



IV. Introduction to Drug Classes

The Controlled Substances Act (CSA) regulates five classes of drugs:

- Narcotics
- Depressants
- Stimulants
- Hallucinogens
- Anabolic steroids

Each class has distinguishing properties, and drugs within each class often produce similar effects. However, all controlled substances, regardless of class, share a number of common features. This introduction will familiarize you with these shared features and define the terms frequently associated with these drugs.

All controlled substances have abuse potential or are immediate precursors to substances with abuse potential. With the exception of anabolic steroids, controlled substances are abused to alter mood, thought, and feeling through their actions on the central nervous system (brain and spinal cord). Some of these drugs alleviate pain, anxiety, or depression. Some induce sleep and others energize.

Though some controlled substances are therapeutically useful, the “feel good” effects of these drugs contribute to their abuse. The extent to which a substance is reliably capable of producing intensely pleasurable feelings (euphoria) increases the likelihood of that substance being abused.

DRUG ABUSE

When drugs are used in a manner or amount inconsistent with the medical or social patterns of a culture, it is called drug abuse. The non-sanctioned use of substances controlled in Schedules I through V of the CSA is considered drug abuse. While legal pharmaceuticals placed under control in the CSA are prescribed and used by patients for medical treatment,

the use of these same pharmaceuticals outside the scope of sound medical practice is drug abuse.

DEPENDENCE

In addition to having abuse potential, most controlled substances are capable of producing dependence, either physical or psychological.

Physical Dependence

Physical dependence refers to the changes that have occurred in the body after repeated use of a drug that necessitates the continued administration of the drug to prevent a withdrawal syndrome. This withdrawal syndrome can range from mildly unpleasant to life-threatening and is dependent on a number of factors, such as:

- The drug being used
- The dose and route of administration
- Concurrent use of other drugs
- Frequency and duration of drug use
- The age, sex, health, and genetic makeup of the user

Psychological Dependence

Psychological dependence refers to the perceived “need” or “craving” for a drug. Individuals who are psychologically dependent on a particular substance often feel that they cannot function without continued use of that substance. While physical dependence disappears within days or weeks after drug use stops, psychological dependence can last much longer and is one of the primary reasons for relapse (initiation of drug use after a period of abstinence).

Contrary to common belief, physical dependence is not addiction. While addicts are usually physically dependent on the drug they are abusing, physical dependence can exist without addiction. For example, patients who take narcotics for chronic

pain management or benzodiazepines to treat anxiety are likely to be physically dependent on that medication.

ADDICTION

Addiction is defined as compulsive drug-seeking behavior where acquiring and using a drug becomes the most important activity in the user's life. This definition implies a loss of control regarding drug use, and the addict will continue to use a drug despite serious medical and/or social consequences. In 2009, an estimated 21.8 million Americans aged 12 or older were current (past month) illicit drug users, meaning they had used an illicit drug during the month prior to the survey interview. This estimate represents 8.7 percent of the population aged 12 or older. Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.¹

Drugs within a class are often compared with each other with terms like potency and efficacy. Potency refers to the amount of a drug that must be taken to produce a certain effect, while efficacy refers to whether or not a drug is capable of producing a given effect regardless of dose. Both the strength and the ability of a substance to produce certain effects play a role in whether that drug is selected by the drug abuser.

It is important to keep in mind that the effects produced by any drug can vary significantly and is largely dependent on the dose and route of administration. Concurrent use of other drugs can enhance or block an effect, and substance abusers often take more than one drug to boost the desired effects or counter unwanted side effects. The risks associated with drug abuse cannot be accurately predicted because each user has his/her own unique sensitivity to a drug. There are a number of theories that attempt to explain these differences, and it is clear that a genetic component may predispose an individual to certain toxicities or even addictive behavior.

Youth are especially vulnerable to drug abuse. According to NIDA, young Americans engaged in extraordinary levels of illicit drug use in the last third of the twentieth century. Today, about 47% of young people have used an illicit drug by the time they leave high school and about 16 percent of eighth, tenth, and

twelfth graders are current (within the past month) users.²

The behaviors associated with teen and preteen drug use often result in tragic consequences with untold harm to others, themselves, and their families. For example, an analysis of data from the National Survey on Drug Use and Health indicates that youth between the ages of 12 and 17 who had engaged in fighting or other delinquent behaviors were more likely than other youths to have used illicit drugs in the past month. For example, in 2009, past-month illicit drug use was reported by 18.8 percent of youths who had gotten into a serious fight at school or work in the past year, compared with 7.7 percent of those who had not engaged in fighting, and by 38.3 percent of those who had stolen or tried to steal something worth over \$50 in the past year compared with 8.7 percent of those who had not attempted or engaged in such theft.³

In the sections that follow, each of the five classes of drugs is reviewed and various drugs within each class are profiled. Although marijuana is classified in the CSA as a hallucinogen, a separate section is dedicated to that topic. There are also a number of substances that are abused but not regulated under the CSA. Alcohol and tobacco, for example, are specifically exempt from control by the CSA. In addition, a whole group of substances called inhalants are commonly available and widely abused by children. Control of these substances under the CSA would not only impede legitimate commerce, but also would likely have little effect on the abuse of these substances by youngsters. An energetic campaign aimed at educating both adults and youth about inhalants is more likely to prevent their abuse. To that end, a section is dedicated to providing information on inhalants.

¹ *Results from the 2009 National Survey on Drug Use and Health: Volume I. Summary of National Findings*; U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration

² *Monitoring the Future Survey, 2009*; National Institute on Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services

³ *National Survey on Drug Use and Health, 2009*; U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration