



SUBSTANCE USE DISORDERS

OVERVIEW

It is not uncommon for adolescents to experiment with a variety of substances, both legal and illegal. However, drug and alcohol use is a leading cause of morbidity and mortality among adolescents, and experimentation can lead to substance use disorder.

Studies have shown that children who experiment with substances at a young age are more likely to use other drugs later in life. These findings highlight the need to prevent drug initiation among adolescents and children or delay it for as long as possible.

Families should be aware of potential warning signs of drug use in adolescents. The first changes families often notice are in behavior and mannerisms. However, there are many warning signs, some of which include:

- Fatigue
- Red and glazed eyes
- Lasting cough
- Sudden mood changes
- Irresponsible behavior or poor judgment
- Depression
- Breaking rules and withdrawing from the family
- Loss of motivation or lack of interest in previous activities
- Negative attitude
- Drop in grades
- New friends that are less interested in standard home and school activities
- General discipline problems

The specific criteria used to diagnose substance use disorder are common across the classes of substances. Substance use disorder is diagnosed when there is a problematic pattern of substance use leading to significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:

KEY POINTS

- Characterized by problematic pattern of substance use leading to clinically significant impairment or distress.
- Can include physical addiction, which is characterized by intense cravings, increased tolerance, and physical and mental withdrawal symptoms.
- Depending upon the substance, medically supervised detoxification may be required.
- Evidence-based treatments include cognitive behavioral therapy, family therapies, and multisystemic therapy.

Substance Use Disorders

- The substance is taken in larger amounts or over a longer period than originally intended.
- There are multiple unsuccessful attempts to stop usage, despite a strong desire to do so.
- A great deal of time is spent obtaining, using, or recovering from the effects of the substance.
- The individual experiences cravings or strong desire to use the substance.
- Recurrent use results in failure to fulfill major obligations at work, school, or home.
- Use continues despite persistent social or interpersonal problems caused by use.
- Important social, occupational, or recreational activities are given up or reduced because of use.
- Use continues in situations in which use is physically hazardous.
- Use continues despite knowing one has a physical or psychological problem that is likely to be caused or exacerbated by the substance.
- Tolerance, defined as requiring a markedly increased dose to achieve the desired effect, develops.
- Withdrawal symptoms occur, which lead the individual to use the substance in order to relieve the symptoms.

The severity of substance use disorder is estimated by the number of criteria present. An estimated two or three symptoms is mild, four or five is moderate, and six or more is severe.

Biological Process of Addiction

Addiction is a brain disease that develops over time. Long-term substance use can cause profound changes in brain structure and function, which can result in uncontrollable, compulsive drug or alcohol craving, seeking, and substance using.

Addiction occurs when substances of abuse hijack the reward center of the brain. The brain is designed to encourage life-sustaining and healthy activities through the release of the chemical dopamine. Dopamine not only causes feelings of pleasure, it also makes memory of that pleasure extremely salient, to ensure that pleasure-creating activities are repeated. Substances of abuse flood the brain's dopamine circuits with much more dopamine than natural rewards generate, causing feelings of euphoria. In addition, the presence of excess dopamine causes the brain to adapt by producing and absorbing less dopamine in a process called "tolerance." As an individual develops tolerance to a drug, the pleasure associated with it subsides, and he or she must take more of it to obtain the same dopamine reward and to ward off painful withdrawal symptoms. The result of this process is intense physical and mental craving. Eventually, the addicted individual becomes biologically and psychologically compelled to take the drug.

Drugs of Addiction

There are a variety of illegal drugs and legal substances that youth utilize. Legally available drugs include alcohol, prescribed medications, inhalants (fumes from glues, aerosols, and solvents), and over-the-counter cough, cold, sleep, and diet medications. The most commonly used illegal drugs are marijuana (pot), stimulants (such as cocaine, crack, meth, and speed), LSD, PCP, opiates, heroin, and designer drugs (such as MDMA, also called ecstasy or molly).

