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Disruptive, Impulse-Control, and Conduct Disorders Five conditions comprise the category of disruptive, impulse-control, and conduct disorders. They include two that are associated with childhood: (1) oppositional defiant disorder and (2) conduct disorder, both of which are discussed in the child psychiatry section of this text in Sections 32.12d and 32.12e, respectively. The remaining three disorders are intermittent explosive disorder, kleptomania, and pyromania, which are discussed in subsequent text of this chapter. Each disorder is characterized by the inability to resist an intense impulse, drive, or temptation to perform a particular act that is obviously harmful to self or others, or both. Before the event, the individual usually experiences mounting tension and arousal, sometimes—but not consistently—mingled with conscious anticipatory pleasure. Completing the action brings immediate gratification and relief. Within a variable time afterward, the individual experiences a conflation of remorse, guilt, self-reproach, and dread. These feelings may stem from obscure unconscious conflicts or awareness of the deed's impact on others (including the possibility of serious legal consequences in syndromes such as kleptomania). Shameful secretiveness about the repeated impulsive activity frequently expands to pervade the individual's entire life, often significantly delaying treatment. ETIOLOGY Psychodynamic, psychosocial, and biological factors all play an important role in impulse-control disorders; however, the primary causal factor remains unknown. Some impulse-control disorders may have common underlying neurobiological mechanisms. Fatigue, incessant stimulation, and psychic trauma can lower a person's resistance to control impulses. Psychodynamic Factors An impulse is a disposition to act to decrease heightened tension caused by the buildup of instinctual drives or by diminished ego defenses against the drives. The impulse disorders have in common an attempt to bypass the experience of disabling symptoms or painful affects by acting on the environment. In his work with adolescents who were delinquent, August Aichhorn described impulsive behavior as

related to a weak superego and weak ego structures associated with psychic trauma produced by childhood deprivation. Otto Fenichel linked impulsive behavior to attempts to master anxiety, guilt, depression, and other painful affects by means of action. He thought that such actions defend against internal danger and that they produce a distorted aggressive or sexual gratification. To observers, impulsive behaviors may appear irrational and motivated by greed, but they may

actually be endeavors to find relief from pain. Heinz Kohut considered many forms of impulse-control problems, including gambling, kleptomania, and some paraphilic behaviors, to be related to an incomplete sense of self. He observed that when patients do not receive the validating and affirming responses that they seek from persons in significant relationships with them, the self might fragment. As a way of dealing with this fragmentation and regaining a sense of wholeness or cohesion in the self, persons may engage in impulsive behaviors that to others appear self-destructive. Kohut's formulation has some similarities to Donald Winnicott's view that impulsive or deviant behavior in children is a way for them to try to recapture a primitive maternal relationship. Winnicott saw such behavior as hopeful in that the child searches for affirmation and love from the mother rather than abandoning any attempt to win her affection. Patients attempt to master anxiety, guilt, depression, and other painful affects by means of actions, but such actions aimed at obtaining relief seldom succeed even temporarily.

Psychosocial Factors Psychosocial factors implicated causally in impulse-control disorders are related to early life events. The growing child may have had improper models for identification, such as parents who had difficulty controlling impulses. Other psychosocial factors associated with the disorders include exposure to violence in the home, alcohol abuse, promiscuity, and antisocial behavior.

Biological Factors Many investigators have focused on possible organic factors in the impulse-control disorders, especially for patients with overtly violent behavior. Experiments have shown that impulsive and violent activity is associated with specific brain regions, such as the limbic system, and that the inhibition of such behaviors is associated with other brain regions. A relation has been found between low cerebrospinal fluid (CSF) levels of 5-hydroxyindoleacetic acid (5-HIAA) and impulsive aggression. Certain hormones, especially testosterone, have also been associated with violent and aggressive behavior. Some reports have described a relation between temporal lobe epilepsy and certain impulsive violent behaviors, as well as an association of aggressive behavior in patients who have histories of head trauma with increased numbers of emergency room visits and other potential organic antecedents. A high incidence of mixed cerebral dominance may be found in some violent populations. Considerable evidence indicates that the serotonin neurotransmitter system mediates symptoms evident in impulse-control disorders. Brainstem and CSF levels of 5-HIAA are decreased, and serotonin-binding sites are increased in persons who have committed suicide. The dopaminergic and noradrenergic systems have also been implicated in impulsivity. Impulse-control disorder symptoms can continue into adulthood in persons whose disorder has been diagnosed as childhood attention-deficit/hyperactivity disorder (ADHD). Lifelong or acquired mental deficiency, epilepsy, and even reversible brain syndromes have long been implicated in lapses in impulse control.

