



# **Encyclopedia of Substance Abuse Prevention, Treatment, & Recovery**

## **Adolescents, Substance Abuse and Treatment**

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Use and abuse of alcohol and illicit drugs by youth is a major public health problem in the United States. Adolescents who use drugs are at higher risk than non-drug-using adolescents for physical and mental health problems and criminal involvement. The social costs of adolescent drug abuse include crime, economic loss, academic disruption, and familial distress. Approximately 7% of adolescents ages 12 to 17 meet criteria for abuse or dependence, but only about 10% of youth with drug abuse problems receive treatment. This entry describes the unique developmental period of adolescence, the epidemiology and nature of adolescent substance abuse, and efforts to prevent and treat alcohol and other substance abuse disorders in adolescents.

## **Adolescence and Substance Use**

The concept of adolescence is a relatively new phenomenon that describes the time between the beginning of puberty and achievement of adulthood. Specific ages in this period vary with a start between 11 and 13 and an end age of 18, 21, or older. The Center for Substance Abuse Treatment defines adolescents as individuals ages 12 to 24.

Adolescent years are characterized by substantial physical, social, and emotional growth, as well as an increasing focus on independence. Conflicts frequently develop between adolescents and their parents or other authority figures due to the presumed vulnerability, impulsivity, rebelliousness, and awkwardness of adolescents. These substantial changes give rise to adolescents' experimentation with different identities and, frequently, with alcohol and other illicit substances. A focus on adolescent drug use as a phenomenon is limited to the relatively recent recognition of adolescence as a period distinct from childhood and adulthood.

As with adult drug use, adolescent drug use is on a continuum of severity from abstinence to dependence. Most information regarding the life course of adolescent drug use is based on experience and research with adults. The view of adult and adolescent drug disorders as fundamentally the same disorder has been questioned in that drug use in adolescence is not necessarily highly predictive of drug use in adulthood. Most drug use peaks in late adolescence. There is controversy regarding whether alcohol and tobacco may be "gateway" drugs that lead to use of illicit drugs, including marijuana. The increased likelihood that an adolescent who uses one illicit drug will use another reflects selective recruitment of people with preexisting traits that may be predisposed to use drugs, peer affiliations with others who use drugs, and socialization into a subculture with favorable attitudes toward the use of drugs.

The diagnostic criteria for drug abuse are similar for all types of substances and across all ages. The *Diagnostic and Statistical Manual of Mental Disorders* defines substance abuse as including a maladaptive pattern of substance use leading to clinically significant impairment or distress, resulting in a failure to fulfill major role obligations, continued use in hazardous situations, and recurrent legal problems or persistent social or interpersonal problems caused or exacerbated by the effects of the substance. Substance dependence diagnoses include increased cognitive, behavioral, and physiological symptoms that indicate decreased control over substance use. Changes from earlier versions of the *Diagnostic and Statistical Manual of Mental Disorders* to the fourth edition increase the diagnostic criteria focus on psychosocial dysfunction and reduce focus on specific behaviors or time periods, which could have

the effect of reducing the number of adolescents who meet criteria. The term *abuse*, however, is sometimes used disapprovingly to refer to any use at all, particularly of illicit drugs, or can refer to any non-medical or unsanctioned patterns of use, regardless of consequences. Notably, the International Classification of Diseases and the World Health Organization do not use the term *abuse* and instead address harmful use and hazardous use of drugs.

## **Epidemiology**

The annual National Survey on Drug Use and Health (NSDUH), produced by the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA), is a major source of information on use of illicit drugs, alcohol, and tobacco, in civilian, noninstitutionalized U.S. population, ages 12 and older. According to the NSDUH, current (reported past month) illicit drug use among youth ages 12 to 17 declined from 11.6% in 2002 to 8.3% in 2006. The National Institute on Drug Abuse sponsors the Monitoring the Future study, which surveys 50,000 8th-, 10th-, and 12th-grade students annually about behaviors, values, and attitudes related to drug abuse. The results of this survey are similar to those found in the NSDUH. The Centers for Disease Control and Prevention's Youth Risk Behavior Surveillance System also surveys youth behaviors. The 2004–2006 results indicate 43% of high school students had drunk alcohol, 20% had used marijuana, and 23% had smoked cigarettes during the 30 days preceding the survey.

## **Alcohol**

Alcohol use among adolescents is a concern to those who work in substance abuse because there is a strong relationship between early alcohol use and later problems with dependence and other risk behaviors (dropping out of school, arrests). In 2006, about 10.8 million 12- to 20-year-olds (28.3%) reported drinking alcohol in the past month. Heavy drinking (five or more drinks on the same occasion on 5 or more days in the past month), including binge drinking (five or more drinks within a couple of hours), are significant concerns because of associated health problems. Nearly 7.2 million (18.8%) of 12- to 20-year-olds report binge drinking, and 2.3 million (6.0%) were heavy drinkers. Driving under the influence of alcohol is a considerable public health concern, and the majority of auto crashes involving adolescent drivers also involve the use of alcohol.

