DRUGS of ABUSE

The term "drug abuse" is unfortunate because it connotes social disapproval and may have different meanings to different people. One must also distinguish drug abuse from drug misuse. Abuse of a drug might be construed as any use of a drug for non-medical purposes, usually for altering consciousness but also for bodybuilding. To misuse a drug might be to take it for the wrong indication, in the wrong dosage, or for too long a period, to mention only a few obvious examples. In the context of drug abuse, the drug itself is of less importance than the pattern of use. For example, taking 50 mg of diazepam [a benzodiazepines for anxiety, depression, relaxation] to heighten the effect of a daily dose of methadone is an ***abuse*** of diazepam. On the other hand, taking the same excessive daily dose of the drug but only for its anxiolytic effect is ***misusing*** diazepam.

Dependence is a biologic phenomenon often associated with "drug abuse."

Psychological dependence is manifested by compulsive drug-seeking behavior in which the individual uses the drug repetitively for personal satisfaction, often in the face of known risks to health. Cigarette smoking is an example.

Deprivation of the agent for a short period of time typically results in a strong desire or *craving* for it.

Physiologic dependence is present when withdrawal of the drug produces symptoms and signs that are frequently the opposite of those sought by the user. It has been suggested that the body adjusts to a new level of homeostasis during the period of drug use and reacts in opposite fashion when the new equilibrium is disturbed. Alcohol withdrawal syndrome is perhaps the best-known example, but milder degrees of withdrawal may be observed in people who drink a lot of coffee every day. Psychological dependence almost always precedes physiologic dependence but does not inevitably lead to it. Addiction is usually taken to mean a state of physiologic and psychological dependence, but the word is too imprecise to be useful.

Tolerance signifies a decreased response to the effects of the drug, necessitating ever-larger doses to achieve the same effect. Tolerance is closely associated with the phenomenon of physiologic dependence. It is largely due to compensatory responses that mitigate the way that the drug is acting in the body.

Behavioral tolerance, an ability to compensate for the drug's effects, is another possible mechanism of tolerance.

Functional tolerance, which may be the most common type, is due to compensatory changes in all the possible responses of the various sites in the body to this specific drug.

How can dependence for a drug be tested?

A number of experimental techniques have been devised to predict the ability of a drug to produce dependence and to assess its likelihood for abuse. Most of these techniques employ self-administration of the drug by animals. Meaning: the animal is forced and demands or is seeking the drug by itself. The speed of reinforcement can be altered so as to make the animal work harder for each dose of drug, providing a semi-quantitative measure as well. Comparisons are made against a standard drug in the class, e.g., morphine among the opioids.

Withdrawal of dependent animals from drugs assesses the nature of the withdrawal syndrome and can be used to test drugs that might cross-substitute for the standard drug. Most agents with significant potential for psychological or physiologic dependence can be readily detected by these techniques. The actual abuse liability, however, is difficult to predict, since many variables enter into the decision to abuse drugs.

Cultural Considerations.

Each society accepts certain drugs as licit and condemns others as illicit. In the USA and most of Western Europe, the "national drugs" are caffeine, nicotine, and alcohol. In the Middle East, cannabis may be added to the list of licit drugs, whereas alcohol is forbidden. Among certain Native American tribes, peyote, a hallucinogen, may be used licitly for religious purposes. In the Andes of South America, Cocaine is used to allay hunger and enhance the ability to perform arduous work at high altitudes. Thus, which drugs are licit or illicit or-to use other terminology-"used" or "abused" is a social judgment. A major social cost of relegating any substance to the illicit category is the criminal activity that often re-suits, since purveyors of the substance are lured into illegal traffic by the opportunity to make large profits while dependent users may resort to robbery, prostitution, and other types of antisocial behavior to sup- port their habits. A major social and medical cost associated with *parenteral [by injection]* abuse of drugs is the high incidence of transmission of HIV and hepatitis virus through the sharing of needles.

Current USA attitudes to drugs of this type are reflected in the Schedule of Controlled Substances. This schedule is quite similar to those published by international control bodies. Such schedules affect principally ethical and law-abiding manufacturers of the drugs and have little deterrent effect on illicit manufacturers or suppliers. Such schedules have been circumvented by the synthesis of "designer" drugs that make small changes of the chemical structures of drugs with little or no change in their way the drug acts in the human body. Thus, schedules must constantly be revised to include these attempts to produce compounds not currently listed.