INTERMITTENT EXPLOSIVE DISORDER Intermittent explosive disorder manifests as discrete episodes of losing control of aggressive impulses; these episodes can result in serious assault or the destruction of property. The aggressiveness expressed is grossly out of proportion to any stressors that may have helped elicit the episodes. The symptoms, which patients may describe as spells or attacks, appear within minutes or hours and, regardless of duration, remit spontaneously and quickly. After each episode, patients usually show genuine regret or self-reproach, and signs of

generalized impulsivity or aggressiveness are absent between episodes. The diagnosis of intermittent explosive disorder should not be made if the loss of control can be accounted for by schizophrenia, antisocial or borderline personality disorder, ADHD, conduct disorder, or substance intoxication. The term epileptoid personality has been used to convey the seizure-like quality of the characteristic outbursts, which are not typical of the patient's usual behavior, and to convey the suspicion of an organic disease process, for example, damage to the central nervous system. Several associated features suggest the possibility of an epileptoid state: the presence of auras; postictal-like changes in the sensorium, including partial or spotty amnesia; and hypersensitivity to photic, aural, or auditory stimuli. Epidemiology Intermittent explosive disorder is underreported. The disorder appears to be more common in men than in women. The men are likely to be found in correctional institutions and the women in psychiatric facilities. In one study, about 2 percent of all persons admitted to a university hospital psychiatric service had disorders that were diagnosed as intermittent explosive disorder; 80 percent were men. Evidence indicates that intermittent explosive disorder is more common in first-degree biological relatives of persons with the disorder than in the general population. Many factors other than a simple genetic explanation may be responsible. Comorbidity High rates of fire setting in patients with intermittent explosive disorder have been reported. Other disorders of impulse control and substance use and mood, anxiety, and eating disorders have also been associated with intermittent explosive disorder. Etiology Psychodynamic Factors. Psychoanalysts have suggested that explosive outbursts occur as a defense against narcissistic injurious events. Rage outbursts serve as interpersonal distance and protect against any further narcissistic injury. Psychosocial Factors. Typical patients have been described as physically large, but dependent, men whose sense of masculine identity is poor. A sense of being useless and impotent or of being unable to change the environment often precedes an episode of physical violence, and a high level of anxiety, guilt, and depression usually follows an episode. An unfavorable childhood environment often filled with alcohol dependence, beatings, and threats to life is usual in these patients. Predisposing factors in infancy and childhood include perinatal trauma, infantile seizures, head trauma, encephalitis,

minimal brain dysfunction, and hyperactivity. Investigators who have concentrated on psychogenesis as causing episodic explosiveness have stressed identification with assaultive parental figures as symbols of the target for violence. Early frustration, oppression, and hostility have been noted as predisposing factors. Situations that are directly or symbolically reminiscent of early deprivations (e.g., persons who directly or indirectly evoke the image of the frustrating parent) become targets for destructive hostility. Biological Factors. Some investigators suggest that disordered brain physiology, particularly in the limbic system, is involved in most cases of episodic violence. Compelling evidence indicates that serotonergic neurons mediate behavioral inhibition. Decreased serotonergic transmission, which can be induced by inhibiting serotonin synthesis or by antagonizing its effects, decreases the effect of punishment as a deterrent to behavior. The restoration of serotonin activity, by administering serotonin precursors such as L-tryptophan or drugs that increase synaptic serotonin levels, restores the behavioral effect of punishment. Restoring serotonergic activity by administration of L-tryptophan or drugs that increase synaptic serotonergic levels appears to restore control of episodic violent tendencies. Low levels of CSF 5-HIAA have been correlated with impulsive aggression. High CSF testosterone concentrations are correlated with aggressiveness and interpersonal violence in men. Antiandrogenic agents have been shown to decrease aggression. Familial and Genetic Factors. First-degree relatives of patients with intermittent explosive disorder have higher rates of impulse-control disorders, depressive

