

# ALCOHOL

## WHAT IS ALCOHOL?

Alcohol is a drug. Like other sedatives, it is a central nervous system depressant. The type of alcohol that is consumed by humans is ethyl alcohol, or ethanol. It is formed naturally by the reaction of fermenting sugar with yeast spores.

Alcohol is the drug in beverages such as beer, malt liquors, wine, wine coolers, and liquor. It is also found in many prescription and over-the-counter medications.

Alcohol beverage sales are a big business. Advertising and other efforts to promote these products affect public knowledge and feelings about alcohol.

## WHAT IMMEDIATE EFFECTS DOES ALCOHOL HAVE ON THE BODY?

Many immediate effects are the result of alcohol's action in the brain. The drug's depressant effects begin quickly, even with the dose contained in one drink, and increase if more alcohol is consumed.

Alcohol has a tranquilizing effect on most people. Some people think alcohol is a stimulant, because a person may become loud or aggressive after drinking. But loud or aggressive behavior occurs because the drug has depressed parts of the brain that govern self control. These parts of the brain are known as the inhibitory control centers.

Alcohol first impairs judgment and mental processes that have been learned through training and experience. It also impairs vision and other senses, memory, balance, and muscle coordination. The larger the dose, the greater the effect.

In high doses, alcohol will depress the brain enough to cause unconsciousness, coma, respiratory failure, and death.

## WHY DOES ALCOHOL SEEM TO AFFECT DIFFERENT PEOPLE DIFFERENTLY?

The short term effects of alcohol on a drinker are influenced by many factors. These include how much and how quickly alcohol is consumed. Also important are whether the drinker has food in his or her stomach and whether the drinker has taken other drugs. Other personal factors include the drinker's weight, gender, body fat level, tolerance, personality, level of fatigue, and mood. Factors such as noise level, time of day, and the behavior of others also influence the effect of alcohol on the drinker.

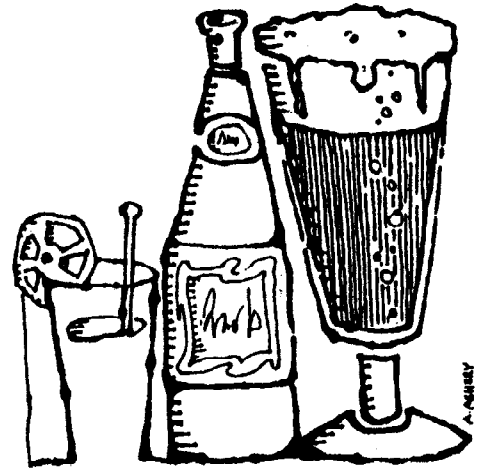
This is why it is difficult to say exactly what the effect will be if a particular person consumes a certain number of drinks.

## WHAT IMMEDIATE PROBLEMS ARE CAUSED BY ALCOHOL?

Alcohol's immediate effects cause many problems, including injuries and death. Risks occur at any level of drinking, not just when larger doses cause drunkenness and obvious loss of control.

Just one or two drinks will impair judgment and reaction time and can cause serious problems if a person then drives an automobile, boat, snowmobile, or other vehicle. About half of all deaths from auto crashes in this country are alcohol-related. This drug is also a factor in many deaths and injuries on the job and at home.

Alcohol use is a major factor in problems such as fights and arguments, spouse abuse, child abuse, rapes, other crimes, and unplanned sex among young people. Alcohol use can also cause absenteeism from work and school.



Alcohol irritates the stomach and digestive system. Nausea and vomiting may occur. A hangover may follow drinking, with headache, muscle aches, and nausea. These problems occur after different amounts of alcohol are consumed, depending on the person.

Finally, an alcohol overdose can cause coma and death.

## WHAT LONG TERM PROBLEMS ARE CAUSED BY ALCOHOL?

The physical effects of long-term alcohol use are always damaging. Heavy alcohol use over time damages many body organs. These include the liver, heart, stomach, and brain.

Alcohol-related social, emotional, family, and job-related problems often continue over a long period of time. Alcohol dependency is another long-term problem.

Alcohol problems also lead to financial costs, which affect everyone. Poor job performance caused by alcohol use increases the cost of goods and services. Alcohol problems also lead to costs for medical care and alcohol treatment services.