The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) divides substances into the following ten classes:

1. Alcohol
2. Caffeine
3. Cannabis
4. Hallucinogens
 - Phencyclidine (PCP)
 - Other hallucinogens
5. Inhalants
6. Opioids
7. Sedatives, hypnotics, and anxiolytics
8. Stimulants
9. Tobacco
10. Unknown or other substances

Substance use disorder is a possible diagnosis in every class except caffeine. These classes are described in the paragraphs that follow.

Alcohol

Alcohol use disorder is characterized by a cluster of behavioral and physical symptoms, which can include withdrawal, tolerance, and craving. Withdrawal develops approximately four to 12 hours after the reduction of intake following prolonged, heavy alcohol ingestion. Once a pattern of repetitive and intense use develops, individuals with alcohol use disorder may devote substantial periods of time to obtaining and consuming alcoholic beverages. Withdrawal is unpleasant and triggers some individuals to continue consuming alcohol to avoid or reduce withdrawal symptoms. In addition, withdrawal can trigger life-threatening seizures in some people. Alcohol cravings, indicated by a strong desire to drink, can incite certain individuals to use alcohol in physically hazardous ways, such as while driving or swimming. Resulting damage from alcohol use disorder can include poor school performance, social and interpersonal problems, blackouts, depression, and serious medical problems such as liver disease.

Studies show that one form of substance abuse, binge drinking, damages the adolescent brain more significantly than the adult brain. Research suggests that adolescents are more vulnerable than adults to the impact of alcohol on learning and memory. Heavy drinking in early or middle adolescence, with resulting cortical damage, can also lead to diminished control over cravings for alcohol and to poor decision-making.

Caffeine

Caffeine can be found in coffee, tea, caffeinated soft drinks, energy drinks and similar aids, over-the-counter analgesics and cold remedies, weight-loss aids, chocolate and, increasingly, vitamins and food products. Symptoms of caffeine intoxication include restlessness, nervousness, excitement, insomnia, flushed face, diuresis, and gastrointestinal complaints. Symptoms at higher doses include muscle twitching, rambling thoughts and speech, tachycardia or cardiac arrhythmia, periods of seemingly unlimited energy, and psychomotor agitation. These signs may not occur in those who have developed a tolerance. Caffeine withdrawal symptoms

include headache with marked fatigue or drowsiness, dysphoric or depressed mood, irritability, difficulty concentrating, nausea, vomiting, or muscle pain and stiffness.

Cannabis

Cannabis, also known as marijuana, is used in several forms, including plant form and a concentrated extraction called hashish. It is typically smoked (via pipes or water pipes, or in cigarette or cigar form) or ingested. A new intake method, called vaporizing, involves heating plant material to release psychoactive cannabinoids for inhalation. Synthetic formulations are available in pill or capsule form for medical indications such as relieving nausea and vomiting from chemotherapy or stimulating appetite in individuals with AIDS. Cannabis has also been used to control seizures in persons with epilepsy who do not respond to other interventions.

Cannabis intoxication typically begins with a “high” feeling, followed by euphoria, inappropriate laughter and grandiosity, sedation, and lethargy. Additional symptoms include short-term memory impairment, difficulty completing complex mental processes, impaired judgment, distorted sensory perceptions, impaired motor performance, and the sensation that time is passing slowly. At times, cannabis use is accompanied by anxiety, dysphoria, or social withdrawal. Physical signs develop within two hours of cannabis use, including conjunctival injection (red, bloodshot eyes), increased appetite, dry mouth, and tachycardia.

The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) recognizes the potential of cannabis withdrawal syndrome, symptoms of which include irritability, anger or aggression, anxiety, depressed mood, restlessness, difficulty sleeping, and decreased appetite or weight loss.

Although cannabis use disorder can co-occur with other substance use disorders, this is uncommon.

Hallucinogens

Phencyclidine (PCP)

Phencyclidine (PCP or angel dust) and similar substances are referred to as dissociative hallucinogens. They produce feelings of separation from the mind and body in small doses, and stupor and coma can result at high doses. These substances include phencyclidine, ketamine, cyclohexamine, and dizocilpine. They are often smoked or taken orally, but they can also be snorted or injected. While these drugs are often used in an illicit manner, ketamine is also used to help treat major depressive disorder.