disorders, and substance use disorders. Biological relatives of patients with the disorder were more likely to have histories of temper or explosive outbursts than the general population. Diagnosis and Clinical Features The diagnosis of intermittent explosive disorder should be the result of history-taking that reveals several episodes of loss of control associated with aggressive outbursts (Table 19-1). One discrete episode does not justify the diagnosis. The histories typically describe a childhood in an atmosphere of alcohol dependence, violence, and emotional instability. Patients' work histories are poor; they report job losses, marital difficulties, and trouble with the law. Most patients have sought psychiatric help in the past but to no avail. Anxiety, guilt, and depression usually follow an outburst, but this is not a constant finding. Neurological examination sometimes reveals soft neurological signs, such as left-right ambivalence and perceptual reversal. Electroencephalography (EEG) findings are frequently normal or show nonspecific changes. Table 19-1 DSM-5 Diagnostic Criteria for Intermittent Explosive Disorder

A 36-year-old real estate agent sought assistance for difficulty with his anger. He was quite competent at his job, although he frequently lost clients when he became enraged over their indecisiveness. On a number of occasions, he became verbally abusive, leading clients to find ways out of escrow closings. The impulsive aggression also led to termination of multiple relationships because sudden angry outbursts contained demeaning accusations toward his girlfriends. This occurred frequently in the absence of any clear conflict. On multiple occasions, the patient became so uncontrollably enraged that he threw things across the room, including books, his desk, and the contents of the refrigerator. Between episodes, he was a kind and likable individual with many friends. He enjoyed drinking on the weekends and had a history of two arrests for driving while intoxicated. On one of these occasions, he became involved in a verbal altercation with a police officer. He had a history of drug experimentation in college that included cocaine and marijuana. Mental status examination revealed a generally cooperative patient. However, he became quite defensive when questioned about his anger and easily felt accused and blamed by the interviewer for his past behaviors. He had no significant medical history and no signs of neurological problems. He had never been in psychiatric treatment prior to this evaluation. He was on no medications. He denied any symptoms of a mood disorder or any other antisocial activity. Treatment included the use of carbamazepine (Tegretol) and a combination of supportive and cognitive-behavioral psychotherapy. The patient's angry outbursts improved as he became aware of early signs that he was about to lose control. He learned techniques to avoid confrontation when he was faced with these warning signs. (Courtesy of Vivien K. Burt, M.D., Ph.D., and Jeffrey William Katzman, M.D.)

Physical Findings and Laboratory Examination

Persons with the disorder have a high incidence of soft neurological signs (e.g., reflex asymmetries), nonspecific EEG findings, abnormal neuropsychological testing results (e.g., letter reversal difficulties), and accident susceptibility. Blood chemistry (liver and thyroid function tests, fasting blood glucose, electrolytes), urinalysis (including drug toxicology), and syphilis serology may help rule out other causes of aggression. Magnetic resonance imaging (MRI) may reveal changes in the prefrontal cortex, which is associated with loss of impulse control.

Differential Diagnosis

The diagnosis of intermittent explosive disorder can be made only after disorders associated with the occasional loss of control of aggressive impulses have been ruled out as the primary cause. These other disorders include psychotic disorders, personality change because of a general medical condition, antisocial or borderline personality disorder, and substance intoxication (e.g., alcohol, barbiturates, hallucinogens, and amphetamines), epilepsy, brain tumors,

degenerative diseases, and endocrine disorders. Conduct disorder is distinguished from intermittent explosive disorder by its repetitive and resistant pattern of behavior, as opposed to an episodic pattern. Intermittent explosive disorder differs from the antisocial and borderline personality disorders because, in the personality disorders, aggressiveness and impulsivity are part of patients' characters and, thus, are present between outbursts. In paranoid and catatonic schizophrenia, patients may display violent behavior in response to delusions and hallucinations, and they show gross impairments in reality testing. Hostile patients with mania may be impulsively aggressive, but the underlying diagnosis is generally apparent from their mental status examinations and clinical presentations. Amok is an episode of acute violent behavior for which the person claims amnesia. Amok is usually seen in southeastern Asia, but it has been reported in North America. Amok is distinguished from intermittent explosive disorder by a single episode and prominent dissociative features. Course and Prognosis Intermittent explosive disorder may begin at any stage of life, but usually appears between late adolescence and early adulthood. The onset can be sudden or insidious, and the course can be episodic or chronic. In most cases, the disorder decreases in severity with the onset of middle age, but heightened organic impairment can lead to frequent and severe episodes. Treatment A combined pharmacological and psychotherapeutic approach has the best chance of success. Psychotherapy with patients who have intermittent explosive disorder is difficult, however, because of their angry outbursts. Therapists may have problems with countertransference and limit-setting. Group psychotherapy may be helpful, and family

