Designer Drugs and Human Physiology: PCP, Ecstasy, Fentanyl

Objectives
- To expose the myth that "designer drugs" are sophisticated.
- To emphasize that designer drugs are illegal and deadly.
- To provide details about the harmful physiological effects of PCP, Ecstasy, and Fentanyl.
- To present testimonials of recovering addicts who have suffered the devastating consequences of using these drugs.
- To provide facts that will help people make informed decisions regarding drug use.

SYNOPSIS

In introducing "designer drugs," a forensic toxicologist defines them as various illicit chemical compounds produced for street sale in clandestine laboratories. They are called "designer drugs" because for the most part they are chemically designed to stay one step ahead of the law as products not yet on the government's controlled substance list.

The first of these discussed is phencyclidine, better known as PCP or angel dust. This drug acts simultaneously as an anesthetic, a stimulant, a sedative, and a hallucinogen. The ways in which PCP affects the brain are described with emphasis on how the drug disrupts the chemical balance of the brain and how it distorts an individual's normal perception of sensory experience. Heavy doses of PCP can result in memory loss, frightening hallucinations, convulsions, coma, and even death. PCP psychosis is described as virtually indistinguishable from schizophrenia. "Flashbacks" with disastrous physical and emotional consequences can occur months after an individual's last use of the drug.

Dealers often add cheap PCP to other drugs, allegedly to upgrade the quality of such substances as cocaine, methamphetamine, LSD, Ecstasy, and psychedelic mushrooms. The dangers of this type of multiple drug use are examined, with special emphasis on the violent paranoia often resulting from "space basing" (i.e. mixing PCP with crack cocaine.)

Ecstasy is next reviewed as a harmful chemical that delivers anything but what its street name implies. Ecstasy is in fact the compound MDMA, a drug related to methamphetamine and mescaline (the hallucinogen derived from the peyote cactus). Often mistakenly reputed as a "love drug" that can mend emotional ills and provide inner peace, MDMA destroys brain cells that produce serotonin—a chemical in the brain that regulates aggression, mood, sleep sexual activity, and sensitivity to pain. Effects of MDMA intoxication include anxiety, paranoia, increased heartbeat and blood pressure, muscle tension, and depression that can last for days after the drug is taken.

The final substance considered is Fentanyl, a synthetic heroin which is unfortunately sometimes thought of as a safe illicit drug. A laboratory chemical which can be used medically as a painkiller, Fentanyl can be inexpensively formulated into designer opiates. The drug user's desired effects of fentanyl are identical to those of heroin; a rush of euphoria, relief from pain, a false sense that all is right with the world. The truth is that designer opiates can be a thousand times more potent than heroin.

Designers opiates are often disguised for sale as other street drugs. The purchase of illegal substances from dealers is thus laden with uncertainty. Maintaining a designer drug habit is extremely expensive and can be financially devastating. Recovering addicts relate how they committed crimes to fund their drug purchases.

Warnings are given at the conclusion of the program on the dangers of mixing designer drugs with alcohol, using drugs during pregnancy, and on the risk of contracting AIDS when sharing needles. Throughout the program, the toxicologist illustrates all important statements with anatomical charts, models, and X-ray graphics of internal body functions. Dramatic testimonials from recovering addicts confirm the facts presented by the toxicologist.

Questions to ask before showing the program
- Tell what you've heard about designer drugs. How widespread do you think is the problem of their use?
- What do you know about the physical and social adverse effects of using PCP? Ecstasy? Fentanyl?
- What do you think are some of the reasons people turn to designer drugs?

Questions to ask after showing the program
1. What is PCP? (An illegal drug that acts as an anesthetic, a stimulant, a sedative, and a hallucinogen.)
2. What is the "blood-brain barrier"? (A wall of special tightly joined cells in the brain's blood vessels that prevent toxic chemicals from passing out of the bloodstream into the brain.)
3. Can PCP pass through the blood-brain barrier? (Yes.)
4. What are the effects of moderate doses of PCP on the body? (Agitation, slurred speech, disorientation, fear, and involuntary eye movement.)
5. Why do people under the influence of PCP often drown in swimming pools? (PCP disrupts coordination between the brain and body movements.)
6. What are the symptoms of heavy doses of PCP? (Memory loss, frightening hallucinations, convulsions, coma, and death.)
7. Is PCP psychosis similar to schizophrenia? (Yes.)
8. What are "flashbacks" and how can they be disastrous? (Unpredictable physical and emotional consequences can occur months after an individual's last use of the drug.)
9. What is "space basing"? Why is it dangerous? (Mixing PCP with crack cocaine; it can cause violent behavior and paranoia.)
10. What is Ecstasy? (An amphetamine, chemically related to methamphetamine and mescaline.)

11. How does Ecstasy affect the brain? (It destroys brain cells that produce serotonin—a chemical in the brain that regulates aggression, mood, sleep, sexual activity, and sensitivity to pain.)

12. What is Fentanyl? (A designer opiate that can be a thousand times more potent than heroin.)

13. What is the most severe effect of heroin on the body? (Depressed respiration resulting in lack of oxygen in the blood, which in turn may cause cardiovascular collapse and death.)

14. What is MPTP? How does it affect the body? (It is a very potent neurotoxin and the byproduct of illegal fentanyl manufacturing; it can cause Parkinson’s disease.)

15. How do drug users know for sure exactly what they buy on the street? (They can never know.)

16. How does using designer drugs affect driving? Infant development during pregnancy? The possibility of contracting AIDS? (Driving ability is severely impaired; drugs may be passed to an unborn child by the pregnant mother; shared needles for injecting drugs can spread AIDS.)

Consult your AIMS catalog for additional titles.

Length
- 18 1/2 minutes

Subject areas
- Substance Abuse, Guidance and Counseling

Audience Level
- Junior High-Adult

Catalog number
- 8113

Annotations
A forensic toxicologist details the very serious physiological threats posed by the so-called “designer drugs” PCP, Ecstasy, and Fentanyl. Supporting the expert narration are a number of personal testimonials which further reinforce the message to quit or never begin using these dangerous substances.