The primary effects of PCP last for a few hours, but the drug stays in the body eight days or more. The DSM-5 separates PCP intoxication from intoxication by other hallucinogens. Common symptoms of PCP intoxication include disorientation, confusion without hallucination, hallucinations or delusions, catatonic-like state, and coma of varying severity.

Other hallucinogens

Many hallucinogens are chemically different from one another but, as a group, they produce similar perception, mood, and cognition alterations in users. These substances are typically taken orally, but they are sometimes smoked. Duration of hallucinogenic effects varies depending upon the substance taken. Tolerance may develop

to hallucinogens, but hallucinogen tolerance does not create a cross-tolerance with other drug categories, such as amphetamines or cannabis.

Hallucinogen use may lead to hallucinogen persisting perception disorder, characterized by a sober individual re-experiencing perceptual disturbances. These persistent disturbances can happen either episodically or almost continually, and may last for weeks, months, or years. The disturbances are typically visual, including geometric hallucinations, false perceptions of movement in peripheral vision, intensified or flashing color, and trails of visual images. Additional disturbances include hallucinating entire objects, experiencing positive after-images and halos, and misperceiving the size of images.

The DSM-5 does not include hallucinogenic withdrawal syndrome as a criterion for abuse or as a diagnosis because clinically significant withdrawal syndrome has not been consistently documented in humans. However, there is some evidence of hallucinogenic and stimulant withdrawal symptoms associated with MDMA (also called ecstasy or molly).

Inhalants

Inhalants are volatile hydrocarbons: toxic gases from glues, fuels, paints, and other volatile compounds. Inhalant intoxication develops during or immediately following volatile hydrocarbon substance inhalation, and the intoxication ends several minutes to several hours after inhalation. At times, inhalation is completed by inhaling substances within a closed container, like a plastic bag over the head. Inhalation may cause unconsciousness, anoxia, and death. Sudden death may also occur, often from cardiac arrhythmia or arrest or from the toxicity of the substance inhaled.

Inhalant use disorder exists when use persists even when the user knows the substance is causing serious problems. Lingering odors and peri-oral or peri-nasal rash may suggest the presence of the disorder. Medical complications like brain white matter pathology and rhabdomyolysis, in which muscle fibers break down and release into the bloodstream, is also a possible indication of inhalant use disorder.

Opioids

Opioids relieve pain and induce euphoria. Some opioids are illegal, such as heroin, while others are used by medical professionals to treat pain and are available by prescription. The brain also manufactures natural opioids, which human beings naturally crave. This natural craving, combined with the intense pleasure opioids can induce, can be a dangerous combination that can lead to abuse.

Opioid use disorder is the compulsive, prolonged self-administration of opioids for no legitimate medical purpose, or the use of opioids in great excess of what is needed to treat a medical condition. Prescription forms of opioids are sometimes acquired by falsifying or exaggerating medical conditions or by visiting several physicians for the same disorder (called “doctor shopping”). In addition, prescription opioids are sometimes easily accessible in the family home, which poses a significant risk to youth and adolescents.

Symptoms of opioid intoxication include initial euphoria followed by apathy, dysphoria, and psychomotor agitation or impairment. Impaired judgment also occurs. Most individuals with opioid use disorder have developed significant tolerance to the drugs, and discontinuation causes withdrawal symptoms. Withdrawal can

also occur independently of opioid use disorder and regardless of whether use is medical or recreational. In addition, other disorders can be induced by opioid use, such as opioid-induced depressive disorder, opioid-induced anxiety disorder, opioid-induced sleep disorder, and opioid-induced sexual dysfunction.

Overdose of opioids can result in respiratory depression, which can result in death.

Sedatives, Hypnotics, and Anxiolytics

Several drug types are included in the sedatives, hypnotics, and anxiolytics category. These include benzodiazepines, benzodiazepine-like drugs, carbamates, barbiturates, barbiturate-like hypnotics, all prescription sleeping medications, and almost all prescription anti-anxiety medications. One type of substance omitted from this category is nonbenzodiazepine anti-anxiety medications because they are not significantly misused.