therapy is useful, particularly when the explosive patient is an adolescent or a young adult. A goal of therapy is to have the patient recognize and verbalize the thoughts or feelings that precede the explosive outbursts instead of acting them out. Anticonvulsants have long been used, with mixed results, in treating explosive patients. Lithium (Eskalith) has been reported useful in generally lessening aggressive behavior, and carbamazepine, valproate (Depakene) or divalproex (Depakote), and phenytoin (Dilantin) have been reported helpful. Some clinicians have also used other anticonvulsants (e.g., gabapentin [Neurontin]). Benzodiazepines are sometimes used but have been reported to produce a paradoxical reaction of dyscontrol in some cases. Antipsychotics (e.g., phenothiazines and serotonin-dopamine antagonists) and tricyclic drugs have been effective in some cases, but clinicians must then question whether schizophrenia or a mood disorder is the true diagnosis. With a likelihood of subcortical seizure-like activity, medications that lower the seizure threshold can aggravate the situation. Selective serotonin reuptake inhibitors (SSRIs), trazodone (Desyrel), and buspirone (BuSpar) are useful in reducing impulsivity and aggression. Propranolol (Inderal) and other β -adrenergic receptor antagonists and calcium channel inhibitors have also been effective in some cases. Some neurosurgeons have performed operative treatments for intractable violence and aggression. No evidence indicates that such treatment is effective. KLEPTOMANIA The essential feature of kleptomania is a recurrent failure to resist impulses to steal objects not needed for personal use or for monetary value. The objects taken are often given away, returned surreptitiously, or kept and hidden. Persons with kleptomania usually have the money to pay for the objects they impulsively steal. As with other impulse-control disorders, kleptomania is characterized by mounting tension before the act, followed by gratification and lessening of tension with or without guilt, remorse, or depression after the act. The stealing is not planned and does not involve others. Although the thefts do not occur when immediate arrest is probable, persons with kleptomania do not always consider their chances of being apprehended, although repeated arrests lead to pain and humiliation. These persons may

feel guilt and anxiety after the theft, but they do not feel anger or vengeance. Furthermore, when the object stolen is the goal, the diagnosis is not kleptomania; in kleptomania, the act of stealing is itself the goal. Epidemiology The prevalence of kleptomania is not known, but it is estimated to be about 0.6 percent. The range varies from 3.8 to 24 percent of those arrested for shoplifting. There are reports that it occurs in fewer than 5 percent of identified shoplifters. The male-to-female ratio is 1:3 in clinical samples.

Comorbidity Patients with kleptomania are said to have a high lifetime comorbidity of major mood disorders (usually, but not exclusively, depressive) and various anxiety disorders. Associated conditions also include other disorders such as pathological gambling and compulsive shopping, eating disorders, and substance use disorders, alcoholism in particular. **Etiology** **Psychosocial Factors.** The symptoms of kleptomania tend to appear in times of significant stress, for example, losses, separations, and endings of important relationships. Some psychoanalytic writers have stressed the expression of aggressive impulses in kleptomania; others have discerned a libidinal aspect. Those who focus on symbolism see meaning in the act itself, the object stolen, and the victim of the theft. Analytic writers have focused on stealing by children and adolescents. Anna Freud pointed out that the first thefts from mother's purse indicate the degree to which all stealing is rooted in the oneness between mother and child. Karl Abraham wrote of the central feeling of being neglected, injured, or unwanted. One theoretician established seven categories of stealing in chronically acting-out children:

