39 - 31.16 Adolescent Substance Abuse

31.16 Adolescent Substance Abuse

disorders: In search of a rational, evidence-informed approach. Curr Opin Psychiatry. 2013;26:219–230. Seal JL, Gornick MC, Gotgay N, Shaw P, Greenstein DK, Coffee M, Gochman PA, Stromberg T, Chen Z, Merriman B, Nelson SF, Brooks J, Arepalli S, Wavrant-De Vrieze F, Hardy J, Rapoport JL, Addington AM. Segmental uniparental isodisomy on 5q32-qter in a patient with childhood-onset schizophrenia. J Med Genet. 2006;43(11):887–892. Shaw P, Sporn A, Gogtay N, et al. Childhood onset schizophrenia: a double-blind clozapine-olanzapine comparison. Arch Gen Psychiatry. 2006;63:721–730. Sikich L, Frazier JA, McClellan J, Findling RL, Vitiello B, Ritz L, Ambler D, et al. Double-blind comparison of first-and second-generation antipsychotics in early-onset schizophrenia and schizo-affective disorder : findings from the treatment of early-onset schizophrenia spectrum disorders (TEOSS) study. Am J Psychiatry. 2008;165:1420–1431. Starling J, Williams LM, Hainsworth C, Harris AW. The presentation of early-onset psychotic disorders. Aust N Z J Psychiatry. 2013;47:43–50 Vyas NS, Gogtay N. Treatment of early onset of schizophrenia: Recent trends, challenges and future considerations. Front Psychiatry. 2012;3:1–5. Vyas NS, Patel NH, Puri BK. Neurobiology and phenotypic expression in early-onset schizophrenia. Early Interv Psychiatry. 2011;5:3–14. 31.16 Adolescent Substance Abuse Substance use is a public health concern among American youth. The most common substances used by adolescents in the United States are tobacco, alcohol, and marijuana. Adolescent substance use and abuse, however, includes a wider range of substances, including cocaine, heroin, inhalants, phencyclidine (PCP), lysergic acid diethylamide (LSD), dextromorphan, anabolic steroids and various club drugs, 3,4methylenedioxymethamphetamine (MDMA or Ecstasy), flunitrazepam (Rohypnol), gamma-hydroxybutyrate (GHB), and ketamine (Ketalar). It is estimated that approximately 20 percent of 8th graders in the United States have tried illicit drugs and about 30 percent of 10th through 12th graders have used an illicit substance. Alcohol remains the most common substance used and abused by adolescents. Binge drinking occurs in about 6 percent of adolescents, and teens with alcohol use disorders are at greater risk of problems with other substances as well. The American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), in contrast to the previous Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR), does not separate the diagnoses of substance abuse from substance

dependence. Instead, the DSM-5 provides criteria for substance use disorder, accompanied by criteria for intoxication, withdrawal, and substance-induced disorders. The previous DSM-IV-TR criterion of recurrent substance-related legal problems has been deleted in the DSM-5, and a new criterion, craving, or a strong desire or urge to use a substance, has been added. In the DSM-5, a threshold of two or more criteria must be present. Cannabis withdrawal and caffeine withdrawal are new disorders in the DSM-5. The combined substance use criteria including both abuse and withdrawal phenomena may strengthen the validity of the disorder in adolescents, and the elimination of the criterion for “legal problems” is