## **CAN ALCOHOL KILL?**

Alcohol can lead to death through overdose, injury, and gradual health damage.

A large dose of alcohol can cause respiratory failure and death. The risk for this overdose is greatest when a drinker consumes alcohol rapidly and in large amounts. Many people are not aware of this danger.

As mentioned above, alcohol impairment causes death through traffic crashes, drownings, other injuries at home or work, and violence. Health damage from the drug shortens the heavy drinker's life span an average of about ten years. Alcohol withdrawal can cause death. Alcohol consumed with other drugs, particularly other depressants, results in many deaths.

## **CAN PEOPLE BECOME DEPENDENT ON ALCOHOL?**

Alcohol causes both psychological and physical dependence.

Psychological dependence refers to the drinker's thoughts and feelings about drinking. It is present when a drinker uses alcohol to escape from problems and stresses, comes to depend on the drug for relief, or thinks frequently about drinking.

Physical dependence refers to changes that occur in a drinker's physical reactions to the drug. Signs of this include tolerance (a need to consume more of the drug to get the same effect), or needing alcohol to function. Withdrawal symptoms occur when a physically dependent person stops drinking.

A person who is dependent on alcohol usually drinks more heavily and generally drinks during more of his or her life. This increases the physical damage and other problems caused by alcohol.

## **WHAT IS ALCOHOLISM?**

Alcoholism is another term for dependence on alcohol. It is also called a disease or an addiction.

Signs of alcoholism include having little control over when or how much alcohol is consumed, thinking often about drinking, and continued drinking despite major and ongoing problems. These problems may be with health, family, friends, or work. They

may also include accidents or legal trouble.

Alcohol dependence is often hidden. The drinker and others may deny that it is present, or may not recognize the signs. The dependence may develop slowly so that it is not easily noticed.

Alcoholism may also be combined with dependency on other drugs. This creates an even greater risk of physical damage and difficulties in the drinker's life.

## **WHAT IS "PROBLEM DRINKING?"**

The term problem drinking is often used to describe a case in which alcohol is causing serious problems, but the drinker is not yet clearly dependent on alcohol.

Binge drinking or frequent intoxication are two serious examples of problem drinking. Other examples include any drinking which causes problems - with family, friends, or at work, for instance.

The term problem drinking may also be helpful when people are afraid to think that they or a friend may be dependent or alcoholic. This less threatening term can help people focus on the situation. If drinking is causing or adding to problems, the drinker needs to stop drinking or change their drinking habits. Help is available and should be sought.

## **IS A PERSON WHO GETS DRUNK AN ALCOHOLIC?**

Getting intoxicated (drunk) one time does not make a person an alcoholic or mean that person is an alcoholic. Getting drunk often, however, is one sign of the disease. Some alcoholics never act drunk, because they have developed a high tolerance to the drug.

## **HOW COMMON IS ALCOHOL DEPENDENCY?**

About 10 percent of people who drink alcohol become physically dependent. An estimated 18 million Americans are problem drinker or alcoholics.

Both men and women can become dependent on the drug. People of all ages - youth through older adults - can develop alcohol dependence. Certain groups, such as women and young people who drink, are at

greater risk since the disease develops more quickly for them.

Those with a family history of alcohol dependency are also at greater risk for alcohol dependency.

## **WHAT HELP IS AVAILABLE TO THOSE WITH ALCOHOL DEPENDENCE?**

Several levels of treatment are available for those with alcohol dependence. These include outpatient, intensive outpatient, day treatment, residential, and hospital programs. In some cases, medical care is needed while the alcohol is eliminated from the body. This is called detoxification, or "de-tox". Hospitalization may be required, and medication can be helpful in some cases. Long-term treatment and support are often needed.

The support of other recovering persons through Alcoholics Anonymous or other self-help support groups is an important part of recovery. Many people are helped by these groups even without participating in counseling services.

Treatment should be sought as soon as possible. Waiting for the alcoholic to "hit bottom" is not necessary. A process called intervention can be used to help the dependent person see his or her problem and begin to get help. An intervention is best done with trained help and after careful planning.