1. As a means of restoring the lost mother-child relationship
 2. As an aggressive act
 3. As a defense against fears of being damaged (perhaps a search by girls for a penis or a protection against castration anxiety in boys)
 4. As a means of seeking punishment
 5. As a means of restoring or adding to self-esteem
 6. In connection with, and as a reaction to, a family secret
 7. As excitement (lust angst) and a substitute for a sexual act
- One or more of these categories can also apply to adult kleptomania. **Biological Factors.** Brain diseases and mental retardation have been associated with kleptomania, as they have with other disorders of impulse control. Focal neurological signs, cortical atrophy, and enlarged lateral ventricles have been found in some patients. Disturbances in monoamine metabolism, particularly of serotonin, have been postulated. **Family and Genetic Factors.** In one study, 7 percent of first-degree relatives had obsessive-compulsive disorder (OCD). In addition, a higher rate of mood disorders has been reported in family members.
- Diagnosis and Clinical Features**

The essential feature of kleptomania is recurrent, intrusive, and irresistible urges or impulses to steal unneeded objects. Patients with kleptomania may also be distressed about the possibility or actuality of being apprehended and may manifest signs of depression and anxiety. Patients feel guilty, ashamed, and embarrassed about their behavior. They often have serious problems with interpersonal relationships and often show signs of personality disturbance. In one study of patients with kleptomania, the frequency of stealing ranged from less than 1 to 120 episodes a month. Most patients with kleptomania steal from retail stores, but they may also steal from family members in their own households. Jane was a 42-year-old, highly successful, single executive from

a wealthy background. She called herself a “shop-’til-you-drop type” and had always been able to afford the expensive designer clothing that she loved. Since college, her “legit” shopping had been paralleled by “boosting” cheap panties and brassieres from discount stores. She did not wear the stolen items; indeed, she considered them “sleazy.” She could never bring herself to get rid of them either and kept boxes filled with pilfered lingerie in a storage facility. Jane talked or bought her way out of trouble until her 30s, when she was arrested while stealing pantyhose from the same K-Mart for the third time in as many months. As a condition of probation, she was ordered to see a psychiatrist. Her attendance was sporadic, and several more thefts occurred over the next 2 years. She also experienced substantial depression, which she tried to alleviate by heavy drinking. Jane finally began taking her problem seriously after yet another arrest precipitated a suicidal gesture. She began keeping appointments regularly and consented to taking citalopram (Celexa) and naltrexone (ReVia). She believes that her participation in an Alcoholics Anonymous (AA) group for high-pressured executives has been at least as effective—if not more so—in controlling her stealing. (Courtesy of Harvey Roy Greenberg, M.D.)

Differential Diagnosis Episodes of theft occasionally occur during psychotic illness, for example, acute mania, major depression with psychotic features, or schizophrenia. Psychotic stealing is obviously a product of pathological elevation or depression of mood or command hallucinations or delusions. Theft in individuals with antisocial personality disorder is deliberately undertaken for personal gain, with some degree of premeditation and planning, often executed with others. Antisocial stealing regularly involves the threat of harm or actual violence, particularly to elude capture. Guilt and remorse are distinctively lacking, or patients are patently insincere. Shoplifting has become a national epidemic. Few shoplifters have true kleptomania; most are teenagers and young adults who “boost” in pairs or small groups for “kicks,” as well as goods, and do not have a major psychiatric disorder. Acute intoxication with drugs or alcohol may

precipitate theft in an individual with another psychiatric disorder or without significant psychopathology. Patients with Alzheimer's disease or other dementing organic illness may leave a store without paying, owing to forgetfulness rather than larcenous intent. Malingering kleptomania is common in apprehended antisocial types, as well as nonantisocial youthful shoplifters. Given a sufficiently intelligent perpetrator, the fictive version can be difficult to distinguish from the genuine disorder.

Course and Prognosis Kleptomania may begin in childhood, although most children and adolescents who steal do not become kleptomaniac adults. The onset of the disorder generally is late adolescence. Women are more likely than men to present for psychiatric evaluation or treatment. Men are more likely to be sent to prison. Men tend to present with the disorder at about 50 years of age; women present at about 35 years of age. In quiescent cases, new bouts of the disorder may be precipitated by loss or disappointment. The course of the disorder waxes and wanes, but tends to be chronic. Persons sometimes have bouts of being unable to resist the impulse to steal, followed by free periods that last for weeks or months. The spontaneous recovery rate of kleptomania is unknown. Serious impairment and complications are usually secondary to being caught, particularly to being arrested. Many persons seem never to have consciously considered the possibility of facing the consequences of their acts, a feature that agrees with some descriptions of patients with kleptomania (sometimes, as persons who feel wronged and therefore entitled to steal). Often, the disorder in no way impairs a person's social or work functioning. The prognosis with treatment can be good, but few patients come for help of their own accord. Treatment Because true kleptomania is rare, reports of treatment tend to be individual case descriptions or a short series of cases. Insight-oriented psychotherapy and

psychoanalysis have been successful, but depend on patients' motivations. Those who feel guilt and shame may be helped by insight-oriented psychotherapy because of their increased motivation to change their behavior. Behavior therapy, including systematic desensitization, aversive conditioning, and a combination of aversive conditioning and altered social contingencies, has been reported successful, even when motivation was lacking. The reports cite follow-up studies of up to 2 years. SSRIs, such as fluoxetine (Prozac) and fluvoxamine (Luvox), appear to be effective in some patients with kleptomania. Case reports indicated successful treatment with tricyclic drugs, trazodone, lithium, valproate, naltrexone, and electroconvulsive therapy.

PYROMANIA Pyromania is the recurrent, deliberate, and purposeful setting of fires. Associated features include tension or affective arousal before setting the fires; fascination with, interest in, curiosity about, or attraction to fire and the activities and equipment associated with firefighting; and pleasure, gratification, or relief when setting fires or when witnessing or participating in their aftermath. Patients may make considerable advance preparations before starting a fire. Pyromania differs from arson in that the latter is done for financial gain, revenge, or other reasons and is planned beforehand. **Epidemiology** No information is available on the prevalence of pyromania, but only a small percentage of adults who set fires can be classified as having pyromania. The disorder is found far more often in men than in women, with a male-to-female ratio of approximately 8:1. More than 40 percent of arrested arsonists are younger than 18 years of age. **Comorbidity** Pyromania is significantly associated with substance abuse disorder (especially alcoholism); affective disorders, depressive or bipolar; other impulse control disorders, such as kleptomania in female fire setters; and various personality disturbances, such as inadequate and borderline personality disorders. Attention-deficit/hyperactivity disorder and learning disabilities may be conspicuously associated with childhood pyromania; this constellation frequently persists into adulthood. Persons who set fires are more likely to be mildly retarded than are those in the general population. Some studies have noted an increased incidence of alcohol use disorders in persons who set fires. Fire setters also tend to have a history of antisocial traits, such as truancy, running away from home, and delinquency. Enuresis has been considered a common finding in the history of fire setters, although controlled studies have failed to confirm this. Studies, however, have found an association between cruelty to animals and fire setting. Childhood and adolescent fire setting is often associated with ADHD or adjustment disorders. **Etiology** Psychosocial. Freud saw fire as a symbol of sexuality. He believed the warmth radiated by fire evokes the same sensation that accompanies a state of sexual excitation, and a flame's shape and movements suggest a phallus in activity. Other psychoanalysts have associated pyromania with an abnormal craving for power and social prestige. Some patients with pyromania are volunteer firefighters who set fires to prove themselves brave, to force other firefighters into action, or to demonstrate their power to extinguish a blaze. The incendiary act is a way to vent accumulated rage over

frustration caused by a sense of social, physical, or sexual inferiority. Several studies have noted that the fathers of patients with pyromania were absent from the home. Thus, one explanation of fire setting is that it represents a wish for the absent father to return home as a rescuer, to put out the fire, and to save the child from a difficult existence. Female fire setters, in addition to being much fewer in number than male fire setters, do not start fires to put firefighters into action as men frequently do. Frequently noted delinquent trends in female fire setters include promiscuity without pleasure and petty stealing, often approaching kleptomania. **Biological Factors.** Significantly low CSF levels of 5-HIAA and 3-methoxy-4-hydroxyphenylglycol (MHPG) have been

found in fire setters, which suggests possible serotonergic or adrenergic involvement. The presence of reactive hypoglycemia, based on blood glucose concentrations on glucose tolerance tests, has been put forward as a cause of pyromania. Further studies are needed, however.

Diagnosis and Clinical Features Persons with pyromania often regularly watch fires in their neighborhoods, frequently set off false alarms, and show interest in firefighting paraphernalia. Their curiosity is evident, but they show no remorse and may be indifferent to the consequences for life or property. Fire setters may gain satisfaction from the resulting destruction; frequently, they leave obvious clues. Commonly associated features include alcohol intoxication, sexual dysfunctions, below-average intelligence quotient (IQ), chronic personal frustration, and resentment toward authority figures. Some fire setters become sexually aroused by the fire.