also an appropriate change for adolescents, since this is less common for younger adolescents and for adolescent females who use substances. Two recent commentaries raise concerns regarding the application of DSM-5 criteria to adolescents with respect to the symptom of tolerance, particularly to alcohol, that may occur across the board, and may be developmentally normal for adolescents who use alcohol but for whom there is no clinical impairment, and for withdrawal symptoms, which may have clinical significance but is only moderately associated with level of severity of substance use. Many risk and protective factors influence the age of onset and severity of substance use among adolescents. Psychosocial risk factors mediating the development of substance use disorders include parent modeling of substance use, family conflict, lack of parental supervision, peer relationships, and individual stressful life events. Protective factors that mitigate substance use among adolescents include variables such as a stable family life, strong parent–child bond, consistent parental supervision, investment in academic achievement, and a peer group that models prosocial family and school behaviors. Interventions that diminish risk factors are likely to mitigate substance use. Approximately one of five adolescents has used marijuana or hashish. Approximately one third of adolescents have used cigarettes by age 17 years. Studies of alcohol use among adolescents in the United States have shown that by 13 years of age, one third of boys and almost one fourth of girls have tried alcohol. By 18 years of age, 92 percent of males and 73 percent of females reported trying alcohol, and 4 percent reported using alcohol daily. Of high school seniors, 41 percent reported using marijuana; 2 percent reported using the drug daily. Drinking among adolescents follows adult demographic drinking patterns: The highest proportion of alcohol use occurs among adolescents in the northeast; whites are more likely to drink than are other groups; among whites, Roman Catholics are the least likely nondrinkers. The four most common causes of death in persons between the ages of 10 and 24 years are motor vehicle accidents (37 percent), homicide (14 percent), suicide (12 percent), and other injuries or accidents (12 percent). Of adolescents treated in pediatric trauma centers, more than one third are treated for alcohol or drug use. Studies considering alcohol and illicit drug use by adolescents as psychiatric disorders have demonstrated a greater prevalence of substance use, particularly alcoholism, among biological children of alcoholics than among adopted youth. This finding is supported by family studies of genetic contributions, by adoption studies, and by observing children of substance users reared outside the biological home. Numerous risk factors influence the emergence of adolescent substance abuse. These include parental belief in the harmlessness of substances, lack of anger control in families of substance abusers, lack of closeness and involvement of parents with children’s activities, maternal passivity, academic difficulties, comorbid psychiatric disorders such as conduct disorder and depression, parental and peer substance use, impulsivity, and early onset of cigarette smoking. The greater the number of risk factors, the more likely it is that an adolescent will be a substance user.

EPIDEMIOLOGY Alcohol The Centers for Disease Control and Prevention Youth Risk Behavior Survey found that 72.5 percent of high school students had tried at least one alcoholic drink, and 24.2 percent reported an episode of heavy drinking in the month preceding the survey. Findings from the Monitoring the Future Survey suggest that about 39 percent of adolescents have used alcohol before the 8th grade. Another survey found that drinking was a significant problem for 10 to 20 percent of adolescents. Drinking was reported by 70 percent of 8th grade students: 54 percent reported drinking within the past year, 27 percent reported having gotten drunk at least once, and 13 percent reported binge drinking in the 2 weeks before the survey. By the 12th grade, 88 percent of high school students reported drinking, and 77 percent drank within the past year; 5 percent of 8th grade students, 1.3 percent of 10th grade students, and 3.6 percent of 12th grade students reported daily alcohol use. In the age range of 13 to 17 years, in the United States, reports indicate there are 3 million problem drinkers and 300,000 adolescents with alcohol dependence. The gap between male and female alcohol consumers is narrowing. Marijuana For the last two decades, marijuana has been one of the most widely used drugs by young people in developed countries, and recently it has become highly used globally. The United Nations Office on Drugs and Crime estimated that marijuana was used by 3.9 percent of people worldwide between ages 15 years and 64 years. Marijuana is the most commonly used illicit drug among high school students in the United States. It is estimated that about 10 percent of those who try marijuana become daily users, and 20 to 30 percent become weekly users. Marijuana has been termed a “gateway drug,” because the strongest predictor of future cocaine use is frequent marijuana use during adolescence. Of 8th grade, 10th grade, and 12th grade students, 10, 23, and 36 percent, respectively, report using marijuana, a slight decrease from the year preceding the survey. Of 8th grade, 10th grade, and 12th grade students, 0.2, 0.8, and 2 percent, respectively, report daily marijuana use. Prevalence rates for marijuana are highest among Native American males and females; these rates are nearly as high in white males and females and Mexican American males. The lowest annual rates are reported by Latin American females, African American females, and Asian American males and females. Cocaine The annual cocaine use reported by high school seniors decreased more than 30 percent between 1990 and 2000. Currently, about 0.5 percent of 8th grade students, 1 percent of

10th grade students, and 2 percent of 12th grade students are estimated to have used cocaine. The prevalence rates for crack cocaine use, however, is increasing and is most common among those between the ages of 18 and 25. Crystal Methamphetamine Crystal methamphetamine, or “ice,” was at a relative low level of use in adolescence about one decade ago of 0.5 percent, and has steadily increased to a recent rate of 1.5 percent among 12th graders. Opioids A survey of 7,374 high school seniors found that 12.9 percent reported nonmedical use of opioids. Of users, more than 37 percent reported intranasal administration of prescription opioids. Lysergic Acid Diethylamide (LSD) Lysergic acid diethylamide is reportedly used by 2.7 percent of 8th grade students, 5.6 percent of 10th grade students, and 8.8 percent of 12th grade students. Of 12th grade students, 0.1 percent report daily use. The current LSD rates are lower than rates of LSD use during the past two decades. 3,4-Methylenedioxymethamphetamine (MDMA) The popularity of MDMA has increased over the last decade, and current rates of use in the United States are in the range of about 5 percent for 10th graders and 8 percent of 12th graders, despite that the perceived harmfulness of this drug has increased over the last decade to almost 50 percent among 12th graders. Accidental adolescent deaths have been associated with the use of MDMA. Gamma-Hydroxybutyrate (GHB) Gamma-hydroxybutyrate, a club drug, has been found in surveys to have an annual prevalence rate of 1.1 percent for 8th graders, 1.0 percent rate for 10th graders, and a

1.6 percent rate of use for 12th graders. Ketamine (Ketalar) Ketamine, another club drug, was found recently to have a rate of 1.3 percent annual prevalence for 8th graders, 2.1 percent for 10th graders, and 2.5 percent rate for 12th graders. Flunitrazepam (Rohypnol)

Flunitrazepam (Rohypnol), a third club drug, has been found to have an annual prevalence rate of about 1 percent for all high school grades combined. Anabolic Steroids Despite reported knowledge of the risks of anabolic steroids among high school students, surveys over the last 5 years found rates of anabolic steroid use to be 1.6 percent among 8th graders and 2.1 percent among 10th graders. Up to 45 percent of 10th and 12th graders reported knowledge of the risks of anabolic steroids; however, over the last decade it appears that high school seniors reported less disapproval of their use. Inhalants The use of inhalants in the form of glue, aerosols, and gasoline is relatively more common among younger than older adolescents. Among 8th grade, 10th grade, and 12th grade students, 17.6, 15.7, and 17.6 percent, respectively, report using inhalants; 0.2 percent of 8th grade students, 0.1 percent of 10th grade students, and 0.2 percent of 12th grade students report daily use of inhalants. Multiple Substance Use Among adolescents enrolled in substance abuse treatment programs, 96 percent are polydrug users; 97 percent of adolescents who abuse drugs also use alcohol. ETIOLOGY Genetic Factors The concordance for alcoholism is reportedly higher among monozygotic than dizygotic twins. Considerably fewer studies have been conducted of families of drug abusers. One twin study of drug users showed that the drug abuse concordance for male monozygotic twins was twice that for dizygotic twins. Studies of children of alcoholics reared away from their biological homes have shown that these children have about a 25 percent chance of becoming alcoholics. Psychosocial Factors Among adolescents, substance use, particularly marijuana use, is strongly influenced by peers, and especially for those adolescents who report using marijuana for relaxation, the drug is used to escape from stress, and as a social activity. There are data to suggest, however, that marijuana use is also associated with both social anxiety disorder and depressive symptoms. Among young adolescents who start using alcohol, tobacco, and marijuana at an early age, data suggest that they often come from families with low parental supervision. The risk of early initiation of substances is greatest for children below 11 years of age. Increased parental supervision during middle childhood years

may diminish drug and alcohol sampling and ultimately diminish the risk of using marijuana, cocaine, or inhalants in the future. Comorbidity Rates of alcohol and marijuana use are reportedly higher in relatives of youth with depression and anxiety disorders. On the other hand, mood disorders are common among those with alcoholism. Evidence indicates another strong link between early antisocial behavior, conduct disorder, and substance abuse. Substance abuse can be viewed as one form of behavioral deviance that, unsurprisingly, is associated with other forms of social and behavioral deviance. Early intervention with children who show early signs of social deviance and antisocial behavior may conceivably impede the processes that contribute to later substance abuse. Comorbidity, the occurrence of more than one substance use disorder or the combination of a substance use disorder and another psychiatric disorder, is common. It is important to know about all comorbid disorders, which may show differential responses to treatment. Surveys of adolescents with alcoholism show rates of 50 percent or higher for additional psychiatric disorders, especially mood disorders. A recent survey of adolescents who used alcohol found that more than 80 percent met criteria for another disorder. The disorders most frequently present were depressive disorders, disruptive behavior disorders, and drug use disorders. These rates of comorbidity are even higher than those for adults. The diagnosis of alcohol abuse or

dependence was likely to follow, rather than precede, other disorders; that a large proportion of adolescents with alcoholism have a previous childhood disorder may have both etiological and treatment implications. In this survey, the onset of alcohol disorders did not systematically precede drug abuse or dependence. In 50 percent of cases, alcohol use followed drug use. Alcohol use may be a gateway to drug use, but is not in most cases. The presence of other psychiatric disorders was associated with an earlier onset of alcohol disorder, but it did not seem to indicate a more protracted course of alcoholism. DIAGNOSIS AND CLINICAL FEATURES According to the DSM-5, substance-related disorders include the following three categories: substance use, substance intoxication, and substance withdrawal disorder. Whereas in DSM-IV-TR, substance abuse and dependence were two separate categories, in DSM-5, they are combined in one diagnosis called substance use disorder. Substance use refers to a maladaptive pattern of substance use leading to clinically significant impairment or distress, manifest by one or more of the following symptoms within a 12-month period: recurrent substance use in situations that causes physical danger to the user, recurrent substance use in the face of obvious impairment in school or work situations, recurrent substance use despite resulting legal problems, or recurrent substance use despite social or interpersonal problems. Substance intoxication refers to the development of a reversible, substance-specific syndrome caused by use of a substance. Clinically significant maladaptive behavioral or

psychological changes must be present. Substance withdrawal refers to a substance-specific syndrome caused by the cessation of, or reduction in, prolonged substance use. The substance-specific syndrome causes clinically significant distress or impairs social or occupational functioning. Two new disorders in DSM-5 include Cannabis withdrawal disorder and caffeine withdrawal disorder. The diagnosis of alcohol or drug use in adolescents is made through careful interview, observations, laboratory findings, and history provided by reliable sources. Many nonspecific signs may point to alcohol or drug use, and clinicians must be careful to corroborate hunches before jumping to conclusions. Substance use can be viewed on a continuum with experimentation (the mildest use), regular use without obvious impairment, abuse, and finally, dependence. Changes in academic performance, nonspecific physical ailments, and changes in relationships with family members, changes in peer group, unexplained phone calls, or changes in personal hygiene may indicate substance use in an adolescent. Many of these indicators, however, also can be consistent with the onset of depression, adjustment to school, or the prodrome of a psychotic illness. It is important, therefore, to keep the channels of communication with an adolescent open when substance use is suspected. Nicotine Nicotine is one of the most addictive substances known; it involves cholinergic receptors, and enhancing acetylcholine, serotonin, and β-endorphin release. Young teens who smoke cigarettes are also exposed to other drugs more frequently than nonsmoking peers. Alcohol Alcohol use in adolescents rarely results in the sequelae observed in adults with chronic use of alcohol, such as withdrawal seizures, Korsakoff’s syndrome, Wernicke’s aphasia, or cirrhosis of the liver. One report, however, has stated that adolescent exposure to alcohol may result in diminished hippocampal brain volume. Because the hippocampus is involved with attention, it is conceivable that adolescent alcohol use could result in compromised cognitive function, especially with respect to attention. Marijuana The short-term effects of the active ingredient in marijuana, tetrahydrocannabinol (THC), include impairment in memory and learning, distorted perception, diminished problem-solving ability, loss of coordination, increased heart rate, anxiety, and panic attacks. Abrupt cessation of heavy marijuana use by adolescents has been reported to result in a withdrawal syndrome characterized by insomnia, irritability, restlessness,

drug craving, depressed mood, and nervousness followed by anxiety, tremors, nausea, muscle twitches, increased sweating, myalgia, and general malaise. Typically, the

