Ecstasy

What Is It?

Ecstasy is an illegal drug that has effects similar to hallucinogens and stimulants. Ecstasy's scientific name is "MDMA" or methylenedioxymethamphetamine. That word is almost as long as the all-night dance club "raves" or "trances" where ecstasy is often used. That's why ecstasy is called a "club drug."

MDMA is synthetic. It does not come from a plant like marijuana does. MDMA is a chemical made in secret labs hidden around the country. Other chemicals or substances are often added to or substituted for MDMA in ecstasy tablets, such as caffeine, dextromethorphan (cough syrup), amphetamines, and even cocaine. Makers of ecstasy can add anything they want to the drug. So the purity of ecstasy is always in question.

What Are the Common Street Names?

Slang words for ecstasy are E, XTC, X, Adam, hug, beans, clarity, lover's speed, and love drug.

How Is It Used?

Ecstasy is usually taken by mouth in a pill, tablet, or capsule. These pills can be different colors, and sometimes the pills have cartoon-like images on them. Called "bumping," some MDMA users take more than one pill at a time.

How Many Teens Use It?

According to a 2002 NIDA-funded study, some teens are getting smart and turning their backs on ecstasy. For 10th graders in this NIDA-funded study, use of MDMA dropped from 6.2% in 2001 to 4.9% in 2002. There was also a drop in use by 8th graders (from 3.5% to 2.9%) and 12th graders (from 9.2% to 7.4%) compared to 2001. How many students in these grades have ever tried ecstasy?

A 2002 NIDA study reported that 4.3% of 8th graders, 6.6% of 10th graders, and 10.5% of 12th graders had tried MDMA at least once in their life.

Is MDMA Addictive?

Like other stimulant drugs, MDMA appears to have the ability to cause addiction. That is, people continue to take the drug despite experiencing unpleasant side effects, and other social, behavioral, and health consequences.

No one knows how many times a person can use a drug before becoming addicted to it or who is most vulnerable to addiction. A person's genetic makeup, their living environment, and other factors probably play a role in their susceptibility to addiction.

What Are the Common Effects?

In general, NIDA-supported research shows that use of any club drugs can cause serious health problems and, in rare instances, even death. Many drug users take combinations of drugs, including alcohol, which may further increase their danger.

For most users, a "hit" of ecstasy lasts for 3 to 6 hours. Once the pill is swallowed, it only takes about 15 minutes for ecstasy to get into the bloodstream and reach the brain. About 45 minutes later, a user experiences MDMA's peak level (high). It's downhill from there, unless the user "bumps" and takes more MDMA. But even if the user only takes one pill the after-effects of MDMA can last for several days to a week (or longer in regular MDMA users). These include feelings of sadness, anxiety, depression, and memory difficulties.

Initial Effects

Users might feel very alert or "hyper" at first. They can keep on dancing for hours at a time while at a rave. Users also experience distortions in time, and other changes in perception, such as an enhanced sense of

touch. Some, however, become anxious and agitated. Sweating or chills may occur, and the MDMA user may feel faint or dizzy.

Users can also become dehydrated through vigorous activity in a hot environment. MDMA can interfere with the body's ability to regulate its temperature, which can cause dangerous overheating (hyperthermia.) This, in turn, can lead to serious heart, kidney, and liver problems, and rarely, death. MDMA can be extremely dangerous in high doses, or when multiple small doses are taken within a short time period to maintain the ecstasy high. Blood levels of the drug can reach very high levels, increasing the risk of hyperthermia and other negative health consequences of MDMA.

Other Effects on the Body

Ecstasy can also cause muscle tension, clenching of teeth, nausea, blurred vision, fainting, and chills or sweating. MDMA increases your heart rate and your blood pressure.

Effects on the Mind

Ecstasy can cause confusion, depression, sleep problems, intense fear and worrying (anxiety). Some of these side effects can last for days or weeks (in regular drug users) after taking MDMA.

Dangers

MDMA can be dangerous in high doses, and is unpredictable regarding who will be vulnerable to its harmful effects. It can cause a marked increase in body temperature (hyperthermia), which has also been associated with dehydration. Hyperthermia can lead to cardiovascular problems, seizures, liver failure, and muscle breakdown that can cause kidney failure. These have been reported in some fatal cases at raves.

MDMA has been shown to be neurotoxin in studies using animals. We do not know yet whether it is neurotoxic in humans. However, memory loss has been found in regular users of MDMA, and this may reflect damage to the neurons that release serotonin, which also affects the ability to sleep and helps to regulate mood.

Long-term Effects

Although we do not know whether there is long-term damage to the brain in human MDMA users, or whether effects of MDMA are reversible when someone stops using the drug, one study, in non-human primates, showed that exposure to high doses of MDMA for 4 days produced brain damage that was evident 6 to 7 years later. In this study, the researchers found that some of the damaged nerve fibers grow back, but not necessarily in the same parts of the brain. It's like cutting off a limb of a fruit tree. The tree is still alive and can sprout a new limb somewhere else, but it may not bear as much fruit as the old one.

Risks to the Brain

Brain imaging research in humans indicates that MDMA may affect neurons that use the chemical serotonin to communicate with other neurons. The serotonin system plays a direct role in regulating mood, aggression, sexual activity, sleep, and sensitivity to pain.

*See References