## **HOW MANY AMERICANS DRINK?**

About one third of adult Americans drink little or no alcohol. But many Americans, young and old, drink alcohol. This explains in part why alcohol problems are so common in our country.

About 70 percent of adults drink. About 30 percent drink an average of up to two or three alcohol drinks per week, or less than one drink a day. About 20 percent consume 1 or 2 drinks per day. About 10 percent consume over 4 drinks per day. Another 10 percent consume an average of over 10 drinks daily.

## **HOW DOES ALCOHOL AFFECT YOUNG PEOPLE?**

Over half of all children have tried alcoholic beverages by sixth grade.

Among 1999 United States high school seniors, 80 percent had tried alcohol at least once, 51 percent were current users (in the last month), and 3.4 percent were daily users. 32.9 percent of high school seniors had been drunk in the past month. Among eighth graders, 52.1 percent had tried alcohol, 24 percent were current users, and 1.0 percent used daily. 9.4 percent had been drunk in the past month.

Young people who drink are more likely than adults to drink to get drunk. They are more intoxicated by a given level of alcohol. Young drinkers become dependent on alcohol more rapidly than adults. Youth who drink before age 15 are four times more likely to develop alcohol dependence than those who begin drinking at age 21.

Binge drinking (drinking five or more drinks on one occasion) is common among adolescent drinkers. About one third of high school seniors binge drink at least once every two weeks.

Alcohol related traffic crashes are the leading cause of death among young people. Alcohol is involved in many suicides and overdose deaths. It is a factor in many instances of violence.

Alcohol use is also a factor in many cases of unplanned sexual activity, date rapes, and other rapes.

### **HOW ARE WOMEN AFFECTED BY ALCOHOL AND ALCOHOLISM?**

Women become alcoholic and have alcohol problems. On the whole, women who drink consume less alcohol and have fewer alcohol-related problems than men. Among heavy drinkers, however, women equal or surpass men in the number of problems resulting from drinking.

Research shows differences in the way women's bodies use alcohol. The drug has greater short-term effects on women than on men. Long term alcohol abuse causes greater health problems for women than for men.

Society tends to look upon female alcoholics as somehow "worse" than males. Women are often more reluctant than men to admit to alcohol problems.

Women are affected by their spouse

or partner's alcoholism, too. They may become codependent on alcohol along with their spouse or partner. Women are more likely than men to stay with an alcoholic spouse and suffer from problems caused by a spouse's drinking.

### **WHAT EFFECT DOES ALCOHOL HAVE ON THE HUMAN FETUS?**

Alcohol consumed by a pregnant woman affects the fetus. Alcohol consumption contributes to low birth weight, impaired fetal growth and development, and other problem outcomes of the pregnancy. Drinking also increases the risk of having a baby with birth defects called Fetal Alcohol Syndrome (FAS) or Alcohol Related Neurodevelopmental Disorder (ARND, formerly called Fetal Alcohol Effects, or FAE). Babies with FAS or ARND have life-long physical, mental, and behavioral problems.

All levels of drinking by the mother may affect the fetus. This includes regular drinking, occasional heavy drinking (binge drinking), or light drinking. The effects of drinking can occur at any stage of pregnancy.

No safe level of alcohol consumption during pregnancy has been determined. Women who are pregnant or thinking of becoming pregnant should not drink alcoholic beverages. A woman who has already consumed alcohol during her pregnancy can still improve the outcome of that pregnancy at any time by quitting drinking. If she does not quit completely, drinking less will still help.

Alcohol consumed by the nursing mother will also affect the child. Women who are breastfeeding should not drink alcoholic beverages.

### **WHY DO PEOPLE DRINK?**

People may choose to drink alcohol for cultural, religious, social, or other reasons. Wine has a long history in ceremonies of certain religions. Alcohol is an ingredient in many folk remedies. Many cultures have traditions that include alcohol use at social events, to relax, or to celebrate.

People may drink alcohol for many other reasons. Some people drink because others around them are drinking. Some people use the drug to forget their worries or to escape

reality. Some people drink to get drunk. Drinking for escape or relief or to get drunk are warning signs for problem drinking or alcoholism.

