

Drugs and Addiction

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Understanding Addiction

Addiction involves craving for something intensely, loss of control over its use, and continuing involvement with it despite adverse consequences. Addiction changes the brain; first by subverting the way it registers pleasure and then by corrupting other normal drives such as learning and motivation. Although breaking an addiction is tough, it can be done.

What causes addiction?

The word “addiction” is derived from a Latin term for “enslaved by” or “bound to.” Anyone who has struggled to overcome an addiction—or has tried to help someone else to do so—understands why.

Addiction exerts a long and powerful influence on the brain that manifests in three distinct ways: craving for the object of addiction, loss of control over its use, and continuing involvement with it despite adverse consequences.

For many years, experts believed that only alcohol and powerful drugs could cause addiction. Neuroimaging technologies and more recent research, however, have shown that certain pleasurable activities, such as gambling, shopping, and sex, can also co-opt the brain.

Although a standard U.S. diagnostic manual (the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition or DSM-IV) describes multiple addictions, each tied to a specific substance or activity, consensus is emerging that these may represent multiple expressions of a common underlying brain process.

New insights into a common problem:

Nobody starts out intending to develop an addiction, but many people get caught in its snare. Consider the latest government statistics:

- Nearly 23 million Americans—almost one in 10—are addicted to alcohol or other drugs.
- More than two-thirds of people with addiction abuse alcohol.
- The top three drugs causing addiction are marijuana, opioid (narcotic) pain relievers, and cocaine.

Credit: <https://www.helpguide.org/harvard/how-addiction-hijacks-the-brain.htm>

Warning Signs



Common signs and symptoms of drug abuse include:

- **You are neglecting your responsibilities** at school, work, or home (failing classes, skipping work, etc.) because of your drug use.
- **You are using drugs under dangerous conditions or taking risks while high**, such as driving while on drugs, using dirty needles, or having sex.
- **You are under age and your drug use is putting yourself at legal risk or trouble**, such as arrests for disorderly conduct, driving under the influence, or stealing to support a drug habit.
- **Your drug use is causing problems in your relationships**, such as fights with your family, friends at school, an unhappy boss, or the loss of old friends.
- **You use drugs to avoid solving problems or to escape from unpleasant feelings.**

Common signs and symptoms of drug addiction include:

- **You have built up a drug tolerance.** You need to use more of the drug to get the same effects.
- **You take drugs to avoid or relieve withdrawal symptoms.** If you go too long without drugs, you experience symptoms such as nausea, restlessness, insomnia, depression, sweating, shaking, and anxiety.
- **You have lost control over your drug use.** You often do drugs or use more than you planned, even though you told yourself you would not.
- **Your life revolves around drug use.** You spend a lot of time using and thinking about drugs, figuring out how to get them, and recovering from the drug's effects.
- **You have abandoned activities you used to enjoy**, such as hobbies, sports, and socializing, because of your drug use.

Credit:

http://www.helpguide.org/mental/drug_substance_abuse_addiction_signs_effects_treatment.htm

Myths about Addiction



MYTH 1: Overcoming addiction is a simply a matter of willpower. You can stop using drugs if you really want to. Prolonged exposure to drugs alters the brain in ways that result in powerful cravings and a compulsion to use. These brain changes make it extremely difficult to quit just by sheer force of will.

MYTH 2: Addiction is a disease; there is nothing you can do about it. Most experts agree that addiction is a brain disease, but that does not mean you're a helpless victim. The brain changes associated with addiction can be treated and reversed through making good choices, therapy, medication, exercise, and other treatments.

MYTH 3: You have to hit rock bottom before you can get better. Recovery can begin at any point in the addiction process—and the earlier, the better. The longer drug abuse continues, the stronger the addiction becomes and the harder it is to treat. Do not wait to change.

MYTH 4: Forcing you into treatment cannot help; you have to want change before you can get help. Treatment does not have to be voluntary to be successful. People who are pressured into treatment by their family, employer, or the legal system are just as likely to benefit as those who choose to enter treatment on their own. As they sober up and their thinking clears, many formerly resistant addicts decide they want to change.

MYTH 5: Treatment didn't work before, so there's no point trying again. Recovery from drug addiction is a long process that often involves setbacks. Setbacks are opportunities to get back on track, either by going back to treatment or adjusting the treatment approach.

MYTH 6: You can't get addicted to some drugs. Remember, addiction is continuing to use drugs despite all the problems drug use is causing you. Some drugs are more lethal than others, but addiction never changes.