## **Cannabis**

Cannabis (including marijuana and hashish) is the most prevalent psychoactive substance (other than alcohol) used by adolescents in the United States. In 2007, the Monitoring the Future survey found that 42% of high school seniors, 31% of 10th graders, and 14% of 8th graders reported lifetime use. Rates of cannabis use are twice that of rates in the early 1990s. According to the NSDUH, current (reported past month) use of marijuana by 12- to 17-year-olds has declined significantly from 8.2% in 2002 to 6.7% in 2006. Young people also compose the majority of marijuana possession arrests, with half of arrestees under age 21. It has been estimated that more than 1 million U.S. teenagers sell marijuana.

## **Methamphetamine**

Methamphetamine is the most prevalent synthetic drug manufactured in the United

States, and the use of this powerfully addictive stimulant has significant health effects, including paranoia, hallucinations, and irregular heartbeat. Monitoring the Future reported a drop in annual use among 12th graders from 4.7% in 1999 to 1.7% in 2007, the lowest percentage since the survey started to measure methamphetamine use. The average age of new users dropped from 22.3 years in 1990 to 18.4 years in 2000.

## **Other Drugs**

Rates of adolescent use of other drugs, such as heroin, cocaine, and nonmedical prescription drugs, remain relatively low, with only use of prescription drugs appearing to increase over the past few years. Monitoring the Future reported an increase in the nonmedical use of sedatives from 2.8% of high school seniors in 1992 to 6.2% in 2007. There is some evidence that adolescents perceive nonmedical use of prescription drugs to be safer than use of street drugs.

## **Ethnicity and Gender**

There are differences in trends of drug use by ethnicity. According to the NSDUH, among youth ages 12 to 17 in 2006, the rate of current illicit drug use was highest among American Indians and Alaska Natives, about twice the overall rate among youths (18.7% vs. 9.8%, respectively). The rates for other groups were 10.2% among Blacks, 10.0% among Whites, 11.8% among those reporting two or more races, 8.9% among Hispanics, and 6.7% among Asians.

Adolescent males tend to have higher rates of drug use across all drugs than adolescent girls. Adolescent girls' use of drugs is closing the gap, however, with similar rates of use for some drugs, such as nonmedical use of prescription drugs. Males are more likely than females to obtain treatment for drug-related problems. Females are more likely to present with trauma and to be diagnosed with mental health disorders.

## **Familial Patterns and Co-Occurring Disorders**

Adolescents who abuse drugs frequently experience co-occurring medical problems. Medical problems can include problems caused directly by the drug abuse, such as damaged neuronal pathways from methamphetamine use or problems exacerbated by risky behaviors associated with drug use. Adolescents who use drugs intravenously are at particularly high risk for bloodborne pathogens, such as HIV and hepatitis B. Risky behavior and reduced inhibitions during drug use can be associated with unwanted sexual activity, sexually transmitted diseases, physical trauma, and violence. Many female adolescents stop drug use when they discover they are pregnant, but others continue to use during pregnancy, potentially harming both the mother and the fetus.

Developmental research supports the bidirectional impact of drug use and co-occurring psychiatric disorders. Particular temperamental traits, such as being shy, high novelty-seeking, or aggressive, can result in fewer childhood experiences of success or mastery. Adolescents with those childhood experiences who also have family problems, self-regulation difficulties, or poor social skills may associate with a peer group that is supportive of drug use. For example, many adolescents experience dysfunctions in the maintenance of a safe environment, which may include poor adult supervision, poor family communication, poor academic performance, a deviant peer group, and overt conflict or violence. Drug use contributes to further marginalization of adolescents from potentially positive school or family associations and increased

involvement with deviant peers. Protective factors include family involvement and warmth, religious involvement, academic achievement, and supervision.

Lifetime psychiatric disorder prevalence among adolescents with substance abuse disorders is around 75%. Half of these adolescents have depressive disorders, and another 25% have disruptive disorders, including conduct disorder and attention deficit disorder. Co-occurring trauma has been identified recently as very common among individuals who use drugs and is a potential barrier to treatment. The consideration of the presence of co-occurring psychiatric disorders has changed assessment and treatment procedures in many drug treatment agencies that serve adolescents to view psychiatric disorders as the norm, not the exception.

The presence of co-occurring disorders also has implications in how adolescents obtain treatment for drug use. Many adolescents enter drug treatment indirectly, following identification of drug problems during arrests or mental health service use. In addition, many youth with drug problems receive services from multiple venues, such as drug treatment, mental health treatment, child welfare, and juvenile justice, in which drug use may not be identified as the primary problem. The extent to which the venue of first service (e.g., juvenile justice) affects long-term recovery from drug abuse is not clear.

