

Instructor's Guide

Drugs: Uses and Abuses PSYCHEDELICS AND HALLUCINOGENS

The History of Hallucinogens

Hallucinogenic Plants

The use of hallucinogens dates back thousands of years. Although more common in the Americas than other parts of the world (due to availability), one of the earliest documented uses of a hallucinogenic plant occurred in West Africa, where a preparation called Iboga was used during traditional ceremonies. Iboga was derived from a small bush with yellow flowers called the *Tabernanthe iboga*, which had hallucinogenic properties. Iboga later surfaced in Europe during the mid-19th century, where it was marketed as a tonic for different ills.

The Shangana Tsonga tribe of Mozambique, Africa, utilized a hallucinogenic plant called the *Datura fastuosa* as part of an initiation ceremony for girls entering adolescence. Likewise, there was a tradition among Australia's native people of giving a hallucinogenic plant called *pituri* to boys entering adolescence. Use of the pituri plant among Australia's native people stopped around 1950 when the harvest was cut back.

Hallucinogens and the Americas

Historically, the Americas show the most evidence of long-standing hallucinogenic use, dating back many centuries ago. A 3,000-year-old statue in Mexico depicts stone images of mushrooms sculpted in the form of a god. Mushrooms were also used at a feast in 1502 during the time of the Aztec ruler Montezuma.

The native people of the Americas often used hallucinogenic drugs as part of their religious ceremonies, a tradition that is still practiced today in North and South America. In the U.S., peyote and jimsonweed are commonly used in the religious practices of some Native American tribes, even though many states have passed laws prohibiting peyote use. However, in 1994 President Bill Clinton signed the American Indian Religious Freedom Act Amendments, which allow Native Americans to possess, use, or transport peyote for ceremonial purposes.

The Synthetic Hallucinogens: LSD and Ecstasy

Albert Hofmann, a researcher working for a Swiss pharmaceutical company, discovered one of the most popular synthetic hallucinogens, LSD, in 1938. Hofmann was experimenting with the fungus ergot, and looking for new drug possibilities. However, Hofmann didn't realize what he had developed until five years later, when he accidentally absorbed the drug through his skin while handling it without wearing gloves. Three days after this experience, Hofmann intentionally took a large dose of LSD to see what would happen. He later wrote a book about his experiences with LSD titled *LSD: My Problem Child*.

During the 1950s and 1960s scientists did a great deal of research on LSD because the drug was legal to produce and distribute. The effects of the drug were tested on human subjects until LSD became known as a drug with unpredictable results and government restrictions were imposed. Then, researchers began testing its effects on animals.

The CIA also became fascinated with LSD in the 1950s and began its own research, hoping to use the drug as a truth serum on enemy agents. The agency tested it on human subjects in mock interrogation trials, but found that LSD produced unpredictable reactions, and decided it wasn't useful for their purposes.

Questions

1. Describe how hallucinogens affect the brain, and what a "trip" is.
2. How were hallucinogens used historically? How are they used today?
3. Which hallucinogens occur naturally? Which are chemically synthesized?
4. What hallucinogenic chemical does the peyote cactus produce?
5. Name some slang terms associated with mescaline. How is mescaline ingested?
6. What are the mental and physical effects of mescaline? How long do the effects last?
7. Define peyotism.
8. Describe the history of magic mushrooms.
9. Name some slang terms used for magic mushrooms. How are they ingested?
10. What is the chemical found in magic mushrooms that causes hallucinations? What mental and physical effects does it produce?
11. What is the chemical name for LSD? How is LSD ingested? Name some slang terms for LSD.
12. Describe the mental and physical effects of LSD. How long do they last during and after the "trip"? What is a flashback?
13. What are designer drugs, and how are they made? How are they ingested? What is the most popular designer drug used today?
14. What is the active chemical present in designer drugs? Discuss its medical history.
15. What are the mental and physical effects of MDMA?
16. Why are designer drugs such as XTC so popular?
17. Are hallucinogens addictive? Why are hallucinogens dangerous?