These drugs are brain depressants and act similarly to alcohol. Individuals who misuse sedatives, hypnotics, or anxiolytics typically crave the substance and may mix it with other medicines and substances. Symptoms of intoxication associated with a substance use disorder include inappropriate sexual or aggressive behavior, marked fluctuation of mood, and impaired judgment. Additionally, intoxication may include slurred speech, lack of coordination to the level of causing falls or difficulty driving, unsteady gait, cognitive impairment, and stupor or coma. Clinicians can also look for nystagmus, or fast, uncontrollable eye movements. As with all substance use disorders, impaired social or occupational functioning also results.

Tolerance and withdrawal can occur with sedative, hypnotic, or anxiolytic use and can be very significant. However, tolerance and withdrawal that occur as a result of appropriate medical use does not meet the criteria for a substance use disorder. Sedatives, hypnotics, and anxiolytics are often prescribed to offset or alleviate effects of other substance use disorders. Nevertheless, with regular use, tolerance develops, and the affected individual must take more of the substance to reach desired effects.

Withdrawal from sedatives, hypnotics, and anxiolytics typically occurs after several weeks of use, and it is similar to alcohol withdrawal. Symptoms include increased heart and respiratory rate, elevated blood pressure or body temperature, and sweating, along with hand tremors, nausea occasionally with vomiting, insomnia, and anxiety. Another possible symptom of withdrawal is psychomotor agitation, which is unintentional motor activity manifested as fidgeting, pacing, and hand-wringing. As many as 20 to 30 percent of individuals treated for sedative, hypnotic, or anxiolytic withdrawal may experience grand mal seizures. The time between last dose and onset of withdrawal symptoms depends upon the substance. For example, withdrawal symptoms from triazolam can begin within a few hours, while withdrawal symptoms from diazepam (which lasts much longer in the body) may take one to two days to develop.

Stimulants

Stimulants include amphetamines and amphetamine-type substances (such as cocaine, crack cocaine, and methamphetamine). Stimulants are typically taken orally, intravenously, or by being inhaled. Stimulant medications are often prescribed for obesity, attention-deficit/hyperactivity disorder (ADHD), and narcolepsy. Stimulant use disorder can develop within one week of onset of use, and tolerance occurs regardless of whether

a substance use disorder develops. Stimulants stimulate the central nervous system and produce psychoactive and sympathomimetic effects. Dopamine levels increase in the brain, causing intense pleasure and increased energy or, in some cases, anxiety and paranoia. With repeated use, stimulants can disrupt the dopamine system, reducing an individual's ability to feel pleasure. Long term effects include panic attacks, paranoid psychosis, and increased risk for heart attacks.

Withdrawal symptoms include hypersomnia (excessive daytime sleepiness or prolonged nighttime sleep), increased appetite, and dysphoria. Occasionally, vivid and unpleasant dreams will also occur, and appetite will increase. Additionally, intense depressive symptoms that resolve within one week often signal stimulant withdrawal.

Tobacco

Tobacco use disorder typically occurs in those who smoke or use tobacco products daily, but not in those who do not use tobacco daily or who use nicotine medications such as smoking cessation aids. Individuals who are not used to using tobacco often feel nausea and dizziness upon use, symptoms that are more pronounced with the first use of tobacco each day. Those with tobacco use disorder typically do not experience these symptoms. Most tobacco users report strong cravings when they do not use tobacco for several hours, and many tobacco users chain smoke (smoke cigarettes all day with no break in between cigarettes). Tobacco users may forego social events for a lack of tobacco-friendly areas.

When tobacco use is stopped, very distinct withdrawal symptoms occur. These symptoms are much stronger in users who smoke or use smokeless tobacco than in those who use nicotine medications. The symptomatic discrepancy is potentially because of the higher levels of nicotine in cigarettes and smokeless tobacco in comparison to levels in nicotine medications. People who have ceased tobacco use often experience a heart rate decline of five to 12 beats per minute and a weight increase of four to seven pounds.