Credit:

http://www.helpguide.org/mental/drug_substance_abuse_addiction_signs_effects_treatment.htm

Addictive Thinking



Addicts think differently, and though there are many explanations for why an addict thinks like an addict the end result is the same: addictive thinking. Addictive thinking is easy to describe even if it may be hard to understand.

Picture what would happen if a non-addict drank too much alcohol and decided to drive too soon. When that person gets pulled over by the police, they would think something like "I can't believe I did something so stupid! I could have hurt or killed myself or somebody else. I'll never, ever do this again. Next time I'll get a cab, or have a designated driver, or just wait until the alcohol is out of my system."

This would be a normal response to a very serious mistake: the person recognizes the problem, takes responsibility, and changes their behavior. An addict who gets pulled over in that same scenario would think something like "I can't believe this happened – the police are always out to get people!" For an addict it is always somebody else's fault; addicts perpetually believe that life is not fair to them, and they will convince themselves that it is not and cannot be their fault for their problems. Addiction cannot exist without the addict's addictive thinking. That's why the first step in overcoming addiction is understanding the problem is not everybody else!

Teens and Dangerous Drugs

Drugs are simply more dangerous for teens than they are for adults. The types of drugs discussed here are also illegal for use by any teenager and juvenile. While it may not seem like a big deal to experiment with drugs any minor who experiments with drugs has crossed the line into illegal behavior.

Teenagers are in a growth period known as adolescence in which virtually every part of their body and brain is changing. Drugs interfere with this natural growth; teenagers are at much greater risk for long-term damage to their brains and bodies because of drug abuse. To make matters worse, teenagers – whether they use drugs or not – are more likely to engage in risky behavior since they lack the benefit of life experience and because their brain is not yet fully developed. When teens take drugs their chances of engaging in things like unintended sex, dangerous driving, criminal behavior, and other types of impulsivity increase.



Marijuana: Marijuana is the most common illegally used drug in the United States. Its use is widespread among young people. In 2015, more than 11 million young adults ages 18 to 25 used marijuana in the past year. According to the **Monitoring the Future** survey, rates of marijuana use among middle and high school students have dropped or leveled off in the past few years after several years of increase. However, the number of young people who believe that regular marijuana use is risky is decreasing.

How does marijuana affect the brain?

Marijuana has both short-and long-term effects on the brain.

Short-Term Effects:

When a person smokes marijuana, THC quickly passes from the lungs into the bloodstream. The blood carries the chemical to the brain and other organs throughout the body. The body absorbs THC more slowly when the person eats or drinks it. In that case, they generally feel the effects after 30 minutes to 1 hour.

Marijuana over activates parts of the brain that contain the highest number of these receptors. This causes the "high" that people feel. Other effects include:

- Altered senses (for example, seeing brighter colors)

- Altered sense of time
- Changes in mood
- Impaired body movement
- Difficulty with thinking and problem-solving
- Impaired memory
- Hallucinations (when taken in high doses)
- Delusions (when taken in high doses)
- Psychosis (when taken in high doses)

Long-Term Effects:

Marijuana also affects brain development. When people begin using marijuana as teenagers, the drug may impair thinking, memory, and learning functions and affect how the brain builds connections between the areas necessary for these functions. Researchers are still studying how long marijuana's effects last and whether some changes may be permanent.

A Rise in Marijuana's THC Levels

The amount of THC in marijuana has been increasing steadily over the past few decades. For a person who's new to marijuana use, this may mean exposure to higher THC levels with a greater chance of a harmful reaction. Higher THC levels may explain the rise in emergency room visits involving marijuana use.

The popularity of edibles also increases the chance of harmful reactions. Edibles take longer to digest and produce a high. Therefore, people may consume more to feel the effects faster, leading to dangerous results.

Higher THC levels may also mean a greater risk for addiction if people are regularly exposing themselves to high doses.

What are the other health effects of marijuana?

Marijuana use may have a wide range of effects, both physical and mental.

Physical Effects:

- Breathing problems. Marijuana smoke irritates the lungs, and people who smoke marijuana frequently can have the same breathing problems as those who smoke tobacco.
- Increased heart rate. Marijuana raises heart rate for up to 3 hours after smoking. This effect may increase the chance of heart attack.
- Problems with child development during and after pregnancy. One study found that about 20% of pregnant women 24-years-old and younger screened positive for marijuana.
- Intense Nausea and Vomiting. Regular, long-term marijuana use can lead to some people to develop Cannabinoid Hyperemesis Syndrome. This causes users to experience regular cycles of severe nausea, vomiting, and dehydration, sometimes requiring emergency medical attention.