Answer Key

- 1. Describe how hallucinogens affect the brain, and what “tripping” is.**
They trigger the sensory mechanism in the brain, causing the user to experience altered perceptions, visual and aural distortion, disorientation, and impaired judgment. “Tripping” is the term used to describe the effects felt or seen by the user after they have taken a hallucinogen.
- 2. How were hallucinogens used historically? How are they used today?**
Hallucinogens have been used in sacred ceremonies by religious groups and cultures for spiritual enlightenment. They were also used recreationally by some philosophers and psychologists, such as Timothy Leary and Aldous Huxley, for a perceived greater “self-knowledge.” In the 1960s, hallucinogens gained popularity as drugs of abuse because they were used by so many for recreation. Today, they are still used by some cultures in sacred ceremonies and for recreation.
- 3. Which hallucinogens occur naturally? Which are chemically synthesized?**
Mushrooms and mescaline occur naturally, while LSD and designer drugs are chemically synthesized in a lab.
- 4. What hallucinogenic chemical does the peyote cactus produce?**
The peyote cactus produces the chemical mescaline, a hallucinogenic compound discovered by chemists in 1958.
- 5. Name some slang terms associated with mescaline. How is mescaline ingested?**
Beans, buttons, chief, mescal, mesc, moon, cactus, bad seeds, and P are all slang terms for mescaline. It can be chewed, swallowed, smoked, or brewed in tea.
- 6. What are the mental and physical effects of mescaline? How long do the effects last?**
Mental effects of mescaline include hallucinations with vivid colors, impressive shapes, and the perception of mystical experiences. Physical effects include nausea and vomiting, rapid heart-beat, shaking, increased blood pressure and body temperature, and weakened muscles. Dry skin, headaches, and cardiac depression are also possible. The effects can last from 1 to 12 hours.

7. Define peyotism.

Peyotism is the religion of the Native American Church that recognizes the centuries-old tradition of using peyote during prayer sessions for its physical and spiritual healing powers.

8. Describe the history of magic mushrooms.

As long ago as 1500 BC, magic mushrooms were used by the Indians of Mexico and Central America and other cultures. They also became popular in the 1960s as a recreational drug. They remain popular today as a recreational drug.

9. Name some slang terms used for magic mushrooms. How are they ingested?

Magic mushrooms are sometimes called sacred mushrooms, 'shrooms, silly putty, or caps. They can be chewed, swallowed, or brewed as a tea.

10. What is the chemical found in magic mushrooms that causes hallucinations? What mental and physical effects does it produce?

Psilocybin is the chemical found in magic mushrooms. Mental effects include alterations in perception, visual distortions, and the feeling that time is passing very slowly. Physical effects include a stimulated nervous system and possible nausea. Large doses may also cause numbness of the tongue, lips, or mouth.

11. What is the chemical name for LSD? How is LSD ingested? Name some slang terms for LSD.

Lysergic Acid Diethylamide. As tablets, capsules, or liquid, LSD is swallowed. In blotting paper squares it's licked, sucked, or eaten. Slang terms include acid, sugar cubes, white lightning, mellow yellow, green dragon, and pellets.

12. Describe the mental and physical effects of LSD. How long do they last during and after the "trip"? What is a flashback?

Mental effects include altered sense of time and self, mood swings, delusions, and a sense of isolation. Physical effects include dilated pupils, sweating, sleeplessness, and increased heart rate, body temperature, and blood pressure. Hallucinations may occur within 30 minutes after ingesting the drug, and can last as long as 12 hours. Up to a year after taking LSD, the user may experience hallucinations out of the blue in what's called a flashback.

- 13. What are designer drugs, and how are they made? How are they ingested? What is the most popular designer drug used today?**
Designer drugs are a cross between a hallucinogen and a stimulant. They are concocted in home laboratories by "underground" chemists, and are inhaled as a white powder or swallowed as a tablet or capsule. XTC (Ecstasy) is the most popular designer drug used today.
- 14. What is the active chemical present in designer drugs? Discuss its medical history.**
Methylene Dimethoxy Meth Amphetamine (MDMA). In the 1970s, psychiatrists used MDMA to make patients more receptive to therapy. Although some still consider it a potentially useful drug in psychotherapy, it was outlawed in 1985.
- 15. What are the mental and physical effects of MDMA?**
Mental effects of MDMA include a sense of calm, feelings of intimacy, and presence of love. Feelings of confusion, paranoia, anxiety, and depression can also be felt. Physical effects caused by MDMA are nausea, blurred vision, faintness, and increased heart rate and blood pressure.
- 16. Why are designer drugs such as XTC so popular?**
Teenagers who frequent the rave and club scenes use designer drugs because of the feelings they promote and the increased energy they get from using them.
- 17. Are hallucinogens addictive? Why are hallucinogens dangerous?**
No, hallucinogens are not addictive. However, they are dangerous because their effects are unpredictable. You don't know what you're taking, especially with synthetically produced hallucinogens where there is no quality control.

Discussion Starters

1. Why might hallucinogens appeal to potential users?
2. If you were at a rave and a good friend wanted you to try some XTC, what would you do?
3. Who could you go to if you or a friend had any questions about or problems with hallucinogens?