Unknown or Other Substance

The DSM-5 provides for diagnostic criteria for a substance use disorder with unknown origin unrelated to the substances listed above. The following substances meet this criterion:

- Anabolic steroids
- Nonsteroidal anti-inflammatory drugs
- Cortisol
- Antiparkinsonian medications
- Antihistamines
- Nitrous oxide
- Anyl-butyl- or isobutyl-nitrites
- Betel nut, chewed in many cultures for mild euphoria and a floating sensation
- Kava, often taken for sedation, incoordination, weight loss, mild hepatitis, and lung abnormalities
- Cathinones, which produce a stimulant effect

Unknown substance use disorder is associated with an intoxicant the individual cannot identify or with new illegal drugs that are not yet identified.

Intoxication by unknown substances is challenging to diagnose. Clinicians may ask for patient history to determine whether the youth experienced similar symptoms in the past and if the youth knows a street name for the substance.

CAUSES AND RISK FACTORS

While nobody knows which youth will develop serious substance use problems, certain adolescents are at higher risk for developing substance use disorder. These youth include those:

- With a family history of substance use disorders;
- Who are depressed or anxious;
- Who have low self-esteem; and/or
- Who feel like they don't fit in or are out of the mainstream.

Table 1 outlines additional risk factors, including those associated with the individual and the family. While none of these factors guarantee an adolescent will develop substance use disorder, families should be cognizant of the potential risks.

EVIDENCE-BASED TREATMENTS

Treatment for substance use disorders is delivered at varying levels of care in many different settings. Because no single treatment is appropriate for every youth or adolescent, treatments must be tailored for the individual. Settings include:

Outpatient/Intensive Outpatient: Child and adolescent substance abuse treatment is most commonly offered in outpatient settings. When delivered by well-trained clinicians, this can be highly effective. Outpatient treatment is traditionally recommended for adolescents with less severe addictions, few additional mental health problems, and a supportive living environment, although evidence suggests that more severe cases can be treated in outpatient settings as well. Outpatient treatment varies in the type and intensity of services offered and may be delivered on an individual basis or in a group format. Low- or moderate-intensity outpatient care is generally delivered once or twice a week. Intensive outpatient services are delivered more frequently, typically more than twice a week for at least three hours per day. Outpatient programs may offer substance use prevention programming focused on deterring further drug use or other behavioral and family interventions.

Table 1
Risk Factors for Substance Use Disorder in Adolescents and Teens

Type of Risk Factor	Description
Family Risk Factors	<ul style="list-style-type: none"> • Inadequate supervision from the family • Inconsistent or severe discipline from the family • Poor communication • Family tension and conflicts • Broken homes
Individual Risk Factors	<ul style="list-style-type: none"> • History of early childhood negative and aggressive behavior or physical or sexual abuse • Being an older adolescent Caucasian male • Emotional, social, or academic problems • Poor impulse control or thrill-seeking behaviors • Emotional instability • Very low perception of the dangers inherent in drug use
Other Risk Factors	<ul style="list-style-type: none"> • Low socioeconomic status • Level of education • Living in a high crime and drug-use neighborhood • Ease of drug availability • Peer-group pressure • History of mental illness

Partial Hospitalization: Youth with more severe substance use disorders but who can still be safely managed in their home living environment may be referred to a higher level of care called partial hospitalization or “day treatment.” This setting offers adolescents the opportunity to participate in treatment four to six hours a day at least five days a week while living at home.

Residential/Inpatient Treatment: Residential treatment is a resource-intensive high level of care, generally for youth and adolescents with severe levels of addiction whose mental health and medical needs and addictive behaviors require a 24-hour structured environment to make recovery possible. These adolescents may have complex psychiatric or medical problems or family issues that interfere with their ability to avoid substance use. One well-known, long-term residential treatment model is the therapeutic community (TC). TCs use a combination of techniques to “resocialize” the adolescent and enlist all the members of the community, including residents and staff, as active participants in treatment. Treatment focuses on building personal and social responsibility and developing new coping skills. Such programs offer a range of family services and may require family participation if the TC is sufficiently close to where the family lives. Short-term residential programs also exist.

Once the treatment setting has been determined, numerous methods are used to treat children and adolescents with substance use disorders. These treatments are discussed in the following paragraphs and are outlined in Table 2.

