

Drug addiction

You may be hooked emotionally and psychologically. You may have a physical dependence, too. If you're addicted to a drug — whether it's legal or illegal — you have intense cravings for it. You want to use it again and again. When you stop taking the drug, you may have unpleasant physical reactions.

An estimated 19.5 million Americans over the age of 12 use illicit drugs. Many other people abuse or are addicted to legal substances. Marijuana is the most commonly used illicit drug. While not everyone who uses drugs becomes addicted, many people do. As many as 19,000 people die of drug-related causes every year.

Drug addiction involves compulsively seeking to use a substance, regardless of the potentially negative social, psychological and physical consequences. Certain drugs, such as narcotics and cocaine, are more physically addicting than are other drugs.

Breaking a drug addiction may involve support from your doctor, family, friends and others who have an addiction, as well as inpatient and

Risk factors

These factors increase the likelihood of your having an addiction to a legal or an illegal drug:

- * **Personality.** If you're a thrill seeker, impulsive and resistant to social norms, you run a greater risk of drug abuse and dependence. As many as half the people addicted to drugs have another psychological problem such as depression, attention deficit disorder and post-traumatic stress disorder. Children who exhibit aggression, a lack of self-control and a difficult temperament may be at greater risk of drug addiction.
- * **Social environment.** Particularly for young people, peer pressure is a strong factor in starting to use and abuse drugs. A lack of attachment with your parents may increase the risk of addiction.
- * **Anxiety, depression and loneliness.** Using drugs can become a way of coping with these painful psychological feelings.
- * **Genetics.** Drug addiction is more common in some families and likely involves the effects of many genes. If you have family members with alcohol or drug problems, you're at greater risk of developing a drug addiction.

* **Type of drug.** Some drugs, such as heroin and cocaine, more quickly result in physical addiction than do others.

Signs and symptoms

The range of drugs to which you can become addicted is wide. The drugs include:

- * **Cannabis compounds.** Contained in marijuana and hashish.
- * **Central nervous system depressants.** Barbiturates and benzodiazepines. Benzodiazepines include tranquilizers such as diazepam (Valium), alprazolam (Xanax), oxazepam (Serax), lorazepam (Ativan), clonazepam (Klonopin) and chlordiazepoxide (Librium).
- * **Central nervous system stimulants.** Amphetamines, methamphetamine, cocaine and methylphenidate (Ritalin).
- * **Designer drugs.** Synthetic compounds such as Ecstasy, which has both amphetamine-like and hallucinogenic effects.
- * **Hallucinogens.** LSD, phencyclidine (PCP) and ketamine (special K).
- * **Inhalants.** Glue, paint, solvents and nitrous oxide.
- * **Opioids.** Narcotic, painkilling drugs produced naturally from opium or made synthetically. They include heroin, morphine, codeine, methadone and oxycodone (Oxycontin).

Addiction to any drug may include these general characteristics:

- * Feeling that you need the drug regularly and in some cases many times a day
- * Making certain that you maintain a supply of the drug
- * Failing in your attempts to stop using the drug
- * Doing things to obtain the drug that you normally wouldn't do, such as stealing
- * Feeling that you need the drug to deal with your problems
- * Driving or doing other activities that place you and others at risk of physical harm when you're under the influence of the drug

The particular signs and symptoms of drug use and dependence vary depending on the type of drug.

Cannabis compounds: Signs and symptoms

- * A sense of relaxation
- * A heightened sense of visual, auditory and taste perception
- * Poor memory

- * Increased blood pressure and heart rate
- * Bloodshot eyes
- * Decreased coordination
- * Difficulty concentrating
- * Poor judgment
- * Paranoid thinking

Central nervous system depressants: Signs and symptoms

- * Slurred speech
- * Lack of coordination
- * Memory impairment
- * Confusion
- * Slowed heart rate
- * Dizziness
- * Inappropriate display of emotions
- * Drowsiness or coma

Central nervous system stimulants: Signs and symptoms

- * Euphoria
- * Decreased appetite
- * Rapid speech
- * Irritability
- * Restlessness
- * Depression as the drug wears off
- * Nasal congestion and damage to the mucous membrane of the nose in users who snort drugs

Designer drugs: Signs and symptoms

Signs and symptoms of using designer drugs vary depending on the drug. You might be able to tell that a family member or a friend is using or abusing a drug based on the physical and behavioral signs and symptoms associated with the drug. Ecstasy produces a mild hallucinogenic effect and a feeling of euphoria. It also causes an increased heart rate, overheating, high blood pressure and memory problems.