### **DOES ALCOHOL HAVE ANY HEALTH BENEFITS?**

Some research has suggested that moderate (up to two drinks a day) alcohol consumption has a protective effect against heart disease. However, NO research has found alcohol harmless. Drinking more than one or two drinks a day increases the risk of health problems. Alcohol use is generally not encouraged as a form of health promotion.

### **WHAT DANGERS ARE ASSOCIATED WITH SOCIAL DRINKING?**

The term social drinking is vague and can be confusing. To most people, it suggests harmless drinking in a social setting. But all drinking is risky to some degree. Even social drinking can affect health, cause accidents, and lead to dependence. Even social drinking can impair judgment and increase the risk of death or injury in an auto crash.

Even very heavy drinkers may think of themselves as "social" drinkers, since they socialize with others who drink as much as they do.

### **WHAT IS LOW-RISK DRINKING?**

Low-risk drinking is less likely to cause problems for the drinker or for others. Various federal and state projects provide low-risk guidelines for alcohol use to help people protect their health and safety:

- Choosing not to drink alcohol is always acceptable, and NO alcohol consumption is the ONLY safe level for:
  - Women who may become pregnant, are pregnant, or are nursing
  - Those under 21 years old.
  - Those driving a motor vehicle, boat, or other vehicle
  - Those using machinery
  - Those taking certain medications
  - Those who are chemically dependent
  - Those with certain medical or health conditions

People at high risk to develop alcohol problems, such as those with a parent or other family member who is

alcoholic, are also advised not to drink alcohol.

- For those who choose to drink, the low risk limit is no more than two drinks per day for men, and no more than one drink per day for women.
- A standard drink is one 12-ounce beer, or one five-ounce glass of wine or wine cooler, or 1.5 ounces of 80-proof liquor. Each of these drinks contains about the same amount of the drug ethyl alcohol.

## LEGAL INFORMATION

Alcoholic beverages are controlled by certain legal restrictions. These regulate the age of those who may purchase and consume them, drinking and driving, and when and how they may be sold.

- It is illegal to operate a motor vehicle, watercraft, snowmobile, aircraft, or locomotive while under the influence of alcohol.
- It is illegal to consume alcoholic liquor on a public highway at any age. (MCLA 436.33a)
- It is illegal to possess or transport any alcoholic liquor in an open container within the passenger compartment of a motor vehicle at any age. (MCLA 436.34a)

Places where alcohol is sold must be licensed. Hours of sale are limited. The location of sales outlets is affected by state and local regulations. The advertising, packaging, and other marketing of alcohol beverages are also regulated by government agencies.

## YOUNG PEOPLE, ALCOHOL, AND THE LAW

Alcoholic beverages may be purchased or consumed only by those who are twenty-one years of age or older. It is illegal for a minor to be in possession of alcohol.

- It is illegal for drivers under age 21 to operate a motor vehicle if they have any bodily alcohol content. This 1994 law sets a level of .02 BAC (blood alcohol concentration) for minors, or essentially one drink. Consequences include license suspension. (MCL 257.625 (6))
- It is illegal to provide alcohol to minors or to allow minors to use alcohol or other drugs in your home. Adults are legally responsible for any-

thing that might happen to a minor who has been served alcohol or other drugs in their home. (Michigan Compiled Laws-436.33)

- In addition to criminal penalties, those who allow a minor to consume alcohol, or in whose home a minor consumes alcohol, may be liable in a civil suits for injuries, damages, or deaths suffered by others as a result.
- Because the host of the party would be committing an illegal act by serving alcohol to a minor, they may not be covered by homeowner's liability insurance in the event of a lawsuit.
- Parents can be sued for the malicious or destructive actions of their children no matter where they are. (Michigan Compiled Laws - 600.2913)
- It is illegal to use fraudulent identification by a person under 21 years of age to purchase alcoholic liquor. (MCLA 436.336(3))
- It is illegal to possess alcoholic liquor in a motor vehicle by a person under 21 years of age. (MCLA 436.33a)

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### MICHIGAN RESOURCE CENTER

For Alcohol, Tobacco & Other Drug Information,  
Health Awareness, and Traffic Safety Education Materials  
111 W. Edgewood Blvd., Ste. 11 • Lansing, MI 48911 (517) 882-9955  
For 24 Hour Substance Abuse Referral 888.736.0253  
MATERIALS INFO 800.626.4636  
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