Table 2
Summary of Treatments for Substance Use Disorder

What Works	
Cognitive behavioral therapy (CBT)	A structured therapeutic approach that involves teaching youth about the thought-behavior link and working with them to modify their thinking patterns in a way that will lead to more adaptive behavior in challenging situations.
Family therapy Multidimensional family therapy (MDFT) Functional family therapy (FFT)	Family-based therapy is aimed at providing education, improving communication and functioning among family members, and reestablishing parental influence through parent management training. MDFT views drug use in terms of networks of influences (individual, family, peer, community) and encourages treatment across settings in multiple ways. FFT is best used in youth with conduct and delinquent behaviors along with substance use disorders combining relationship with CBT interventions to change relationship patterns and improve the family’s functioning.
Multisystemic therapy (MST)	An integrative, family-based treatment with a focus on improving psychosocial functioning for youth and families.
What Seems to Work	
Behavioral therapies	Behavioral therapies focus on identifying specific problems and areas of deficit and working on improving these behaviors.
Motivational interviewing (MI) Motivational enhancement therapy (MET)	MI is a brief treatment approach aimed at increasing motivation for behavior change. It is focused on expressing empathy, avoiding argumentation, rolling with resistance, and supporting self-efficacy. MET is an adaptation of MI that includes one or more client feedback sessions in which normative feedback is presented and discussed.
Medication	Some medication can be used for detoxification purposes, as directed by a doctor. Medication may also be used to treat co-existing mental health disorders.
Not Adequately Tested	
Multifamily educational intervention (MEI)	MEI combines psycho-educational and family interventions for troubled adolescents and their families.
Adolescent group therapy (AGT)	The AGT intervention incorporates adolescent therapy groups on stress management, developing social skills, and building group social support.
Interpersonal and psychodynamic therapies	Interpersonal and psychodynamic therapies are methods of individual counseling that are often incorporated into the treatment plan and focus on unconscious psychological conflicts, distortions, and faulty learning.

Table 2 (continued)
Summary of Treatments for Substance Use Disorder

Client-centered therapies	A type of therapy focused on creating a non-judgmental environment, such that the therapist provides empathy and unconditional positive regard. This facilitates change and solution making on behalf of the youth.
Psychoeducation	Programs aimed at educating youth on substance use and may cover topics like peer pressure and consequences of substance use.
Project CARE	A program aimed at raising awareness about chemical dependency among youth through education and training.
Twelve-step programs	A twelve-step program that uses the steps of Alcoholics Anonymous as principles for recovery and treating addictive behaviors.
Process groups	A type of psychotherapy that is conducted in a small group setting. Groups can be specialized for specific purposes and therapy utilizes the group as a mechanism of change.
Neurofeedback	A type of non-invasive brain training that enables an individual to learn how to change mental and/or physiological activity.

Psychological Treatments

The numerous psychological treatments used to treat youth with substance use disorders are discussed below.

Cognitive Behavioral Therapy (CBT)

The goal of CBT is the identification and modification of maladaptive thinking patterns to reduce negative thoughts, feelings, and behavior. For substance abusers, the focus of this intervention is generally relapse prevention. CBT can help the adolescent develop greater self-control; identify environmental and internal triggers leading to relapse; and develop strategies for dealing with stressors, triggers, and lapses into substance use. The role of clinicians is to aid the youth in anticipating the problems that they are likely to meet and to help them to develop effective coping strategies. The two main elements of CBT are functional analysis, identifying the thoughts and feelings before and after substance use, and skills building, such as ways to overcome peer pressure and increase pleasant activities. CBT also addresses social skills, anger control, and problem-solving.

Family Therapy

Although family therapy is considered an important modality in the treatment of adolescents with substance use disorders, clinicians and consumers should be aware that family therapy is a very broad term that encompasses a large number of treatment programs. Not all of these family therapies have been tested with children and adolescents with substance use disorder. Thus, it is important and relevant to ask “what kind of family therapy” when family therapy is recommended. Common elements across most family therapies include:

- Engaging the family (versus working with the child alone);
- Focusing on education about substance use and abuse;
- Emphasizing communication skills to improve family functioning; and
- Reestablishing parental influence through parent management training.

Though family therapy is important, it may be contraindicated if family members actively abuse substances, are violent, deny that the youth's substance use is problematic, or remain unreasonably angry.