Mental Effects:

Long-term marijuana use has been linked to mental illness in some people, such as:

- Temporary hallucinations
- Temporary paranoia
- Worsening symptoms in patients with schizophrenia—a severe mental disorder with symptoms such as hallucinations, paranoia, and disorganized thinking.

Credit: <https://www.drugabuse.gov/publications/drugfacts/marijuana#ref>



Alcohol: People drink to socialize, celebrate, and relax. Alcohol often has a strong effect on people – and throughout history, we have struggled to understand and manage alcohol’s power. Why does alcohol cause us to act and feel differently? How much is too much? Why do some people become addicted while others do not?

Alcohol’s effects vary from person to person, depending on a variety of factors, including:

- How much you drink
- How often you drink
- Your age
- Your health status
- Your family history

Consequences of drinking too much

Alcohol enters your bloodstream as soon as you take your first sip. Alcohol’s immediate effects can appear within about 10 minutes. Another severe problem for teens is binge drinking. 90% of all alcohol that teens drink is by binge drinking. As you drink, you increase your blood alcohol concentration (BAC) level, which is the amount of alcohol present in your bloodstream. The higher your BAC, the more impaired you become by alcohol’s effects.

These effects can include:

- Reduced inhibitions

- Slurred speech
- Motor impairment
- Confusion
- Memory problems
- Concentration problems
- Coma
- Breathing problems
- Death

Other risks of drinking can include:

- Arrest
- Car crashes and other accidents
- Risky behavior
- Violent behavior
- Suicide and homicide

Credit: <https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption>



Synthetic Cannabinoids (K2/Spice): Synthetic cannabinoids are human-made mind-altering chemicals that are sprayed on dried, shredded plant material either so they can be smoked or sold as liquids to be vaporized and inhaled in e-cigarettes and other devices. These products are also known as herbal or liquid incense.

These chemicals are called cannabinoids because they are similar to chemicals found in the marijuana plant. Because of this similarity, synthetic cannabinoids are sometimes misleadingly called "synthetic marijuana" (or "fake weed"), and they are often marketed as safe, legal alternatives to that drug. In fact, they are not safe and may affect the brain much more powerfully than marijuana; their actual effects can be unpredictable and, in some cases, more dangerous or even life-threatening

Synthetic cannabinoid users report some effects similar to those produced by marijuana:

- Elevated mood
- Relaxation
- Altered perception—awareness of surrounding objects and conditions
- Symptoms of psychosis—delusional or disordered thinking detached from reality

Psychotic effects include:

- Extreme anxiety
- Confusion
- Paranoia—extreme and unreasonable distrust of others
- Hallucinations—sensations and images that seem real though they are not

What are some other health effects of synthetic cannabinoids?

People who have used synthetic cannabinoids and have been taken to emergency rooms have shown severe effects including:

- Rapid heart rate
- Vomiting
- Violent behavior
- Suicidal thoughts

Synthetic cannabinoids can also raise blood pressure and cause reduced blood supply to the heart, as well as kidney damage and seizures. Use of these drugs is associated with a rising number of deaths.

Credit: <https://www.drugabuse.gov/publications/drugfacts/synthetic-cannabinoids-k2spice>



Pills: Teenagers often refer to prescription medications they use to get high as, "pills," regardless of the prescription or intended purpose of the medication. Any time medication is taken by someone who has not been prescribed the medication, taken in doses more than prescribed, and/or mixed with other drugs (including alcohol) the risk of a drug addiction and drug overdose increases significantly. Some commonly abused pills include:

Benzodiazepines (Xanax, Klonopin, Valium, Ativan, etc.): Also known as "benzos," this type of medication is often prescribed to treat certain kinds of anxiety disorders. These medications are addictive, thus it is extremely important to take them only if they are prescribed and only as directed. Taking benzodiazepines in higher than prescribed doses and/or mixing them with other drugs (including alcohol) can suppress a teen's heart rate and ability to breathe resulting in unconsciousness, coma, permanent brain damage, and death.