Additional Resources

Cool Nurse—Teen Health, Teen Advice

www.coolnurse.com/lsd.htm

Freevibe

National Youth Anti-Drug Media Campaign

www.freevibe.com (select "hallucinogens")

SAMHSA's National Clearinghouse for Alcohol and Drug Information

www.health.org

National Institute on Drug Abuse (NIDA)

www.drugabuse.gov

The Partnership for a Drug-Free America®

www.drugfree.org

Just Think Twice

Drug Enforcement Administration: Demand Reduction/Street Smart Prevention

www.justthinktwice.com

Additional Resources at www.films.com

Available from Films Media Group • www.films.com • 1-800-257-5126

Hallucinogens

- 17" x 22" poster (available laminated or framed)
- Part of the poster series *Drugs: A Destructive Force*
- Order # 37041



This is poster 6 of the 8-part poster series *Drugs: A Destructive Force*. The series speaks directly to young people about the alarming risks and all-too-frequent tragedies linked with drug abuse. In addition to several types of dangerous substances—including prescription and over-the-counter medication—the deadly pitfalls of drunk driving are also examined. Posters include Cocaine, Alcohol, Marijuana, Smoking, Prescription/OTC Drugs, Hallucinogens, Inhalants, and Drunk Driving. A Cambridge Educational Product. © 2007.

Drug Posters

- Eight 17" x 22" posters (available laminated or unlaminated)
- Order # 10901



This series of brightly illustrated, attention-grabbing posters explains, in detail, the harsh realities of substance abuse and the life-threatening decisions kids make today. With compelling up-to-date factual information, these posters cover the most popular drugs in teenage society. Use them to inform, explore myths, and promote valuable discussions. Posters include Hallucinogens, Inhalants, Narcotics, Phencyclidine (PCP), Sedatives, Steroids, Stimulants, Marijuana. A Cambridge Educational Product. © 2000.

Designer Drugs: Uncertain Borders

- VHS/DVD
- Part of the series *Drugs and the Brain*
- Close captioned
- Preview clip online at www.films.com (Search on 36369)
- Correlates to educational standards
- Order # 36369

This program recounts how science has gradually become aware of the properties of hallucinogens, both natural and synthetic. It also provides a detailed look at the effects of such substances on the brain. Peyote, mushrooms, ahuyasca vine, iboga and yohimbe bark, belladonna flower, and even animal-produced chemicals like bufotenin—secreted from toad skin—are explored in detail. The findings of Albert Hofmann, Alexander Schulgin, George Ricaurte, and others are conveyed. (51 minutes) © 2005.

Ecstasy—Happiness in a Pill? A 48 Hours/MTV News Report

- VHS/DVD
- Preview clip online at www.films.com (Search on 33081)
- Correlates to educational standards
- Order # 33081

Case studies involving a high school student, two college students, and a single mother of three serve as platforms for investigating ecstasy's role as a gateway drug, the spread of potentially lethal copycat drugs and how the controversial group DanceSafe helps ecstasy abusers at raves to tell the difference, law enforcement's crackdown on ecstasy dealers with raids and stiff sentencing, and ecstasy's use as an aid in coping with emotional trauma. Produced by CBS NEWS. (44 minutes) © 2001.

The Price of Ecstasy

- VHS/DVD
- Preview clip online at www.films.com (Search on 33319)
- Order #33319

This balanced program takes a nonjudgmental look at the pleasures and dangers of party drugs through the eyes of abusers and the medical practitioners and social workers who engage with them. Footage of consenting abusers taking and tripping on ecstasy, ketamine, and GHB gives an objective view of club drug highs, while interviews with doctors, researchers, and addiction counselors outline possible ramifications of substance abuse, including date rape, addiction, and death. Also, a plea for research into clinical applications for ecstasy is made. Contains nudity and mature themes. A Discovery Channel Production. (51 minutes) © 2002.

Facts on ... Drugs

- CD-ROM (Windows/Macintosh)
- Preview clip online at www.films.com (Search on 31862)
- Correlates to the American School Health Association standards and the Joint Committee for National School Health Education and the American Cancer Society standards.
- "Honest in [its] assessment, offering valuable information on substances that are commonly referred to only as 'illegal' and 'harmful'—vague castigations that sometimes entice youth rather than deter them." —*Youth Today*
- Order # 31862

Conversational in tone yet authoritative in content, this interactive electronic reference guide gives the scoop on dozens of commonly abused drugs, including marijuana, cocaine and crack, heroin, ecstasy, methamphetamine, PCP, inhalants, and steroids, as well as prescription and over-the-counter medicines. Includes information on the different categories and types of drugs, the abuse of street drugs and medicinal drugs, the effects of specific drugs on the body, warning signs and potential consequences of drug abuse, and treatment for drug addiction. Also contains quizzes, a list of frequently asked questions, a glossary, and more. All material is printable, for handy offline reference. A Cambridge Educational Production. © 2003.

The series *Drugs: Uses and Abuses* includes

- Sedatives
- Narcotics
- Stimulants
- Psychedelics and Hallucinogens
 - Inhalants
 - THC
 - PCP and Ketamine
 - Steroids