One program with empirical support is Multidimensional Family Therapy (MDFT), an outpatient, family-based treatment for adolescents with serious substance abuse issues. This approach views drug use in terms of a network of influences (individual, family, peer, community) and encourages treatment across settings in multiple ways. Sessions may be held in a clinic, home, court, school, or other community locations. For the child or adolescent, the emphasis of treatment is on skill-building, and the treatment plan often incorporates practicing developmental tasks such as decision-making, negotiation, problem-solving, performing vocational skills, communication, and dealing with stress. Parallel sessions are held with family members, in which parents examine their parenting style, learn to distinguish influence from control, and learn to have a positive and developmentally appropriate influence on their child. Research supports the use of this type of therapy for adolescents with substance use disorders.

Another well-established therapy method is Functional Family Therapy (FFT). FFT is best used in youth with conduct and delinquent behaviors along with substance abuse. This short-term process combines relationship with CBT interventions to change relationship patterns and improve the family's functioning. FFT is specifically designed for youth ages 12 to 18, and is successful across locations and ethnic groups. The effects of FFT endure years after treatment, at times into adulthood, and can positively impact siblings of affected youth as well.

A method of strategic family therapy has also been tested and found effective with substance using adolescents: Brief Strategic Family Therapy (BSFT). BSFT attempts to reduce negative behaviors, promote positive behaviors such as school attendance and performance, and improve family functioning. Clinicians typically administer 12 to 16 family sessions in convenient locations, at times even in the family home.

Multisystemic Therapy (MST)

MST aims to address the multifaceted nature of antisocial behavior at the individual, family, and community levels. This form of therapy is intended to address serious antisocial behavior in children and adolescents who abuse substances. Therapeutic efforts target the child's behavior within the context of the family environment, the school environment, and the neighborhood and community. MST helps develop a support network of extended family, neighbors, and friends to help caregivers achieve and maintain such changes. Treatment occurs in each of the child's natural settings. MST is associated with significant, long-term reduction of aggressive behaviors in chronic and violent juvenile offenders.

RESOURCES AND ORGANIZATIONS

American Academy of Pediatrics Committee on Substance Abuse

Substance Use Screening, Brief Intervention, and Referral to Treatment for Pediatricians
<http://pediatrics.aappublications.org/content/pediatrics/early/2011/10/26/peds.2011-1754.full.pdf>

Association for Behavior and Cognitive Therapies (ABCT)

<http://www.abct.org/Home/>

Association for Applied Psychophysiology and Biofeedback (AAPB)

<https://www.aapb.org>

Food and Drug Administration (FDA)

Risk Evaluation and Mitigation Strategy (REMS) (Extended-Release and Long-Acting Opioid Analgesics)
<http://er-la-opioidrems.com/lwgUI/remis/home.action>

Mental Health America (MHA)

<http://www.mentalhealthamerica.net/>

National Alliance for the Mentally Ill (NAMI)

<https://www.nami.org/>

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

<https://www.niaaa.nih.gov/>

National Institute on Drug Abuse (NIDA)

<https://www.drugabuse.gov/>

Office of Juvenile Justice and Delinquency Prevention (OJJDP)

<https://www.ojjdp.gov/>

Society of Clinical Child and Adolescent Psychology

<https://sccap53.org/>

Stop Underage Drinking

Portal of Federal Resources

<https://casaa.unm.edu/ctn/ctn%20mod%20to%20ol%20kit/Prevention/Stop%20Underage%20Drinking%20%20Portal%20of%20Federal%20Resources.htm>

Substance Abuse and Mental Health Services Administration (SAMHSA)

<https://www.samhsa.gov/>

The GAINS Center for Behavioral Health and Justice Transformation

<https://www.samhsa.gov/gains-center>

VIRGINIA RESOURCES AND ORGANIZATIONS

Virginia Department of Behavioral Health and Developmental Services (DBHDS)

<http://www.dbhds.virginia.gov/>

Virginia Department of Health

Opioid Addiction in Virginia

<http://www.vdh.virginia.gov/commissioner/opioid-addiction-in-virginia/>

***The Collection of Evidence-based Practices for Children and Adolescents with
Mental Health Treatment Needs, 7th Edition***
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