Opioid Painkillers (Hydrocodone, Vicodin, Oxycontin, Methadone, etc.): These prescription drugs are highly addictive and dangerous. It is critically important that these medications are

taken only by individuals who are prescribed them by a doctor, and that they are taken exactly as directed. Even when these drugs are prescribed and taken as directed, symptoms of drug dependence can begin to occur within 30 days of use. Just because they are, "medicine" does not make them safe! For instance, although Methadone makes up only 2% of all painkiller prescriptions it is responsible for over 30% of all prescription drug overdose deaths. Taking painkillers in higher than prescribed doses and/or mixing them with other drugs, (including alcohol) can suppress a teen's heart rate and ability to breathe resulting in unconsciousness, coma, permanent brain damage, and death. It is very dangerous for teens to take these drugs to get high!

AD/HD Amphetamines (Adderall, Vyvanse, Concerta, Ritalin, etc.): Teens who abuse AD/HD medication can easily become addicted. Overdosing on this type of prescription drug is similar to overdosing on cocaine, with symptoms including hallucinations, delusions, difficulty breathing, heart attack, and a condition known as hyperthermia in which the body becomes dangerously overheated, causing potential organ damage, permanent brain damage, and death.



Heroin: Heroin is an opioid drug made from morphine, a natural substance taken from the seedpod of the various opium poppy plants grown in Southeast and Southwest Asia, Mexico, and Colombia. Heroin can be a white or brown powder, or a black sticky substance known as black tar heroin. Other common names for heroin include big H, horse, hell dust, and smack.

How do people use heroin?

People inject, sniff, snort, or smoke heroin. Some people mix heroin with crack cocaine, a practice called speed balling.

What are the effects of heroin?

Heroin enters the brain rapidly and binds to opioid receptors on cells located in many areas, especially those involved in feelings of pain and pleasure and in controlling heart rate, sleeping, and breathing.

Short-Term Effects:

- Dry mouth
- Warm flushing of the skin

- Heavy feeling in the arms and legs
- Nausea and vomiting
- Severe itching
- Clouded mental functioning

Long-Term Effects:

- Insomnia
- Collapsed veins for people who inject the drug
- Damaged tissue inside the nose for people who sniff or snort it
- Infection of the heart lining and valves
- Constipation and stomach cramping
- Liver and kidney disease
- Lung complications, including pneumonia
- Mental disorders such as depression and antisocial personality disorder
- Sexual dysfunction for men
- Irregular menstrual cycles for women

Credit: <https://www.drugabuse.gov/publications/drugfacts/heroin>



Cheese- heroin: a form of low-quality heroin mixed with other drugs is cheap enough for teens to easily afford. Its added danger is that it is very easy for teens to keep snorting it throughout the day as the high wears off; before long, heroin builds up in the teen's body to dangerous levels and the likelihood of overdose is high. Heroin – whether it's "Cheese" or not - can suppress a teen's heart rate and ability to breathe resulting in unconsciousness, coma, permanent brain damage, and death.

Credit: <https://www.drugfreeworld.org/drugfacts/heroin/cheese-heroin.html>



MDMA (Ecstasy/Molly): 3,4-methylenedioxy-methamphetamine (MDMA) is a synthetic drug that alters mood and perception (awareness of surrounding objects and conditions). It is chemically similar to both stimulants and hallucinogens, producing feelings of increased energy, pleasure, emotional warmth, and distorted sensory and time perception.

How do people use MDMA?

People who use MDMA usually take it as a capsule or tablet, though some swallow it in liquid form or snort the powder. The popular nickname Molly (slang for "molecular") often refers to the supposedly "pure" crystalline powder form of MDMA, usually sold in capsules. However, people who purchase powder or capsules sold as Molly often actually get other drugs such as synthetic cathinone's ("bath salts").

Some people take MDMA in combination with other drugs such as alcohol or marijuana.

MDMA increases the activity of three brain chemicals:

- Dopamine—causes a surge in euphoria and increased energy/activity
- Norepinephrine—increases heart rate and blood pressure, which are particularly risky for people with heart and blood vessel problems
- Serotonin—affects mood, appetite, sleep, and other functions. It also triggers hormones that affect sexual arousal and trust. The release of large amounts of serotonin likely causes the emotional closeness, elevated mood, and empathy felt by those who use MDMA.

