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Hallucinogens (LSD)

LSD (lysergic acid diethylamide) is one of the major drugs making up the hallucinogen class of drugs. Hallucinogens cause hallucinations-profound distortions in a person's perception of reality. Hallucinogens cause their effects by disrupting the interaction of nerve cells and the neurotransmitter serotonin. Distributed throughout the brain and spinal cord, the serotonin system is involved in the control of behavioral, perceptual, and regulatory systems, including mood, hunger, body temperature, sexual behavior, muscle control, and sensory perception.

Under the influence of hallucinogens, people see images, hear sounds, and feel sensations that seem real but do not exist. Some hallucinogens also produce rapid, intense emotional swings. One of the most potent mood-changing chemicals, LSD, was discovered in 1938 and is manufactured from lysergic acid, which is found in ergot, a fungus that grows on rye and other grains.

Health Hazards

The effects of LSD are unpredictable. They depend on the amount taken; the user's personality, mood, and expectations; and the surroundings in which the drug is used. Usually, the user feels the first effects of the drug 30 to 90 minutes after taking it. The physical effects include dilated pupils, higher body temperature, increased heart rate and blood pressure, sweating, loss of appetite, sleeplessness, dry mouth, and tremors.

Sensations and feelings change much more dramatically than the physical signs. The user may feel several different emotions at once or swing rapidly from one emotion to another. If taken in a large enough dose, the drug produces delusions and visual hallucinations. The user's sense of time and self changes. Sensations may seem to "cross over," giving the user the feeling of hearing colors and seeing sounds. These changes can be frightening and can cause panic.

Users refer to their experience with LSD as a "trip" and to acute adverse reactions as a "bad trip." These experiences are long; typically they begin to clear after about 12 hours.

Some LSD users experience severe, terrifying thoughts and feelings, fear of losing control, fear of insanity and death, and despair while using LSD. Some fatal accidents have occurred during states of LSD intoxication.

Many LSD users experience flashbacks, recurrence of certain aspects of a person's experience, without the user having taken the drug again. A flashback occurs suddenly, often without warning, and may occur within a few days or more than a year after LSD use. Flashbacks usually occur in people who use hallucinogens chronically or have an underlying mental health problem; however, otherwise healthy people who use LSD occasionally may also have flashbacks. Bad trips and flashbacks are only part of the risks of LSD use. LSD users may manifest relatively long-lasting psychoses, such as schizophrenia or severe depression. It is difficult to determine the extent and mechanism of the LSD involvement in these illnesses.

Most users of LSD voluntarily decrease or stop its use over time. LSD is not considered an addictive drug since it does not produce compulsive drug seeking behavior, as do cocaine, amphetamine, heroin, alcohol, and nicotine. However, like many of the addictive drugs, LSD produces tolerance, so some users who take the drug repeatedly must take progressively higher doses to achieve the state of intoxication that they had previously achieved. This is an extremely dangerous practice, given the unpredictability of the drug.

Adapted from the [National Institute on Drug Abuse \(NIDA\)](http://www.drugscreening.org/lsd.aspx)

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U.S. Department of Health and Human Service