Because of the high social cost of drug abuse, many countries attempt to interdict their entry across borders. While surveys may indicate that the use of drugs such as cocaine and marijuana is increasing or decreasing, it is difficult to attribute such changes to law enforcement policies. Little progress has been made in decreasing the demand for illicit drugs. Some have argued that the only reasonable solution to the problem is legalization of the drugs. Such proposals are obviously highly controversial.

Any use of mind-altering drugs is based on a complicated interplay between three factors: the user, the setting in which the drug is taken, and the drug. Thus, the personality of the user and the setting may have a strong influence on what the user experiences. Nonetheless, it is usually possible to identify a pharmacological "core" of drug effects that will be experienced by almost anyone under almost any circum- stances if the dosage is adequate.

THE DRUG SCENE

NEW DESIGNS

If, on balance, drug use is not sharply on the rise, recent years have seen an influx of new, so-called "designer drugs"- clandestinely produced drugs that are structurally and pharmacologically similar to controlled substances (federally regulated narcotics), but are not themselves controlled substances. Since 1987, federal statutes have prohibited the manufacture and use of these "controlled substance analogs."

The most important new designer drug is **MDMA**, popularly called **Ecstasy**, and also known as **XTC, Adam, hug, beans**, and the **love drug**. MDMA has **stimulant** (**amphetamine-like**) and **hallucinogenic (LSD-like**) properties and is chemically similar to **methamphetamine, methylenedioxyamphetamine (MDA), and mescaline**, all drugs known to cause brain damage. High doses can cause a sharp increase in body temperature (a condition called **malignant hyperthermia**) leading to muscle breakdown and kidney and cardiovascular system failure.

U.S. Department of Health and Human Services data indicates that while MDMA was once used primarily at dance clubs, youth parties-raves-and what the department describes as "the college scene," it is now even more widely used. In 2001, it was reported as the most prominent stimulant used in Chicago. In Denver, many singles' bars sell it illegally. It has become the drug of choice among white middle class young adults in Washington, D.C. In Miami in 1999, eight MDMA-related deaths were reported. Five were reported in Minneapolis/ St. Paul. In Boston during the first three quarters of 2000, MDMA was the most frequently mentioned drug in telephone calls to the Poison Control Center.

The fact that the United States Drug Enforcement Administration (DEA) seized 13,342 MDMA tablets in 1996 and 949,257 in 2000 suggests that the use of this dangerous drug may well rise. Likely, increased use of MDMA is also an indication that additional synthetic drug-s will be developed and abused.

TERMINOLOGY OF "STREET" DRUGS

This is a limited selection of terms. An exhaustive list can be found on the web page of the Indiana Prevention Resource Center – **http://www.drugs.indiana.edu/slang**

Drug:	**Slang /"street" Terminology:**
Cocaine:	Ice (denotes high quality), Yeyo, Snow, White, Cola "Getting amped" "Spun"
Crack	Rock, Hard, Primo "Playing baseball (smoking) ", "Beemin' up"
Crystal Meth: [Amphetamines]	Speed, Crank, Crystal Bernie, Ice (denotes high quality), "Getting amped", "Tweeking/Tweeker"
Heroin:	Smack, Horse, H-bomb, China White, Junk "Booting up" "Chasing the dragon"
Marijuana: [Tetrahydrocannabinol]	Pot, Rope, Dope, Ganja, Weed, Herb, Motah, Reefer, Bhang, Buddha, Cheeba, Dank, hooch, skunk
Regional names:	Kgb, Humboldt County, AK-47, Northern Lights
Hashish:	Hash, Keif, Soles, Quarter moon
Regional names:	Black Russian
Nitrous Oxide:	Nitrous, Hippie crack, Whipits
Psilocybe [Psilocybin] Mushrooms:	Shrooms, Zoomers
Rohypnol: [Flunitrazepam]	Roofies
GHB [Gammahydroxybutyrate]	Gamma
LSD [Lysergic acid diethylamide]	Acid, Blotter, Doses
PCP [Phencyclidine]	Angel Dust, Sherman (cigarette form)