withdrawal syndrome begins 24 hours after the last use, peaks at 2 to 4 days, and diminishes after 2 weeks. Marijuana use has been associated with increased risk of psychiatric disorders. Poor cognitive functioning has been associated with chronic marijuana use, although it is not clear whether marijuana impairs cognitive function. Deficits in verbal learning, memory, and attention have been reported in chronic marijuana users, and both acute and chronic marijuana use is associated with changes in cerebral blood flow to certain brain regions, which can be detected by positron emission tomography. Functional imaging studies suggest that there is less activity in brain regions involved with attention and memory in chronic marijuana users. A 15-year follow-up of 50,465 Swedish males in the military reported that participants who had used marijuana by 18 years of age were 2.4 times more likely to develop schizophrenia. Risks associated with chronic marijuana use include higher rates of motor vehicle accidents, impaired respiratory function, increased risk of cardiovascular disease, and potential increased risk for psychotic symptoms and disorders. Cocaine Cocaine can be sniffed or snorted, injected, or smoked. Crack is the term given to cocaine after it has been changed to a free base for smoking. Cocaine's effects include constriction of peripheral blood vessels, dilated pupils, hyperthermia, increased heart rate, and hypertension. High doses or prolonged use of cocaine can induce paranoid thinking. There is immediate risk of death secondary to cardiac arrest or from seizures followed by respiratory arrest. In contrast to stimulants used to treat attentiondeficit/hyperactivity disorder (ADHD), such as methylphenidate, cocaine quickly crosses the blood–brain barrier and moves off the dopamine transporter within 20 minutes; methylphenidate remains bound to dopamine for long periods. Heroin Heroin, a derivative of morphine, is produced from a poppy plant. Heroin usually appears as a white or brown powder that can be snorted, but more commonly, it is used intravenously. Withdrawal symptoms include restlessness, muscle and bone pain, insomnia, diarrhea and vomiting, cold flashes with goose bumps, and kicking movements. Withdrawal occurs within a few hours after use; symptoms peak between 48 and 72 hours later and remit within about a week. Club Drugs Adolescents who frequent nightclubs, raves, bars, or music clubs also frequently use MDMA, GHB, Rohypnol, and ketamine. GHB, Rohypnol (a benzodiazepine), and ketamine (an anesthetic) are primarily depressants and can be added to drinks without detection because they are often colorless, tasteless, and odorless. The Drug-Induced Rape Prevention and Punishment Act was passed after these drugs were found to be associated with date rape. MDMA is a derivative of methamphetamine, a synthetic with

both stimulant and hallucinogenic properties. MDMA can inhibit serotonin and dopamine reuptake. MDMA can result in dry mouth, increased heart rate, fatigue, muscle spasm, and hyperthermia. Lysergic Acid Diethylamide LSD is odorless, colorless, and has a slightly bitter taste. Higher doses of LSD can produce visual hallucinations and delusions and, in some cases, panic. The sensations experienced after ingestion of LSD usually diminish after 12 hours. Flashbacks can occur up to 1 year after use. LSD can produce tolerance; that is, after multiple uses, more is needed to provide the same degree of intoxication. Substance use is related to a variety of high-risk behaviors, including early sexual experimentation, risky driving, destruction of property, stealing, "heavy metal" or alternative music, and, occasionally, preoccupation with cults or Satanism. Although none of these behaviors necessarily predicts substance use, at the extreme, these behaviors reflect alienation from the mainstream of developmentally expected social behavior. Adolescents

with inadequate social skills may use a substance as a modality to join a peer group. In some cases, adolescents begin their substance use at home with their parents, who also use substances to enhance their social interactions. Although no evidence indicates what determines a typical adolescent user of alcohol or drugs, many substance users seem to have underlying social skills deficits, academic difficulties, and less than optimal peer relationships. TREATMENT Interventions for substance use disorders in adolescents first require effective screening and identification of those teens in need of treatment. Once a substance use disorder has been identified in a teen, a variety of treatment options can be sought. In accordance with the goals of the U.S Substance Abuse Mental Health Services Administration (SAMHSA), a school-based alcohol and drug Screening, Brief Intervention, and Referral to Treatment (SBIRT) has been initiated in a study with 629 adolescents ages 14 to 17 years in 13 participating high schools in New Mexico. Initially, school-based health centers provided substance use screenings for all students who were seen in the clinic for any reason. Once identified, substance using adolescents were offered either brief intervention by clinic staff (85.1 percent of those identified), whereas 14.9 percent received brief treatment or referral to treatment. The brief intervention was based on motivational interviewing, with the goal of helping the student to gain motivation for behavioral change, and being referred for more intensive treatment if needed. Students who received the intervention, regardless of the severity of their substance use, reported decreases in self-reported drinking to intoxication at the 6-month follow-up. Furthermore, students who reported drug use, self-reported decreased use at follow-up. Alcohol use was reported by 42 percent of the student participants, and alcohol intoxication was reported by 37 percent. Eighty-five percent of study participants who reported drug use, reported only marijuana use in the month

