

Health Risks Associated with Use of Controlled Substances and Misuse of Alcohol

Substance use disorders, including alcoholism, are problems of staggering proportions in our society today. They are the leading causes of preventable illness, disability, and death in the U.S. and are estimated to afflict 40 million Americans. This number increases dramatically when one considers the harm done to the families of those diagnosed with substance use disorder as well as to those injured or killed by intoxicated drivers or in drug-related work accidents. Alcoholism may develop in anyone. It tends to appear first between the ages of 20 and 40 and to be more prevalent in persons with a family history of alcoholism.

Alcohol

Alcoholism is a disorder that has profound psychological, biological, and societal effects. Directly, it affects over 20 million people; indirectly, it affects another 60 million. It is usually characterized by life interference, increase in use, inability to curtail use despite negative consequences. The disorder is usually progressive, and physical dependence can develop; if this happens, serious, sometimes life-threatening symptoms can develop when alcohol is withdrawn. Short term effects of alcohol use can include depression, gastritis, liver disease, automobile accidents, and domestic violence. Chronic alcohol misuse can produce irreversible health changes, including dementia, sexual impotence, cirrhosis of the liver, and heart disease. Death can occur either as a complication of one of these chronic problems, or acutely, secondary to alcohol intoxication by poisoning or to aspiration of vomitus, or as the result of any automobile accident while driving intoxicated.

Marijuana (Cannabis)

Marijuana is the most commonly used illegal drug in the United States. Though physiological consequences do depend on frequency, duration, and quantity of use, marijuana use has been linked to impairment of short-term memory, concentration, judgment, perception, and fine motor skills. Thus, the use of this drug increases the risk of machinery or motor vehicle accident and injury, for four to six hours after ingestion. Impairment of memory may last for three to six months, even if use of the drug is discontinued completely. The active chemical in marijuana (THC) remains stored in body fat cells long after ingestion. Marijuana use is associated with chronic anxiety, depression, and paranoid feelings. It can exacerbate or increase significantly underlying emotional problems. Frequent and/or ongoing use by children and adolescents may have long term developmental consequences resulting in lack of motivation, apathy, and difficulty managing current stresses and responsibilities, as well as making appropriate plans. Pregnant women who use marijuana may be at a higher risk for giving birth to children with developmental or birth defects.

Hallucinogens

This category includes drugs such as lysergic acid diethylamine (LSD, also known as "acid"), mescaline, and peyote. These drugs cause delusions, hallucinations, and impaired perception of time and space. Phencyclidine (PCP or "angel dust") and amphetamine variants known as "ecstasy" are included in this category, though they rarely cause hallucinations in the true sense. They are, however, potent drugs that have mind-altering effects and impair perception and cognition. Hallucinogens can produce a "bad trip" with anxiety, agitation, hallucinations, and paranoia leading to impulsive behavior. After a "bad

trip" the person can be subject to "flashbacks," which are recurrences of the experiences of the "bad trip" without taking any more of the drug. Psychosis and impaired thinking may result after long-term use.

Cocaine

The use of cocaine, an illegal stimulant drug, has risen dramatically in the United States. Other names for this drug are coke, C., lady, and snow. Cocaine is a white powder that is snorted, injected into veins, or smoked freebase or as "crack." Crack is a crystalline form of cocaine that is also known as "rock," from its small, white rock-like appearance. ("Speed balls" are cocaine mixed with heroin, which is a particularly dangerous combination.) Crack produces the most intense cocaine high; addiction can occur after using it only once or twice. Cocaine highs are characterized by feelings of extreme happiness and a sense of limitless power and energy. However, the physical effects include high blood pressure and heart palpitations. A cocaine "crash" follows the high and includes symptoms of depression, dullness, great irritability, and paranoia. Serious medical complications occur with cocaine use, such as heart attacks (even in young people), seizures, and strokes due to high blood pressure. The psychological effects of cocaine use include violence, paranoia, and personality changes as well as symptoms such as depression, anxiety, and confusion. Pregnant women using cocaine have increased risk of miscarriages and still-births. Newborns addicted to cocaine are irritable, unresponsive, prone to have malformed kidneys and genitals, and to have heart attacks and strokes. Addiction to cocaine controls aspects of the user's life, impinges on the lives of those closest to the user, and occurs in people of all ages, classes, and educational levels.

Amphetamines and other Stimulants

In addition to cocaine, a number of other drugs stimulate the nervous system and are very addictive. Most of them belong to the amphetamine family of drugs. Dexedrine (present in "diet" pills) may at times be prescribed by a physician, but its use as a legitimate medication is now infrequent. Street drugs of the amphetamine group include "ecstasy" and "ice." Ice is a smokable amphetamine compound that is very potent, and the effects are long-lasting and devastating. The health risks of these and other stimulants are similar to those of cocaine use.