Differential Diagnosis Clinicians should have little trouble distinguishing between pyromania and the fascination of many young children with matches, lighters, and fire as part of the normal investigation of their environments. Pyromania must also be separated from incendiary acts of sabotage carried out by dissident political extremists or by "paid torchers", termed arsonists in the legal system. When fire setting occurs in conduct disorder and antisocial personality disorder, it is a deliberate act, not a failure to resist an impulse. Fires may be set for profit, sabotage, or retaliation. Patients with schizophrenia or mania may set fires in response to delusions or hallucinations. Patients with brain dysfunction (e.g., dementia), mental retardation, or substance intoxication may set fires because of a failure to appreciate the consequences of the act.

Course and Prognosis. Although fire setting often begins in childhood, the typical age of onset of pyromania is unknown. When the onset is in adolescence or adulthood, the fire setting tends to be deliberately destructive. Fire setting in pyromania is episodic

and may wax and wane in frequency. The prognosis for treated children is good, and complete remission is a realistic goal. The prognosis for adults is guarded, because they frequently deny their actions, refuse to take responsibility, are dependent on alcohol, and lack insight.

Treatment Little has been written about the treatment of pyromania, and treating fire setters has been difficult because of their lack of motivation. No single treatment has been proved effective; thus a number of modalities, including behavioral approaches, should be tried. Because of the recurrent nature of pyromania, any treatment program should include supervision of patients to prevent a repeated episode of fire setting. Incarceration may be the only method of preventing a recurrence. Behavior therapy can then be administered in the institution. Fire setting by children must be treated with the utmost seriousness. Intensive interventions should be undertaken when possible, but as therapeutic and preventive measures, not as punishment. In the case of children and adolescents, treatment of pyromania or fire setting should include family therapy.

OTHER SPECIFIED OR UNSPECIFIED DISORDERS This DSM-5 diagnostic category is a residual category for disorders that do not meet the criteria for the disorders described earlier. Some of the disorders listed below stand at the borderline between impulsive and compulsive disorders. Important, although subtle, distinctions exist between the two terms. An impulse is a tension state that can exist without an action; a compulsion is a tension state that always has an action component. The disorders are classified here as compulsions because the patients feel "compelled" to act out their pathological behavior; they cannot resist the impulse to do so. Impulses are acted on with the expectation of receiving pleasure; compulsions are usually egodystonic; for example, the patient does not like having to perform the act even though compelled to do so. An exception to the rule that impulses are associated with pleasure involves those cases in which feelings of guilt follow the act and disturb the sense of pleasure. Similarly, not all compulsions are ego-dystonic; for example,

certain compulsive video game playing may have a pleasurable component. Both impulsive and compulsive behaviors are characterized by their repetitive nature; however, the repeated acting out of impulses leads to psychosocial impairment, whereas compulsive behavior does not always carry that risk. Because of the repetitive and pleasurable nature of many of the behavioral patterns in this group of disorders, they are often referred to as addictions. Internet Compulsion Also called Internet Addiction, such persons spend almost all their waking hours at the computer terminal. Their patterns of use are repetitive and constant, and they are