Adolescents with co-occurring drug use and psychiatric problems have worse outcomes and are costlier to treat than adolescents with either single disorder. The presence of a co-occurring disorder is also associated with different patterns of treatment. Youth with co-occurring mental health and drug abuse disorders are more likely to get treatment only for their mental health disorders, and individuals with only drug abuse disorders are less likely to get any help compared to youth with only mental health disorders. The specific co-occurring disorder can also affect treatment outcomes. For example, youth with conduct disorders are less likely to be successful in drug treatment.

## **Prevention**

Prevention efforts that address substance use rely on data related to perceived risk, availability, and parental disapproval, which are measured annually by the NSDUH. Among youth ages 12 to 17, there were few changes in the perceived risk of marijuana, cocaine, heroin, or LSD use between 2004 and 2006. About a third of adolescents perceived significant risk in smoking marijuana monthly, and half perceived significant risk in weekly use. In 2006, more than half of youth ages 12 to 17 reported that it would be easy for them to obtain marijuana if they wanted some, with about a quarter reporting it would be easy to get cocaine or crack. Ninety percent of youth reported their parents would strongly disapprove of their trying marijuana or hashish.

Prevention activities are structured in a number of ways and are often administered through school or community milieus. Prevention programs can take many forms. Information and affective education approaches seek to prevent drug use by presenting factual information and improving self-esteem; these approaches have not demonstrated strong effectiveness, however. Social-skills training programs enhance skills related to problem solving, assertiveness, self-control, and coping and have demonstrated success. Comprehensive programs address multiple risk factors and may target individuals, families, schools, and communities; these programs demonstrate success relative to programs that focus on only one risk factor or target group.

Several federal and nonprofit organizations fund and evaluate drug prevention activities. The Community Anti-Drug Coalition of America works with nonprofit organizations and community coalitions nationwide to prevent drug abuse. The Office of National Drug Control Policy funds the National Youth Anti-Drug Media Campaign that distributes antidrug messages via media. An independent evaluation, however, demonstrated it raised exposure to antidrug media messages but failed to influence rates of marijuana use. The U.S. Department of Education runs the Safe and Drug-Free Schools Program, which provides grants to reduce drug use and violence at schools. SAMHSAs Center for Substance Abuse Prevention funds programs that provide education and information about the harmful effects of drugs, as well as many evidence-based prevention programs and strategies. Other programs, such as the nonprofit Partnership for a Drug-Free America, distribute antidrug messages and conduct prevention activities.

More than three quarters of adolescents ages 12 to 17 and enrolled in school reported in 2005 that they had seen or heard drug or alcohol prevention messages at school in the past year. Past-month use of an illicit drug was lower for youth exposed to such messages in school (9.2%) than for youth not reporting such exposure (13.2%).

### **Clinical Treatment**

In addition to having different pathways to treatment, adolescents also have unique treatment issues from adults. Adolescents are more likely to be mandated to treatment rather than going voluntarily, they may have less insight into the effects of their substance use, and they may be bothered only by the consequences of their use and not by the use itself. Higher levels of aggression and impulsivity among adolescents often result in challenges in maintaining a safe, therapeutic milieu.

SAMHSAs 2006 National Survey of Substance Abuse Treatment Services identified 91,873 clients under 18 who were in treatment in 2006, which is 8% of all drug treatment clients nationwide. The majority of these clients (84%) were in treatment facilities with special adolescent programs, despite the fact that only 32% of treatment facilities offer specialized adolescent programs.

Treatment of adolescents with substance use disorders is often determined by the severity of drug use, the context of use, and the presence of supports (such as engaged parents) and other problems (such as co-occurring mental or physical disorders). The focus of clinical attention often determines the treatment setting. For some adolescents, this means that their substance use warrants less attention than primary mental health or other symptoms. Adolescents with multiple needs often have difficulty navigating community treatment systems, which typically have different funding sources and poor integration. One community-level intervention designed to increase treatment access and integrated care, Reclaiming Futures, provided community coaching to increase coordination among courts, police, detention facilities, businesses, schools, faith-based organizations, and families to create a network of support for adolescents with substance abuse problems. The program demonstrated success in increasing adolescent access to services, increasing the use of alcohol and drug assessments in the community, and providing targeted treatment for subpopulations.