Other health effects include:

- Nausea
- Muscle cramping
- Involuntary teeth clenching
- Blurred vision
- Chills
- Sweating

Credit: <https://www.drugabuse.gov/publications/drugfacts/mdma-ecstasy-molly>



Methamphetamine: Methamphetamine is a stimulant drug usually used as a white, bitter-tasting powder or a pill. Crystal methamphetamine is a form of the drug that looks like glass fragments or shiny, bluish-white rocks. It is chemically similar to amphetamine [a drug used to treat attention-deficit hyperactivity disorder (ADHD) and narcolepsy, a sleep disorder.

People can take methamphetamine by:

- Inhaling/smoking
- Swallowing (pill)
- Snorting
- Injecting the powder that has been dissolved in water/alcohol

Short-Term Effects:

These include:

- Increased wakefulness and physical activity
- Decreased appetite
- Faster breathing
- Rapid and/or irregular heartbeat
- Increased blood pressure and body temperature

Long-term methamphetamine use has many other negative consequences, including:

- Extreme weight loss
- Severe dental problems ("meth mouth")
- Intense itching, leading to skin sores from scratching
- Anxiety
- Confusion
- Sleeping problems
- Violent behavior
- Paranoia—extreme and unreasonable distrust of others
- Hallucinations—sensations and images that seem real though they aren't

Credit: <https://www.drugabuse.gov/publications/drugfacts/methamphetamine>



Cocaine: Cocaine is a powerfully addictive stimulant drug made from the leaves of the coca plant native to South America. Although health care providers can use it for valid medical purposes, such as local anesthesia for some surgeries, cocaine is an illegal drug. As a street drug, cocaine looks like a fine, white, crystal powder. Street dealers often mix it with things like cornstarch, talcum powder, or flour to increase profits. They may also mix it with other drugs such as the stimulant amphetamine.

Popular nicknames for cocaine include:

- Blow
- Coke
- Crack
- Rock
- Snow

How do people use cocaine?

- Snorting
- Consuming by mouth
- Needle injection
- Smoking

Short-Term Effects:

- Extreme happiness and energy
- Mental alertness
- Hypersensitivity to sight, sound, and touch
- Irritability
- Paranoia—extreme and unreasonable distrust of others

Long-Term Effects:

- Snorting: loss of sense of smell, nosebleeds, frequent runny nose, and problems with swallowing.
- Consuming by mouth: severe bowel decay from reduced blood flow.
- Needle injection: higher risk for contracting HIV, hepatitis C, and other blood borne diseases. However, even people involved with non-needle cocaine use place themselves

at a risk for HIV because cocaine impairs judgment, which can lead to risky sexual behavior with infected partners (see "Cocaine, HIV, and Hepatitis").

Credit: <https://www.drugabuse.gov/publications/drugfacts/cocaine>



Mixing drugs: There are many dangers associated with mixing drugs and alcohol. Mixing two or more drugs—whether they are prescription, over-the-counter, or recreational—can increase the risk of side effects, reduce the effectiveness of medications, and increase the risk of overdose and death. Chronic polysubstance abuse can, over time, lead to deteriorations of your physical and mental health, negatively affect your relationships, drain your finances, and decrease your performance at school or work.

Commonly mixed drugs:

- Alcohol + opiates (e.g., OxyContin, Percocet, Vicodin, etc.).
- Alcohol + benzodiazepines (e.g., Ativan, Valium, Xanax, etc.).
- Cocaine + heroin.
- Alcohol + cocaine.

Combining substances may enhance feelings of pleasure and well-being, but that one “benefit” is dwarfed by the numerous consequences of polydrug use. Firstly, combining drugs can increase the risk of addiction and the speed at which addiction develops. Secondly, particular combinations of substances can lead to fatal overdose.

Credit: <https://drugabuse.com/library/lethal-drug-combinations/>

Additional Resources

Winning The Fight: WTF was developed after losing our son, Brett Morgan O'Keefe, to an accidental drug overdose. He fought and lost. We choose to be a part of saving, not losing!

National Institute on Drug Abuse: NIDA's mission is to lead the Nation in bringing the power of science to bear on drug abuse and addiction.

The Partnership at Drugfree.org: Working toward a vision where all young people will be able to live their lives free of drug or alcohol abuse.

Above the Influence: Our goal is to help teens stand up to negative pressures, or influences. The more aware you are of the influences around you, the better prepared you will be to face them, including the pressure to use drugs, pills, and alcohol.

TNOYS Provider Directory: TNOYS provides this directory as a resource to help identify providers across Texas who offer youth and family services.

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