Narcotics, Including Heroin

Various medications are taken to relieve pain. Most non-prescription pain relievers (such as aspirin, Tylenol, Motrin, and Nuprin) are not addictive. However, there is a class of stronger pain relievers, available by prescription only, which are referred to as narcotics and most of which are opiates. Examples of these drugs include morphine, codeine, Tylenol No.3, Darvon, Darvocet, Percocet, Percodan, Demerol, and certain prescription cough medicines. These drugs differ from non-prescription pain relievers in their potential for misuse and dependence. With close medical supervision, these drugs may be safely used in specific medical circumstances for a limited time. However, addiction may occur, and the person may not want to stop the drug even when the pain has stopped. Tolerance to the drug is shown by an increase in the amount of drug necessary to relieve pain. This becomes progressive and leads to the craving or need for larger and larger doses, without which the person becomes extremely uncomfortable and physically ill. The time may come when the person "needs" such a large dose of the drug that is poisonous or lethal. Under these circumstances, coma, suffocation, and death may ensue. The malignant course of this problem is similar to that of addiction to heroin. Although heroin is not available by prescription, it is a narcotic which belongs to the same chemical family as the above drugs.

The use of heroin is mainly by injection into a vein, which carries the additional medical dangers of contracting AIDS and hepatitis from unclean needles and syringes.

Sedatives and Tranquilizers

Benzodiazepines are central nervous system depressants and include such drugs as Valium, Librium, Ativan, Xanax, Dalmane, Halcion, and Restoril. While safe and effective at moderate doses for short periods of time (weeks), all the benzodiazepines have a potential for physical and psychological dependence if used at higher doses for longer periods of time. Frequently the benzodiazepines are misused by adults who become dependent on them because of their anti-anxiety effects. Other tranquilizers which may be misused include methaqualone (Quaaludes), Doriden, and Equanil. Intoxication may result from benzodiazepine use and resembles alcoholic drunkenness. Drowsiness, slurred speech, unsteady gait, and lack of coordination are common signs. The effects of the benzodiazepines (and the barbiturates and other sedatives) add to those of alcohol; taken together, they can lead to coma and even death. Withdrawal from benzodiazepines resembles alcohol withdrawal and is most apparent if the drugs are stopped abruptly. Withdrawal takes place within hours to days of stopping the drug. Once a person is addicted to benzodiazepines, a physician should supervise the plan for gradually stopping them, to minimize the serious effects of withdrawal.

Impact of Substance Use Disorder on Families

Families are often gravely affected by family members diagnosed with a substance-use disorder. This can occur on many levels. As a very direct, physiological consequence, the infants of alcohol and cocaine-abusing mothers often have low birth weight and may suffer from malformations and a variety of developmental problems. In addition, individuals with substance use disorder often affect the economic well-being of their families as their inability to hold down a job or, in some instances, their stealing from relatives reduces the family's financial means and stability. In many cases substance use leads to violence at home. Substance use disorder takes an emotional toll on the functioning of individual members and the family as a whole. Family members may actively deny the problem, may become symptomatic in an effort to deflect attention from the substance-using member, or may assume the user's responsibilities at home and even at work. On the other hand, very often the family's intervention with the user is an essential step in getting the substance using member to seek treatment. Support groups or family members, such as Al-Anon or Nar-Anon, as well as family therapy can provide needed assistance to families as they confront the destructive effects of the user's addiction.

Recognizing Signs and Symptoms of Substance Use Disorders

Everyone occasionally has days when they exhibit behavior not normally associated with an educational or work environment nor characteristic of himself or herself. Unusual behavior during times of stress can be understood and accepted. However, when unusual behavior is displayed on a gradually increasing scale accompanied by general decline in work habits over a period of time, it indicates that an individual needs professional help. Below are some of the more common signs or symptoms of unusual behavior.

A. Absenteeism and Tardiness

- Arriving late and leaving early
- Absences before and after payday or holidays

- Sporadic but significant use of sick time
- Taking frequent breaks
- Unexplained absences
- Friday and Monday absences
- Absences due to accidents both on and off the work site

B. Impaired Job Performance

- Increasing operating errors
- Lost time on the job
- "Putting things off"
- Irresponsibility in completing tasks
- Faulty decision making
- Increased accident rates
- Wasted materials or damaged equipment
- High performance that slowly declines over time
- Job performance that becomes focused on a specialized, repetitious activity (rather than the entire array of job duties)
- Irregular or non-existent office hours
- Sudden, extreme gaps in performance (missing a grant deadline, unexpected missing of final exams)

C. Unusual Interpersonal Interactions

- Sudden emotional outburst including anger, tears, laughter
- Mood swings, especially early or late in the work day
- Overreactions to criticism
- Blaming others for poor performance
- Making inappropriate statements
- Rambling or incoherent speech
- Isolation from co-workers or increasing social withdrawal
- Disinterest in teamwork

D. Declining Physical Appearance (Sudden or Gradual)

- Poor personal hygiene (e.g., body odor or dirty hair, nails, and skin)
- Less interest in dress and appearance (or a noticeable decline from previous meticulousness)
- Glazed or red eyes
- Slurred speech
- Poor coordination, staggering
- Tremors, poor eye-hand coordination
- Frequent gastrointestinal distress
- Deterioration of oral hygiene

E. Other Signs

- Legal problems, such as arrest for driving under the influence (DUI)

- Domestic situation, including children's drug use (children of alcoholics sometimes have substance use disorders)
- Financial concerns, such as high debt load, bad loans, wages garnished, unusual spending patterns