Several models of treatment have demonstrated success in helping adolescents achieve reduced use or abstinence. Many treatment programs are based on the

*Minnesota Model*, which implements group therapy based on the Twelve Steps of Alcoholics Anonymous or similar support groups. This model includes the use of recovering addicts as counselors, availability of aftercare, and intensive attendance at support group meetings. *Motivational Enhancement Therapy* presumes that adolescents need to resolve ambivalence around whether they have a drug problem and increased motivation to stop using. Motivational techniques during assessments or at the beginning of treatment have demonstrated value in establishing a strong treatment alliance. Motivational techniques are frequently supplemented by *Cognitive Behavioral Therapy*, which teaches skills in drug refusal, establishing positive peer networks, coping with stress, and problem solving. Several models of family involvement, such as the *Family Support Network*, which includes group parent meetings and home visits designed to clarify parent and adolescent roles, provide information about substance abuse and recovery processes, improve family organization and communication, and strengthen motivation and commitment to change. The *Adolescent Community Reinforcement Approach* uses functional analyses to identify antecedents and consequences of behaviors associated with drug use, establishing clear and attainable counseling goals and tracking adolescent satisfaction to inform goal planning and reinforcing prosocial behavior. The *Matrix Model* combines structured information, relapse prevention, contingency management, motivational enhancement, family involvement, Twelve-Step program participation, and an exercise program. *Multidimensional Family Therapy* links adolescent changes to parenting practices and therapy alliance. Strategies in this technique include building alliances with adolescents and parents; addressing adolescent themes including abandonment, hope, and trust; and addressing parent themes such as communication, conflict, and positive interactions.

These treatment approaches address adolescent antisocial or family problems generally, with reduced drug use one of many outcomes. *Multisystemic Therapy* considers youth antisocial behavior as multiply determined and linked with characteristics of the youth and family, peer group, school, and community contexts. The therapy builds protective factors and empowers parents to improve parental discipline, reduce association with negative peers, enhance academic or vocational performance, and improve social support. *Functional Family Therapy* is provided for at-risk or delinquent youth and provides parent- and child-focused cognitive and attribution training to reduce family negativity and increase family communication and supportiveness.

The multiple needs of adolescents in drug treatment must be addressed simultaneously (during drug treatment) or sequentially (following drug treatment). Simultaneous treatment requires costly integration of services or case management, and sequential care results in transitions that can be stressful for adolescents. The role of treatment facilities and providers in ameliorating negative effects of transitions in care or improving the quality of care for adolescent patients around the multiple transitions in care they experience is not clear. Drug Strategies, a nonprofit research institute, evaluated the quality of adolescent substance abuse treatment programs and found that even highly regarded programs often do not adequately address assessment and treatment matching, engagement and retention, gender and cultural competence, and treatment outcomes.

## **Effectiveness of Adolescent Treatment**



Federally funded studies have assessed the effectiveness of adolescent drug treatment. The Drug Abuse Reporting Program in the 1970s and the Treatment Outcome Prospective Study in the 1980s assessed adolescent treatment incidental to the adult treatment process, and participating adolescents often received treatment designed for adults. Both studies reported a reduction in adolescents' use of harder drugs (e.g., opiates) and in drug-related behaviors (such as criminal activity), and no change in marijuana or alcohol use. The Drug Abuse Treatment Outcome Studies for Adolescents (DATOS-A) in the 1990s was a multi-state, prospective treatment outcome study that included an evaluation of the role of co-occurring psychiatric disorders on treatment processes, retention, and outcomes. DATOS-A demonstrated that engaging in outpatient, residential, or inpatient drug treatment was effective; adolescents showed reduced use of marijuana and other illicit drugs and decreased heavy drinking and criminal involvement. DATOS-A also found that adolescents with a history of physical or sexual abuse demonstrated greater service needs and greater drug severity, and adolescents with co-occurring psychiatric disorders had more service needs and received more services than adolescents without co-occurring psychiatric disorders.

The Cannabis Youth Treatment (CYT) study is the largest clinical trial of adolescent treatment to date. It compared treatment methods of Motivational Enhancement Therapy, Cognitive Behavioral Therapy, Family Support Network, Adolescent Community Reinforcement Approach, and Multidimensional Family Therapy among 600 adolescent cannabis users. All five CYT interventions demonstrated significant improvements among the adolescents in days of abstinence and percentage in recovery (defined as no use or abuse problems and living in the community).

## **Conclusion**

Adolescent substance abuse disorders have demonstrated health risks to those who abuse alcohol or illicit drugs, social costs including crime and family distress, and challenges to communities in adequately addressing adolescents' treatment needs. As epidemiological research elucidates the nature of adolescent substance abuse disorders, treatment research improves the ability to demonstrate positive outcomes for adolescents who receive treatment. Public and private systems providing these services continue to adapt to changing problems and resources, showing promise in reducing the human and social costs of these disorders.

- drug use
- drugs
- co-occurring disorders
- narcotics
- drug treatment
- adolescent abuse
- cannabis

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**See also**

- [Co-Occurring Disorders](#)
- [Family Therapy](#)
- [Gender Issues](#)

- [Multidimensional Family Therapy](#)

### **Further Readings**

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