prior to entering the study. The frequency of alcohol and marijuana as the most predominant substances in this age group is consistent with epidemiological data. Overall, this school-based intervention had the advantage of being easily accessible to adolescents and provided a graded option for treatment according to the severity of the substance use. This study suggests that school-based programs for identifying and providing brief interventions for high school students is viable and merits further study. Treatment of substance use disorders in adolescents is designed to directly prevent the substance use behaviors and to provide education for the patient and family and to address cognitive, emotional, and psychiatric factors that influence the substance use in a variety of settings such as a residential milieu, group, and individual psychosocial session. One validated instrument used as a guide for clinicians in the treatment of adolescent substance use designates levels of care appropriate for the symptoms. This instrument called the Child and Adolescent Levels of Care Utilization Services (CALOCUS) outlines six levels of care: Level 0: Basic services (prevention) Level 1: Recovery maintenance (relapse prevention) Level 2: Outpatient (once per week visits) Level 3: Intensive outpatient (2 or more visits per week) Level 4: Intensive integrated services (day treatment, partial hospitalization, wraparound services) Level 5: Nonsecure, 24-hour medically monitored service (group home, residential treatment facility) Level 6: Secure 24-hour medical management (inpatient psychiatric or highly programmed residential facility) Treatment settings that serve adolescents with alcohol or drug use disorders include inpatient units, residential treatment facilities, halfway houses, group homes, partial hospital programs, and outpatient settings. Basic components of adolescent alcohol or drug use treatment include individual psychotherapy, drug-specific counseling, self-help groups (Alcoholics Anonymous [AA], Narcotics Anonymous [NA], Alateen, Al-Anon), substance abuse education and relapse prevention programs, and random urine drug testing. Family therapy and psychopharmacological

intervention may be added. Before deciding on the most appropriate treatment setting for a particular adolescent, a screening process must take place in which structured and unstructured interviews help to determine the types of substances being used and their quantities and frequencies. Determining coexisting psychiatric disorders is also critical. Rating scales are typically used to document pretreatment and posttreatment severity of abuse. The Teen Addiction Severity Index (T-ASI), the Adolescent Drug and Alcohol Diagnostic Assessment (ADAD), and the Adolescent Problem Severity Index (APSI) are several severity-oriented rating scales. The T-ASI is broken down into dimensions that include a family function, school or employment status, psychiatric status, peer social relationships, and legal status.

After most of the information about substance use and the patient's overall psychiatric status has been obtained, a treatment strategy must be chosen and an appropriate setting must be determined. Two very different approaches to the treatment of substance abuse are embodied in the Minnesota model and the multidisciplinary professional model. The Minnesota model is based on the premise of AA; it is an intensive 12-step program with a counselor who functions as the primary therapist. The program uses self-help participation and group processes. Inherent in this treatment strategy is the need for adolescents to admit that substance use is problematic and that help is necessary. Furthermore, they must be willing to work toward altering their lifestyle to eradicate substance use. The multidisciplinary professional model consists of a team of mental health professionals that usually is led by a physician. Following a case-management model, each member of the team has specific areas of treatment for which he or she is responsible. Interventions may include cognitive-behavioral therapy, family therapy, and pharmacological intervention. This approach usually is suited for adolescents with comorbid psychiatric diagnoses. Cognitive-behavioral approaches to psychotherapy for adolescents with substance use generally require that adolescents be motivated to participate in treatment and refrain from further substance use. The therapy focuses on relapse prevention and maintaining abstinence. Psychopharmacological interventions for adolescent alcohol and drug users are still in their early stages. The presence of mood disorders clearly indicates the need for antidepressants, and generally, the selective serotonin reuptake inhibitors are the first line of treatment. Occasionally, an intervention is made to substitute the illicit drug with another drug that is more amenable to the treatment situation; for example, using methadone instead of heroin. Adolescents are required to have documented attempts at detoxification and consent from an adult before they can enter such a treatment program. Peter, a 16-year-old 11th grader, was admitted to substance abuse treatment for the second time, following a relapse and threats of suicide. He was initially admitted to an adolescent psychiatric inpatient unit following a serious suicide attempt. Peter reported a longstanding history of ADHD, but he had been a good student and not had any difficulties until middle school. Peter reported an onset of substance use at age 13 years, rapid progression in substance involvement since age 14 years, and then current use of marijuana on a daily basis, drinking alcohol up to five times each week, and experimentation with a variety of substances, such as LSD and Ecstasy. After being discharged from the psychiatric hospital, Peter attended teen group sessions focusing on his substance use problems. Family sessions led to the realization that Peter's mother had been depressed for some time, and she entered into her own treatment. Peter was improving with respect to his substance use; however, his depressive symptoms increased following 4 weeks of abstinence. Peter was started on fluoxetine (Prozac). After the medication was titrated to 30 mg, he remained on it for

