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Topic: Alcohol and Drug Problem

The abuse of alcohol and other drugs—including prescription drugs—is common and costly. It can cause or worsen many medical problems and if left untreated can destroy families and lives. Frequent abuse of alcohol and other drugs can lead to addiction, a disease that affects the brain and behavior. Some people are more vulnerable to developing a problem with alcohol or other drugs. These populations include:

Individuals who begin drinking or using drugs at an early age.

- 90 percent of all adults with a substance use disorder started using under the age of 18 and half under the age of 15.
- Children who first smoke marijuana under the age of 14 are more than five times as likely to abuse drugs as adults than those who first use marijuana at age 18.

Individuals with a family history of substance abuse problems.

- The children of alcoholics are four times more likely to develop problems with alcohol

Individuals with a mental illness such as depression, anxiety or bipolar disorder.

- In 2002, 4 million adults met the criteria for both serious mental illness and a substance use disorder.
- 60 to 80 percent of adolescents with substance use disorders have a co-occurring mental illness.

Alcohol Problems

Alcohol abuse is a leading preventable cause of death in the US, accounting for 75,000 deaths each year.

- The annual cost of alcohol abuse is approximately \$191.6 billion.
- Among teens, alcohol is the most commonly abused drug.
- More than half (57 percent) of 12th graders and nearly a fifth (17percent) of 8th graders report having been drunk at least once in their lives.
- In addition a quarter (25 percent) of 12th graders report binge drinking (five or more drinks in a row in the last 2 weeks).
- Youth alcohol abuse costs the nation \$89.5 billion annually.
- Among youth, the use of alcohol and other drugs has also been linked to unintentional injuries, physical fights, academic and occupational problems, and illegal behavior.
- Every year, 5,000 young people die as a result of underage drinking

Prescription and Illicit Drug Problems.

Drug abuse is a serious public health problem in the US, costing the nation approximately \$151.4 billion annually. Drug abuse includes the use of illegal drugs such as marijuana, cocaine, heroin, and other “street drugs”; and the misuse and abuse of prescription and over-the-

counter medications. The rate of drug abuse among adolescents remains unacceptable high and is associated with other risky behaviors including drunk and drugged driving, risky sexual behavior, academic failure, and involvement with the criminal justice system.

For example:

- ✓ In 2006, 30 percent of high school seniors reported driving after drinking heavily or using drugs, or riding in a car whose driver had been drinking heavily or using drugs.
- ✓ 24 percent of 15- to 17- year olds and 31 percent of 18- to 24- year olds say they have done more sexually than planned because they had been drinking or using drugs. And, 12 percent of 15- to 17- year olds and 25 percent of 18- to 24- year olds reported having unprotected sex because they were using drugs or drinking.
- ✓ High school students who use alcohol or other drugs are up to five times more likely to drop out of school.
- ✓ As many as four in five teens in trouble with the law are abusing drugs and alcohol. And, 60 to 90 percent of teenagers who appear in juvenile court have a substance abuse problem. Eight out of 10 (78 percent) 9th-12th-graders report teens use drugs “to deal with the pressures and stress of school.

Types of Alcohol & Drugs

- alcohol
- benzodiazepines (minor tranquilisers such as Valium)
- cannabis
- GHB (gamma-hydroxybutyrate)
- ketamine
- opioids (heroin, morphine, codeine)
- amphetamines (speed and ice)
- caffeine
- cocaine
- ecstasy (MDMA — methylene dioxyetha mphet amine)
- nicotine (tobacco)

Alcohol	Kratom	Psilocybin
Ayahuasca	LSD	Rohypnol® (Flunitrazepam)
Central Nervous System	Marijuana (Cannabis)	Salvia
Depressants	MDMA (Ecstasy/Molly)	Steroids (Anabolic)
Cocaine	Mescaline (Peyote)	Synthetic Cannabinoids
DMT	Methamphetamine	Synthetic Cathinones (Bath Salts)
GHB	Over-the-Counter Medicines--	Tobacco/Nicotine
Hallucinogens	Dextromethorphan (DXM)	
Heroin	Over-the-Counter Medicines--	
Inhalants	Loperamide	
Ketamine	PCP	
Khat	Prescription Opioids	
	Prescription Stimulants	

Alcohol's Distribution in the Body

Alcohol that has not been eliminated by first-pass metabolism enters the systemic circulation and is distributed throughout the body water (i.e., the blood and the watery fluid surrounding and inside the cells). Alcohol does not dissolve in fat tissues. The proportion of body water and body fat differs between men and women and between young and old people; women and older people generally have more body fat and less body water than do men and younger people. As a result, alcohol distribution throughout the body depends on a person's gender and age.

Gastrointestinal Absorption and Metabolism

When alcohol is ingested through the mouth, a small amount is immediately broken down (i.e., metabolized) in the stomach. Most of the remaining alcohol is then absorbed into the bloodstream from the gastrointestinal tract, primarily the stomach and the upper small intestine. Alcohol absorption occurs slowly from the stomach but rapidly from the upper small intestine. Once absorbed, the alcohol is transported to the liver through the portal vein. A portion of the ingested alcohol is metabolized during its initial passage through the liver; the remainder of the ingested alcohol leaves the liver, enters the general (i.e., systemic) circulation, and is distributed throughout the body's tissues

Alcohol metabolism (or the metabolism of any other substance) that occurs in the gastrointestinal tract and during the substance's initial passage through the liver is called "first-pass metabolism" (see figure 1). For example, the mucosa lining the stomach contains enzymes that can metabolize alcohol as well as other substances; some of those enzymes, including alcohol dehydrogenase (ADH) and cytochrome P450 are described in more detail in the section "Alcohol Metabolism in the Liver."

Stimulants

Stimulants speed up the messages between the brain and the body. This can cause:

- your heart to beat faster
- your blood pressure to go up
- your body temperature to go up — leading to heat exhaustion or even heat stroke
- reduced appetite
- agitation
- sleeplessness

Drugs can be categorized by the way in which they affect our bodies:

- depressants — slow down the function of the central nervous system
- hallucinogens — affect your senses and change the way you see, hear, taste, smell or feel things
- stimulants — speed up the function of the central nervous system

Physicians have long recognized that different types of drugs affect people differently. Nonetheless, drugs may be categorized or classified according to certain shared symptomatology or effects. The DRE categorization process is premised on these long-standing, medically accepted facts. DREs classify drugs in one of seven categories: central nervous system (CNS) depressants, CNS stimulants, hallucinogens, dissociative anesthetics, narcotic analgesics, inhalants, and cannabis. Drugs from each of these categories can affect a

person's central nervous system and impair a person's normal faculties, including a person's ability to safely operate a motor vehicle.

Solutions

Parents are the most effective force in preventing and reducing adolescent risky behaviors and helping our nation's youth lead healthy drug free lives. Research shows that kids who learn about the dangers of drugs at home are up to 50 percent less likely to use drugs than kids who don't learn about these dangers from their parents. xxiii To help parents in preventing and reducing adolescent alcohol and drug use, The Partnership at Drugfree.org provides information and tools through its website, its community education programs, and its public service messages.