

# Stimulants

**S**timulants are drugs that speed up the central nervous system. Commonly abused stimulants are amphetamines (am-FET-uh-meens), methamphetamine (meth-uhm-FET-uh-meen), and cocaine. The **nicotine** in tobacco products is also a well-known stimulant, as is the caffeine in coffee, colas, tea, and chocolate.

Stimulants cause increased heart and respiratory rates, high blood pressure, dilated pupils, and decreased appetite. In addition, users may experience sweating, headaches, blurred vision, dizziness, and sleeplessness. Extremely high doses can cause irregular heartbeat, shaking or trembling, loss of coordination, and even physical collapse. Inhalation or injection of stimulants can cause a sudden increase in blood pressure that can result in stroke, high fever, or heart failure.

The psychological effects of stimulant use include moodiness, restlessness, and anxiety. Chronic users can experience hallucinations, delusions, and paranoia. **Paranoia** is *irrational suspiciousness or distrust of others*. These symptoms disappear when drug use ceases.

## Amphetamines

Amphetamines are stimulants that have an effect similar to that of the **sympathetic nervous system**. Medical use of amphetamines has declined greatly in recent years. Some people use amphetamines illegally to stay awake and alert, to improve athletic performance, to lose weight, and to offset the effects of depressant drugs. Some use them for a temporary high and for **euphoria** (yoo-FOR-ee-uh), *a feeling of intense well-being or elation that may be followed by a complete "crash" or letdown*. These temporary highs, however, come at great cost to a person's physical and mental well-being, because once the craving begins, it may not go away. Tolerance to amphetamines can easily develop. Psychological dependence also can result. The user can experience exhaustion and depression as the effect of the drug wears off.



## hot link

**nicotine** For more information on nicotine, the addictive drug found in tobacco, see Chapter 24, page 529.

## hot link

**sympathetic nervous system** For more information on the sympathetic nervous system and its function, see Chapter 16, page 370.

◀ **What do you and your peers think can be done to stop the increase of drug use among teens?**

**ACTIVITY** List some ideas you think of that could convince teens that drugs are dangerous.

## hot link

**Parkinson's disease** For more information on Parkinson's disease and its symptoms, see Chapter 16, page 374.

**obesity** For more information on the problem of obesity, see Chapter 6, page 133.

## Did You Know?

- Passive smoke, smoke harmful to those around a smoker, does not involve just tobacco; it also applies to cocaine.
- About six out of every 100 children treated in emergency rooms have cocaine in their systems from breathing in the smoke from adult crack-cocaine smokers.

## Methamphetamine

Methamphetamine is a stimulant that has been used medically in treating certain diseases, including **Parkinson's disease** and **obesity**. When used illegally, this drug, which is also called *crank*, *speed*, or *ice*, may cause a person to turn paranoid or even violent. Because crank is made in labs, it is readily available. Crank can be smoked, "snorted"—sniffed up the nostrils—injected, or swallowed. The effects of this drug are long-lasting. Food and water become unimportant after taking crank and often just the fumes alone prove deadly.

## Cocaine

Cocaine is a white powder made from the coca bush, which grows in parts of South America. Cocaine use and possession is now illegal under state and federal laws.

Cocaine is a rapid-acting, powerful stimulant. Its effects can last from 20 minutes to several hours. The feelings of confidence that come from cocaine use are often followed by a letdown. Regular use can lead to depression, edginess, weight loss, and physiological dependence. Repeated cocaine use can cause tissue damage in the nose and even holes in the nasal septum, the wall dividing the two halves of the nose.

Cocaine use can cause malnutrition and, especially among those with cardiac problems, an increase in the risk of heart attack. Even in healthy individuals who are not heavy users, the drug may disturb the electrical impulses of the heart and cause death. An additional risk of cocaine use is the possibility of being infected with HIV when injecting cocaine with a shared needle.

### CRACK

Crack is a form of cocaine that can be smoked. Processing converts cocaine into lumps or rocks—a form of the drug known as *freebase*. Preparing freebase may involve the use of dangerous solvents and can result in injury or death from an explosion or fire.

Crack is extremely addictive. Because it is smoked, its stimulant effects are felt within seconds. Crack users may develop a sore throat, hoarseness, and lung damage. Using crack can cause death by cardiac or respiratory failure. The drug is considered both extremely addictive and extremely dangerous.

## Depressants

**D**epressants, or sedatives, are *drugs that tend to slow down the central nervous system*. As noted in Chapter 25, alcohol is a depressant. It is also the most commonly used psychoactive drug. Other commonly abused depressants are barbiturates (bar-BICH-uh-ruhts), tranquilizers, and methaqualone (muh-THA-kwuh-lohn).

Depressants relax muscles, relieve feelings of tension and worry, and bring on sleep. They slow down the heart and breathing rates

and reduce blood pressure. Depressants can easily cause physical and psychological dependence.

## Barbiturates

Barbiturates belong to the family of sedative-hypnotic drugs—drugs that induce sleepiness. Barbiturate use can result in mood changes, more sleep than normal, or even a coma. Barbiturates are rarely used for medical purposes. They are used illegally to produce a feeling similar to that of intoxication and to counteract the effects of stimulants. Combined with alcohol, they sometimes prove fatal.

