

Regular non-medical use of amphetamines can lead to *tolerance*. This means that the person needs to take more and more of the drug to get the desired effect. Regular use of amphetamines, especially when the drug is smoked or injected, can quickly cause psychological and physical *dependence*.

Dependence means that cravings and compulsive use of the drug become very important to a person. If drug use is stopped, the person usually goes through *withdrawal*, also called “the crash.” Symptoms of withdrawal can include fatigue, restless sleep, irritability, intense hunger, depression, suicidal behaviour and fits of violence.

People who use amphetamines often also use other drugs, such as alcohol, cannabis or benzodiazepines, to help them relax and sleep. This increases the risk for dependence on these other drugs.

What are the long-term effects of taking amphetamines?

Chronic use of amphetamines can lead to serious physical and mental health problems. Because amphetamines reduce appetite and fatigue, they can cause vitamin and sleep deficiencies and malnutrition, and make people more prone to illness.

Regular use of amphetamines can also cause *amphetamine psychosis*. Symptoms include hallucinations, delusions, paranoia, and bizarre and violent behaviour. These symptoms usually disappear a few days or weeks after the drug use has stopped.

Longer-term studies support the efficacy and safety of methylphenidate when taken as prescribed to treat hyperactivity, but more information is needed to evaluate its long-term effects.

One in a series...

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Do You Know...

Types of amphetamines: amphetamine, methamphetamine, dextroamphetamine

Street names: speed, bennies, glass, crystal, crank, pep pills and uppers

See also *Do You Know... Methamphetamine* and *Do You Know... Ecstasy*

What are amphetamines?

The different types of amphetamines—and related drugs such as methylphenidate (e.g., Ritalin®)—are *stimulant* drugs. Stimulants speed up the central nervous system. They act like adrenaline, a hormone that is one of the body's natural stimulants. Other drugs with similar effects include cocaine, ecstasy, ephedrine, caffeine and many others.

Where do amphetamines come from?

Amphetamines were first introduced in the 1930s as a remedy for nasal congestion, and marketed over-the-counter as an inhaler named Benzedrine. These drugs were also used medically to treat obesity and depression. Different types of amphetamines were available from the 1930s until the 1970s. People eventually found, however, that the medical value of amphetamines is offset by their dangerous effects and high *abuse potential* (the chance a drug will be abused, cause addiction or be otherwise harmful).

In the 1970s, new laws restricted the medical use of these drugs. Today, only dextroamphetamine (Dexedrine®) and methylphenidate are made for medical use. All other amphetamines are made in illicit laboratories.

What do amphetamines look like and how are they used?

Pure amphetamines are white, odourless, bitter-tasting crystalline powders. Illicitly prepared amphetamines vary in purity. They may be whitish with traces of gray or pink and may be a coarse powder, or in crystals or chunks. They may smell “fishy” or like ammonia. Methamphetamine resembles shaved glass slivers or clear rock salt.

Amphetamines are injected, smoked, sniffed or taken as pills.

Who uses amphetamines?

When amphetamines were easy to get, many people used them to stay awake and to have more energy. Truck drivers, students and athletes were especially likely to abuse amphetamines. Even recently, soldiers have been given amphetamines for endurance in battle. People with eating disorders may use these drugs to try to lose weight.

A 2001 survey of Ontario students in grades 7 to OAC found that 4.8 per cent of male and eight per cent of female students reported non-medical use of stimulant drugs (other than cocaine) at least once in the past year.

Medically, dextroamphetamine is used to treat narcolepsy (uncontrolled attacks of sleep) and hyperactivity. Methylphenidate is also commonly used to treat hyperactivity in adults and children. It is less potent than the amphetamines.

How do amphetamines make you feel?

How amphetamines make you feel depends on:

- how much you use
- how often and how long you use them
- how you use them (by injection, orally, etc.)
- your mood, expectation and environment
- your age
- whether you have certain pre-existing medical or psychiatric conditions
- whether you've taken any alcohol or other drugs (illicit, prescription, over-the-counter or herbal).

When amphetamines are injected or smoked, they reach the brain quickly, and produce a “rush,” or surge of euphoria, immediately.

The effects of amphetamines are often different from person to person. Amphetamines can make people:

- alert, confident and energetic
- talkative, restless and excited
- feel a sense of power and superiority
- tense and nervous
- hostile and aggressive.

In children who are hyperactive, however, amphetamines and related drugs, in the correct doses, can have a calming effect.

Amphetamines reduce hunger and increase breathing, heart rate and blood pressure. Larger doses may cause fever, sweating, headache, nausea, blurred vision, very fast or irregular heartbeat, tremors, loss of co-ordination and collapse.

How long does the feeling last?

The initial rush after injecting or smoking lasts only a minute. With some types of amphetamines, the stimulant effects can last up to 12 hours. Some people may use amphetamines repeatedly over a period of several days to try to stay high.

Are amphetamines dangerous?

Yes.

- Overdose can cause seizures, coma and death due to burst blood vessels in the brain, heart failure or very high fever.
- Amphetamines are linked to risky and violent behaviours, and increased injury and sexually transmitted disease.
- Amphetamines may cause bizarre or repetitive behaviour, paranoia and hallucinations.
- Injecting any drug can cause infections from used needles or impurities in the drug; sharing needles with others can transmit hepatitis or HIV.

Are amphetamines addictive?

When taken as prescribed, amphetamines and related drugs do not cause dependence. However, these drugs can cause dependence if they are misused. Methylphenidate is less likely to cause dependence than other amphetamines.

Amphetamines