Club Drugs

Young adults dance the night away at all-night parties commonly referred to as raves. Although raves may seem like innocent fun, some party-goers bring dangerous substances to these parties. Together, these substances are called club drugs; individually they are sometimes referred to as “G,” “Roofies,” “Special K,” “Speed,” “Acid,” or “Ecstasy.”

“G,” “Liquid Ecstasy,” or gamma-hydroxybutyrate (GHB) is a sedative that can be made from common home ingredients and purchased on the Internet. It is produced as a white powder, tablet, capsule, or a clear liquid. GHB users are mostly adolescents and young adults who often combine it with alcohol to intensify its effects. This drug is related to recent poisonings, deaths, date rapes, and to overdoses in increasing numbers. Users enjoy its sedative, euphoric, or intoxicating effects. GHB depresses the central nervous system and relaxes the body, and large doses may bring about sleep, coma, or death. It leaves the body quickly so it can be difficult to detect.

“Roofies,” “Roche,” or Rohypnol® is in a class of drugs that includes Valium® and Xanax®. Although not approved for medical use in the United States, in Europe it is used for insomnia, as a sedative, or a pre-surgery anesthetic. Since Rohypnol® is odorless and tasteless and can easily be dissolved in carbonated drinks, it is used as a “date rape” drug. Rohypnol® can immobilize someone for eight to 12 hours. People under the effects of Rohypnol® usually experience temporary memory loss, confusion, dizziness, visual problems, urinary retention, drowsiness, and low blood pressure.

Since 1970, “Special K,” or ketamine, has been used primarily as an animal anesthetic. In the 1980’s, ketamine became trendy because it produces hallucinations and dream-like states. Ketamine, a white powder, is often snorted or smoked with marijuana or tobacco products. Some people use liquid ketamine by injecting it into the muscles. Small amounts of ketamine in humans produce a loss in learning ability, memory, and attention span. In high doses, it can impair motor function, cause high blood pressure, depression, amnesia, delirium, severe breathing problems, and possibly fatal respiratory difficulties.

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Ecstasy

Today, “Ecstasy” use is growing steadily while other drug use is stabilizing. This summer, public health officials and researchers stated that the use of “Ecstasy” has spread into both urban and suburban populations. Recent reports indicate an increased use of “Ecstasy” in the Manhattan/Riley County area.

“Ecstasy,” 3,4-methylenedioxymethamphetamine (MDMA), is a synthetic drug that acts simultaneously as a stimulant and a hallucinogen. It comes in the form of a capsule or powder, but the tablet form is the most prevalent. In some areas of the country, it is combined with other drugs such as LSD. The Drug Enforcement Administration (DEA) classifies “Ecstasy” as a drug with no accepted medical use.

MDMA, called “Adam,” “Ecstasy,” or “XTC” on the street, is popular among youth because it is inexpensive compared to other club drugs and easily accessible. Manufacturers often camouflage MDMA in capsules or generic tablets that imitate other prescription drugs. Herbal companies may be selling a variation of “Ecstasy” called Herbal Ecstasy consisting of caffeine, pseudoephedrine, and ephedrine (Ephedrine comes from Ephedra plants). Furthermore, club drugs, including MDMA, can often be impure making them more dangerous to users.

MDMA is the most common of a class of illegal substances called “designer drugs.” Creation of “designer drugs” involves changing the molecular structure of one drug to produce a new substance unknown to the DEA. The names of designer drugs depend on the place, time, and manufacturer of the drug. At the turn of the 20th century, MDMA was developed synthetically in Germany as a by-product from the development of other drugs. In 1970, psychotherapists began using MDMA with their patients because it enhanced communication during counseling sessions. During the 1980’s, it emerged as a party or club drug.

There is direct evidence that humans who use MDMA exhibit a decrease in the brain of the chemical neurotransmitter serotonin. Dr. Alan I. Leshner, Director of the National Institute on Drug Abuse (NIDA), says serotonin is critical to normal experiences of mood, emotion, pain, and a wide variety of other behaviors.