Hallucinogens: Signs and symptoms

Use of hallucinogens produces different signs and symptoms, depending on the drug. The most common hallucinogens are LSD, PCP and ketamine, a so-called "club drug."

Signs and symptoms of LSD use include:

- * Hallucinations

- * Greatly impaired perception of reality, for example, interpreting input from one of your senses as another, such as hearing colors
- * Permanent mental changes in perception
- * Rapid heart rate
- * High blood pressure
- * Tremors
- * Flashbacks, a re-experience of the hallucinations — even years later

Signs and symptoms of PCP use include:

- * Hallucinations
- * Euphoria
- * Delusions
- * Sweating and flushing
- * Disorientation and incoordination
- * Paranoia
- * Drooling, nausea or vomiting
- * Suicidal thoughts

Inhalants: Signs and symptoms

The signs and symptoms of inhalant use vary depending on what substance is inhaled. Some commonly inhaled substances include glue, paint thinners, correction fluid, felt tip marker fluid, gasoline, cleaning fluids and household aerosol products. When inhaled, these products can cause brief intoxication and a decreased feeling of inhibition. Long-term use may cause hearing loss and damage to the brain, liver and kidneys.

Opioids: Signs and symptoms

- * Sedation
- * Depression
- * Confusion
- * Constipation
- * Slowed breathing
- * Needle marks (if injecting drugs)

Recognizing drug abuse in teenagers

Possible indications that your teenager is using drugs include:

- * **School performance.** Your child suddenly shows an active dislike of school and looks for excuses to stay home. Contact your school officials to see if your child's attendance record matches what you know about his or her absent days. A student who experiences a drop in performance, possibly failing courses or receiving only minimally passing grades, may be using drugs.

- * **Physical health.** Listlessness and apathy may indicate your child is using certain drugs.
- * **Appearance.** How they look is extremely important to adolescents. A sudden lack of interest in clothing, grooming or looks may be a warning sign of drug use.
- * **Personal behavior.** Teenagers enjoy privacy, but exaggerated efforts to bar you from entering their room or knowing where they go with their friends might indicate drug use. Also, drastic changes in behavior and in family relationships may signal drug use.
- * **Money.** Sudden requests for money without a reasonable explanation for its use may be a sign of drug use. You may also discover money stolen from previously safe places at home. Items may disappear from your home because they're being sold to support a drug habit.

Causes

Drug use or abuse crosses the line into drug addiction when you feel you have to have the drug, and you increase the amount of the drug you take. Various factors, such as your personality, your genetic makeup and peer pressure, affect your likelihood of becoming addicted to a drug. In addition, some drugs such as heroin and cocaine more quickly produce a physical addiction than other drugs do for many people.

Physical addiction appears to occur when repeated use of a drug alters reward pathways in your brain. The addicting drug causes physical changes to some nerve cells (neurons) in your brain.

Neurons use chemicals called neurotransmitters to communicate. Neurons release neurotransmitters into the gaps (synapses) between nerve cells and are received by receptors on other neurons and on their own cell bodies. The changes that occur in this communication process vary with the type of drug to which you're addicted, though researchers have discovered that addictive drugs, such as cocaine and morphine, all affect some nerve endings in the brain in the same manner. If further research confirms this finding, it may be possible to develop a universal drug that could be used to treat all addictions.

Here are some of the ways specific drugs may contribute to addiction:

- * **Cannabis compounds.** The main active agent in cannabis compounds, delta-9-tetrahydrocannabinol (THC), affects the neurotransmitter communication process.

Some people perceive the effects of THC as enjoyable, and this sensation reinforces use of the drug. Other people experience anxiety or uncomfortable feelings, which do not reinforce use of the drug.

* **Central nervous system depressants.** Benzodiazepines and barbiturates produce long-term cellular changes partly by enhancing the actions of the inhibitory neurotransmitter gamma-aminobutyric acid (GABA). Released into the synapses, GABA binds to receptors and ultimately lowers cell excitability, which slows down brain activity.

* **Central nervous system stimulants.** These drugs raise the levels of dopamine, norepinephrine and serotonin in the synapses. Brain cells release dopamine as part of the reward system through which you learn to seek stimuli, such as food and sex. Norepinephrine is a hormone released in response to stress. Serotonin is a chemical in the brain that regulates mood. Stimulants block the reabsorption of dopamine after its release and can physically alter the sensitivities of some dopamine and serotonin receptors.

* **Opioids.** These drugs affect the nerve cells of the reward pathways in your brain in ways similar to that of stimulants, producing positive reinforcement for the use of these drugs. There are opioid receptors in the brain, spinal cord and gastrointestinal tract.