the heart and with fluids and electrolytes (sodium, potassium, chloride) are the most dangerous. The heart gets weaker and pumps less blood through the body. The person may become dehydrated and prone to fainting. The blood may become alkaline (a condition called metabolic alkalosis and potassium levels in the blood may decrease). Vomiting and taking laxatives and diuretics can worsen the situation. Sudden death, probably from abnormal heart rhythms, may occur.

Diagnosis and Treatment

Anorexia nervosa is usually diagnosed on the basis of severe weight loss and the characteristic psychological symptoms. The typical person with anorexia nervosa is an adolescent girl who has lost at least 15% of her body weight, fears obesity, stops having menstrual periods, denies being sick, and otherwise appears healthy.

Treatment has two phases: short-term intervention to restore body weight and save the person's life and long-term therapy to improve psychological functioning and prevent relapse.

The initial treatment of severe or rapid weight loss is best provided in a hospital where experienced staff members firmly but gently encourage the person to eat. Rarely, the person is fed intravenously or by a tube inserted through the nose and passed into the stomach. Sometimes doctors confine those with severe disease in the hospital against their will after obtaining appropriate legal authorization from a parent, guardian, or the court.

When the person's nutritional status is acceptable and stabilized, long-term therapy is begun.

Treatment is aimed at establishing a calm, concerned, stable environment while encouraging the consumption of an adequate amount of food. This treatment may include individual, group, and family psychotherapy as well as drug therapy. Combined treatment by the family doctor and a therapist often helps, and consultation with or referral to a specialist in eating disorders is wise.

When depression is diagnosed, antidepressants are prescribed. Certain antidepressants, particularly selective serotonin reuptake inhibitors, are useful for preventing relapse after weight has been restored.

As many as 10 to 20% of people diagnosed with anorexia nervosa die of it and its complications, which include fluid and electrolyte abnormalities, heart failure, and suicide resulting from depression. However, because mild cases may not be diagnosed, no one knows exactly how many people have anorexia nervosa or what percentage die of it.

Binge Eating Disorder

Binge eating disorder is characterized by bingeing that is not followed by purging.

In this disorder, bingeing contributes to excessive caloric intake and consequent weight gain. Unlike bulimia nervosa, binge eating disorder occurs most commonly in people who are obese and becomes more prevalent with increasing body weight. People who have binge eating disorder tend to be older than those who have anorexia nervosa or bulimia nervosa, and more (nearly half) are men.

The foods that binge eaters typically choose (binge foods) are high in calories (for example, cake and ice cream), and binges usually occur in secrecy.

People who have binge eating disorder are distressed by it, and about 50% of obese binge eaters are depressed. Although this disorder does not cause the physical problems that can occur with bulimia nervosa, it may lead to complications of obesity.

Treatment

Behaviour therapy, as it is used to treat obesity, may be the best treatment for binge eating disorder. Behaviour therapy has been shown to reduce body weight and the frequency of bingeing, even when no special attention is given to binge eating. Cognitive-behaviour therapy markedly reduces the frequency of bingeing as well, but without reducing body weight.

BULIMIA NERVOSA

Bulimia nervosa is characterized by the repeated rapid consumption of large quantities of food (bingeing), followed by attempts to rid the body of the excess food consumed (purging).

As in anorexia nervosa, bulimia nervosa is influenced by hereditary and social factors. Also as in anorexia nervosa, most people who have bulimia nervosa are young women, are deeply concerned about body shape and weight, and belong to the middle or upper socioeconomic classes. About 2% of college women, the population believed to be at highest risk, are bulimics.

Symptoms

People with bulimia nervosa engage in repeated episodes of bingeing, which involves consuming large amounts of food within a relatively short period of time, often within 2 hours. Emotional

stress often triggers the binge-purge cycle, which usually is done in secret. Bingeing, which is accompanied by a feeling of a loss of control, typically includes eating when not hungry and eating to the point of pain. In an attempt to counteract the effects of the binge, people with bulimia nervosa engage in purging through such means as vomiting or taking laxatives; rigorously dieting; over-exercising; or any combination of these. Many also take diuretics to treat perceived bloating. Unlike in anorexia nervosa, however, the body weight of people with bulimia nervosa tends to fluctuate around normal.

Self-induced vomiting can erode tooth enamel, enlarge the salivary glands in the cheeks (parotid glands), and inflame the oesophagus. Vomiting and purging can lower potassium levels in the blood, causing abnormal heart rhythms. Sudden death from repeatedly taking large quantities of ipecac to induce vomiting can occur, the result of an abnormal heart rhythm. Rarely, people who have this disorder eat so much during a binge that their stomach ruptures or their oesophagus tears, leading to life-threatening complications.

Compared with people who have anorexia nervosa, those who have bulimia nervosa tend to be more aware of their behaviour and to feel remorseful or guilty about it. They are more likely to admit their concerns to a doctor or other confidant. Generally, people with bulimia nervosa are more outgoing. They also are more prone to impulsive behaviour, drug or alcohol abuse, and depression.

Diagnosis and Treatment

A doctor suspects bulimia nervosa if a person, particularly a young woman, is overly concerned about weight gain and has wide fluctuations in weight, especially with evidence of excessive laxative use. Other clues include swollen salivary glands in the cheeks, scars on the knuckles from using the fingers to induce vomiting, erosion of tooth enamel from stomach acid, and a low level of potassium detected by a blood test. The diagnosis is not confirmed until the person describes binge-purge behaviour and reports having two or more binge-eating episodes a week for at least 3 months.

The two most effective approaches to treatment are cognitive-behaviour therapy and drug therapy.

In cognitive-behaviour therapy, dysfunctional thoughts are identified and examined, and the person is helped to give them up. The person meets with the therapist once or twice a week over a period of 4 to 5 months, for a total of about 20 sessions. Cognitive-behaviour therapy has been shown to reduce the frequency of bingeing in about two thirds of people with bulimia and to stop bingeing altogether in about one third. People who have undergone this type of therapy continue to reduce or refrain from bingeing for at least 1 year.

Drug therapy with selective serotonin reuptake inhibitors, a type of antidepressant, has been shown to work at least as well as cognitive-behaviour therapy in the treatment of bulimia nervosa. However, when the drugs are stopped, bingeing recurs.