A PET (positron emission tomography) scan reveals that, under the influence of MDMA, the brain is stimulated to release the neurotransmitter serotonin, which creates a high that can last from minutes to hours. A decrease in brain functioning may last several weeks after the person has quit taking MDMA. Continual use may lead to permanent damage to the memory, thought, and pleasure centers in the brain.

“Ecstasy” affects users physically in a variety of ways. After the initial high is over, users may experience several weeks of confusion, sleep problems, depression, anxiety, and paranoia. Some individuals will experience blurred vision, faintness, chills/sweats, dehydration, hypertension, muscle tension, and involuntary loss of body movements. Tremors, kidney failure, stroke, and seizures are possible, too. Users at raves have an increased risk of exhaustion and dehydration. Deaths have been reported due to combinations of drug use and heat stroke.
Psychological effects include enhanced sense of pleasure, self-confidence, increased energy, and a yearning to be close and intimate with others. Some people experience depression, severe anxiety and paranoia, euphoria, hallucinations, and violent and irrational behavior.

Scientists at Johns Hopkins University recently finished a study examining the effects of MDMA on monkeys. Researchers compared one group of monkeys given MDMA with a second group given a placebo. At two weeks and again six to seven years later, the researchers analyzed the brains of the monkeys using PET scans.

After the two-week period, Dr. George Ricaurte and his peers at Johns Hopkins University found that “Ecstasy” produced more damage to neurons that release serotonin. The hippocampus (responsible for long-term memories) and the neo-cortex (outer part of brain responsible for conscious thought) were more affected. Monkeys who had received MDMA for only two weeks still exhibited signs of destruction 6-7 years later. Dr. Ricaurte states that the serotonergic neurons in the monkeys recovered partially, but only in certain parts of the brain and recovery was never complete. The monkeys in the placebo group had no visible signs of damage.

A second study published in the June 2000 issue of the Journal of Neurology, Neurosurgery, and Psychiatry reports that MDMA and marijuana users do significantly worse on performance tests compared to users of only marijuana or non-drug users. Participants were given tests covering topics such as memory and learning, general intelligence, attention, and frontal lobe function. The MDMA users needed more repetitions to learn a word and had inferior short-term memory performance. The scientists concluded that even a small amount of MDMA use over an extended period might cause a significant decline in cognitive performance.

Excited or stimulated neurons release neurotransmitters (a chemical messenger) to a second neuron. The human brain under the influence of Ecstasy exhibits a decrease in release of neurotransmitters.
“Speed,” “Ice,” “Meth,” or Methamphetamine is a powerful stimulant which can be made from common household ingredients. “Meth” is a white, odorless, bitter-tasting powder that dissolves easily in drinks. “Meth” can be snorted, smoked, injected or taken orally. Methamphetamine is highly addictive, and abusers often have serious psychological and health problems, such as aggression, violence, memory loss, psychotic behavior, and possible cardiac and neurological damage. Other health concerns include agitation, excited speech, decreased appetite, and increased activity levels.

As a hallucinogen, “Acid,” “Orange Sunshine,” or Lysergic Acid Diethylamide (LSD), creates difficulty with sensory perceptions. Effects are unpredictable and dependent on the amount taken, the environment where the drug is taken, and the user’s personality, expectations, and mood. LSD is available in tablet, capsule, and liquid form. LSD is also absorbed onto small pieces of paper that are licked or eaten to produce the effects of the drug. Abusers tend to feel the effects within 60/90 minutes after taking the drug. Obvious physical consequences include high body temperature, increased heart rate and blood pressure, dry mouth, sleeplessness, tremors, and dilated pupils. A “bad trip” may cause sensations that are mildly frightening or terrifying. Extended use of LSD can produce consistent psychosis and “flashbacks” (hallucinogen persisting perception disorder). Other effects include sweating, lack of appetite, increased heart rate, and sleeplessness.

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