a month at which time he showed improvement in mood and treatment compliance. Peter continued to attend the teen AA meetings and outpatient therapy. Family conflict soon recurred, however, and Peter became noncompliant with outpatient treatment, medication, and meetings. He resumed old relationships with substance using peers and relapsed into daily marijuana use and occasional alcohol use. (Courtesy of Oscar G. Bukstein, M.D.) Efficacious treatments for cigarette smoking cessation include nicotine-containing gum, patches, or nasal spray or inhaler. Bupropion (Zyban) aids in diminishing cravings for nicotine and is beneficial in the treatment of smoking cessation. Because comorbidity influences treatment outcome, it is important to pay attention to other disorders, such as mood disorders, anxiety disorders, conduct disorder, or ADHD during the treatment of substance use disorders. REFERENCES Buckner JD, Heimberg RG, Schneier FR, Liu SM, Want S, Blanco C. The relationship between cannabis use disorder and social anxiety disorder in the National Epidemiologic Study of Alcohol and Related Conditions (NESARC). Drug Alcohol Depend. 2012;124:128–134. Bukstein O. Adolescent substance abuse. In: Sadock BJ, Sadock VA, Ruiz P, eds. Kaplan & Sadock’s Comprehensive Textbook of Psychiatry. 9th ed. Vol. II. Philadelphia: Lippincott Williams & Wilkins; 2009:3818. Centers for Disease Control and Prevention, 2009. Youth Risk Behavior Survey. Updated February 22, 2011. Fiorentini A, Volunteri LS, Draogna F, Rovera C, Maffini M, et al. Substance-induced psychoses: A critical review of the literature. Curr Drug Abuse Rev. 2011;4:228–240. Fraser S, Hides L, Philips L, Proctor D, Lubman DI. Differentiating first episode substance induced primary psychotic disorders with concurrent substance use in young people. Schizophr Res. 2012;136:110–115. Giedd J, Stocvkman M Weele C. Anatomic magnetic resonance imaging of the developing child and adolescent brain. In: Reyna VF; Chapman SB, Dougherty MR, Copnfrey J., eds. The Adolescent Brain: Learning, Reasoning, and Decision Making. Washington, D.C: American Psychological Association; 2012. Harrow BS, Tompkins CP, Mitchell PD, Smith KW, Soldz S, Kasten L, Fleming K. The impact of publicly funded managed care on adolescent substance abuse treatment outcomes. Am J Drug Alcohol Abuse. 2006;32(3):379. Johnston LD, O’Malley PM, Bachman JG, Schulenberg JE. Monitoring the Future: National Survey Results on Drug Use. 1975–2007. Vol 3 Secondary School Students. Bethesda, MD. National Institute on Drug Abuse; 2008. Kaminer Y, Winters KC. Proposed DSM-5 substance use disorders for adolescents: If you build it, will they come? Am J Addict. 2012;21:280–281. Lenk KM, Erickson DJ, Wonters KC, Nelson TF, Toomey TL. Screening services for alcohol misuse and abuse at four-year colleges in the U.S. J Subst Abuse Treat. 2012;43:352–358. McCabe SE, West BT, Teter CJ, Boyd CJ. Medical and nonmedical use of prescription opioids among high school seniors in the United States. Arch Pediatr Adolesc Med. 2012;166:797–802. Mitchell SG, Gryczynski J, Gonzales A, Moseley A, Peterson T, et al. Screening, brief intervention, and referral to treatment (SBIRT) for substance use in a school-based program: Services and outcomes. Am J Addict. 2010;21:S5–S13. Tavolacci MP, Ladner J, Grigioni S, Richard L, Villet H, Dechelotte P. Prevalence and association of perceived stress, substance use and behavioral addictions: A cross-sectional study among university students in France, 2009–2011. BMC

Revision #1
Created 2026-01-04 19:52:20 UTC by Omar Ayman
Updated 2026-01-04 19:52:20 UTC by Omar Ayman