unable to resist strong urges to use the computer or to “surf the Web.” Internet addicts may gravitate to certain sites that meet specific needs (e.g., shopping, sex, and interactive games, among others). In DSM-5 there is a condition proposed for further study called “Internet gaming disorder,” which refers to persons who continually use the Internet to play games to the extent that it interferes with social relations and work performance. But as mentioned earlier, the disorder need not be limited to games. Other activities may be involved. Internet Use and Abuse. Web sites and organizations offer opportunities for people with similar interests to find one another and begin relationships. The Internet has been useful as a matchmaker, with millions of subscribers to dating services. People meet on the Internet, fall in love, and may even marry. During this process some fact fudging is not uncommon. In Second Life and similar alternate universe games, creative identity deception is expected. This use can become problematic and thus can be termed “abuse” in various ways. VICTIMS. Deception can take a malignant turn as sexual predators deceive their victims with false identities only to exploit and harm them when they meet. These contacts are unregulated and difficult to detect except by monitoring and checking the computers used. There are weekly reports of minors having been lured into sometimes lethal situations by sexual predators. Occasionally there is a report of a couple that met to marry only to discover they had missed verifying crucial details, such as each other’s sex. Some people who make little use of the Internet nonetheless become victims and enter treatment. The suicide of one teenager after reading untruths entered by a peer's malicious mother (“cyberbullying”) has inspired laws to criminalize such behavior. Internet identity theft is also rampant. An underreported and growing problem, medical identity theft, is harder to detect and remedy, often requiring painstaking record correction. The combination of anonymity, convenience, and escape (the ACE model) promotes the Internet as a focus of psychopathology. Internet addiction is mentioned on 385,000 Web pages, a 180-fold increase in 4 years, with those at risk suffering from depression, bipolar disorder, anxiety, low self-esteem, or addiction to substances, at least previously. Online surveys find that 4 to 10 percent of users meet criteria for “Internet addiction,” defined as having at least five of the following signs and symptoms: (1) preoccupation with the Internet; (2) increasing amount of time spent online; (3) failure to cut back use with concomitant restlessness; (4) moodiness or depression; (5) staying online longer than originally intended; (6) running the risk of losing a job, relationship, or other opportunity because of Internet use; and (7) lying to conceal the extent of Internet use and/or using the Internet to escape negative feelings. General population surveys show a prevalence of .3 to .7 percent, with higher rates when family members are queried. The “addicted” averaged 38.5 hours per week on a computer, whereas others averaged 4.9 hours per week. Forty percent got less than 4 hours of sleep per night because of Internet use. Impairment was evident in increased divorce rates, vocational impairment, legal problems, and personal distress. Subgroups on Internet use include (1) cybersex addiction (viewing pornography); (2) cyberrelational addiction (online relationships become more important than those in one's physical world); online gaming (gambling, stock trading), compulsive, debt-inducing shopping, and others;

(3) information overload; (4) net compulsivity; and (5) computer (non-Internet) addiction (e.g., computer games). About 30 percent of those “addicted” reported using the Internet to escape negative feelings and because it was always available at low cost. It is possible to lose real money on the Internet, gambling constantly and continually without being seen to do so. More money is made on sex via the Internet

than through the sale of anything else. Combinations abound, as in the 873,000 sites mentioning both “cybersex” and “casino.”

TREATMENT FOR INTERNET ADDICTS.

A subset of Web pages offer a chance to evaluate one's Internet use as possibly pathological and offer both education and online counseling, with some urging face-to-face counseling as a way of becoming less involved with the Internet. A rough idea of the ratio of what is offered as possible sources of help online is the number of sites mentioning “cybersex” (close 4 million) compared to those mentioning “cybersex addiction” (about 20 thousand). There are many mentions and variants on “Center for Internet Addiction” often represented only by single practitioners with some ancillary staff.

Mobile or Cell Phone Compulsion

Some persons compulsively use mobile phones to call others—friends, acquaintances, or business associates. They justify their need to contact others by giving plausible reasons for calling; but underlying conflicts may be expressed in the behavior, such as fear of being alone, the need to satisfy unconscious dependency needs, or undoing a hostile wish toward a loved one, among others (e.g., “I just want to make sure you are OK.”).

Repetitive Self-Mutilation

Persons who repeatedly cut themselves or do damage to their bodies may do so in a compulsive manner. In all cases, another disorder will be found. Parasuicidal behavior is common in borderline personality disorder. Compulsive body piercing or tattooing may be a symptom of a paraphilia or a depressive equivalent. In DSM-5 there is a proposed diagnosis called “non-suicidal self injury” to refer to persons who repeatedly damage their bodies, who, however, do not wish to die, contrasted with those persons who harm themselves with true suicidal intent. There is secondary gain to this self-injurious behavior such as getting the attention of others, the so-called “cry for help,” or obtaining relief from dysphoric states. It has been postulated that cutting the skin or inflicting bodily pain may release endorphins or raise dopamine levels in the brain, both of which contribute to a euthymic or elated mood, thus alleviating depressed states of mind in those who practice self-mutilation.

Compulsive Sexual Behavior

Some persons repeatedly seek out sexual gratification, often in perverse ways (e.g., exhibitionism). They are unable to control their behavior and may not experience feelings of guilt after an episode of acting-out behavior. Sometimes called sexual addiction, this condition is discussed extensively in Section 17.2.

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