## Tranquilizers

Tranquilizers are depressants that reduce muscular activity, coordination, and attention span. Anti-anxiety tranquilizers, such as diazepam, are used medically to relieve anxiety, muscle spasms, sleeplessness, and nervousness. However, when tranquilizers are used in excess, physiological and psychological dependence occurs.

## Methaqualone

The form of depressant known as methaqualone was originally prescribed to reduce anxiety and to help with insomnia. Known for producing temporary euphoria, the feeling does not last, and withdrawal from the drug is extremely unpleasant. Serious effects of using the drug include rapid dependence, headaches, diarrhea, dizziness, convulsions, and coma. Many people die by combining this depressant with alcohol.

## Narcotics

**N**arcotics are *drugs derived from the opium plant that have a sedative effect*. The most commonly abused narcotics are morphine, heroin, opium itself, and codeine. Formerly, the term *narcotic* referred only to drugs made from the opium poppy flower. These drugs are called *opiates*. Narcotics now also include medicines used to relieve pain. Narcotics cause drowsiness and can result in physiological dependence. Drugs made from opium can cause stupor or sleep so deep that they depress respiration and can result in coma or death.

## Morphine

Morphine is a natural narcotic compound that is contained in opium. It is sometimes used to reduce severe pain, for example, in terminal cancer patients. It can act as an appetite suppressant, cause severe constipation, and lead to addiction.



▲ **Turning to drugs is never a solution when you feel pressured or overwhelmed. Substance abuse only leads to more complex problems.**  
**ACTIVITY** List positive ways you can respond to stress.

## id You Know?

- According to the 1998 Monitoring the Future survey, the use of illicit drugs among students in grades 9 through 12 has been on the decline since 1997.
- According to the National Household Survey on Drug Abuse, the use of hallucinogens and inhalants has also shown a drop among members of the population 12 years and older.

## Codeine

A weaker cousin to morphine, codeine is also a narcotic compound derived from opium. Codeine is sometimes used in cough medications to stop coughing, and, like morphine, it can lead to dependence and abuse.

## Heroin

Heroin is made from morphine and has no accepted medical use in the United States. It is an illegal drug. Heroin depresses the central nervous system and slows breathing and pulse rate. Coma or death may occur with large doses. Tolerance develops very quickly. Pregnant females who use heroin risk having babies who are born addicted. Retardation and delayed growth of these babies' muscular and nervous systems can result. Withdrawal from this drug is very painful. As with any drug that is injected, there are risks of HIV infection from using contaminated needles.

Until recent years, heroin was thought to be a drug of the inner city, used by hard-core drug addicts. According to the Drug Enforcement Administration, or DEA, its use is higher in the United States now than it has ever been, and it is moving to the suburbs and to rural areas. In fact, in 1997, the reported heroin use among American teens was approximately two to three times higher than in 1991. The dangers now are greater than ever in part because the drug's purity is now sometimes 10 times higher than it was in the 1980s.

## Hallucinogens

Some people who have suffered from mental disorders such as schizophrenia suffer from hallucinations and other distorted perceptions of the world around them. They may see and hear things that are not really there. People who use hallucinogenic drugs may have similar experiences. **Hallucinogens** are drugs that alter moods, thoughts, and sense perceptions, including vision, hearing, smell, and touch. The most commonly abused narcotics are PCP, LSD, and mescaline.

## PCP

Phencyclidine, also known as *PCP* or *angel dust*, is a powerful and dangerous hallucinogen. It is prepared synthetically. PCP is considered to be one of the most dangerous of all drugs. Users report that PCP makes them feel distant and detached from their surroundings. Time seems to pass slowly; body movements slow down. Muscle coordination is impaired, and the sensations of touch and pain are dulled. PCP can make the user feel strong and powerful. This feeling has resulted in tragic deaths, serious accidents, and terrible acts of violence.

Even though overdoses of PCP can cause death, most PCP-related deaths are caused by the strange, destructive behavior that the drug produces in the user. PCP users have drowned in shallow water because

they were so disoriented they could not tell where they were or which direction was up. Others have died in fires because they were disoriented and had no sensitivity to the pain of burning.

## **LSD**

LSD is the shortened name for lysergic acid diethylamide. Commonly referred to as *acid*, it is one of the most potent of all mood-altering chemicals. A hallucinogen, LSD comes in tablet, capsule, and sometimes liquid form and is colorless, tasteless, and odorless. LSD's effects are wildly unpredictable. It can cause a false sense of security and power that has resulted in the deaths of users who, for example, believed they could fly or could stop a train by standing on the train tracks. Hallucinations may lead to panic, anxiety, or accidental suicide. Use of hallucinogens is illegal.

## **Mescaline**

Mescaline is the psychoactive ingredient of the peyote cactus. Like LSD, it can lead to "bad trips," or frightening imagined phenomena and may lead to vicious stomach cramps and vomiting.