

Alcohol And You

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Have you ever wondered:

Whether you drink too much?

Whether alcohol is harming you or putting you at risk?

How heavy drinking affects your health?

How much is too much?

Drinking

Drinking alcohol is certainly common in our society. About two-thirds of American adults have a drink at least occasionally, while the other one-third don't drink at all. Of those who do drink, the vast majority use alcohol very moderately, and will never have serious problems with it. For them, alcohol beverages are simply that: *beverages* to be enjoyed now and then as part of a meal or a social occasion.

Yet it is important to remember that alcohol is also a *drug*, and a potentially dangerous one. People who use it beyond moderate levels have a much greater risk for a wide variety of illnesses and problems. Overdrinking results in up to 200,000 deaths each year in the United States alone — about 550 every day — and many more people than that are ill or injured because of their drinking.

Drinking is such a serious health problem in our country, in part, because many people who drink too much don't think of themselves as problem drinkers, or even heavy drinkers. They see themselves as normal, moderate drinkers. Although they may realize that their drinking has negative consequences now and then, they also enjoy drinking, and aren't sure they need to make a change. Heavy drinking can seem quite normal if one has friends who drink just as much, or even more.

This booklet explains some of the risks associated with heavy drinking, based on current scientific knowledge. Of course no one person will experience all, or even most of the risks and problems discussed here. Some are relatively rare, while others happen to many people who drink too much.

The point is that it is important to *know* about alcohol, just as a doctor or pharmacist informs you about the effects of drugs that are prescribed. When you know the facts, you can make better choices. What you decide to do with this information, of course, is up to you.

Heavy Drinking

How much is too much? It is difficult to say exactly. Studies suggest that people who have no more than 1 or 2 drinks per day have no higher risk in general than non-drinkers. ("One drink" here means a 10-ounce glass of beer, or a 4-ounce glass of wine, or one ounce of 100 proof spirits.) Only 8% of American adults (and only 4% of women) average 3 drinks or more per day, and those who do so suffer many more diseases, injuries, and problems than do light drinkers or nondrinkers.

Surprisingly few Americans are aware of the risks of heavier drinking. Most know that drunk driving is dangerous, and that alcoholics may get liver disease. Yet

few really understand how many areas of life and health can be harmed by alcohol, and how quickly and easily this can happen. Over time, heavy drinking can damage one's relationships, job, intelligence, and emotional and physical health. Often the damage is gradual, occurring slowly over a period of years, so that one may not even notice that it is happening. Other kinds of alcohol-related damage and problems happen suddenly.

What kinds of problems can happen because of overdrinking? Health risks will be considered first; then social and psychological risks will be discussed.

Health Risks

Heart and Fitness

Is alcohol good for the heart? Although light drinkers (no more than 1-2 drinks per day) seem to be at least as healthy as abstainers, heavier drinkers can do serious damage to their health and fitness. Alcohol weakens heart muscle, decreasing cardiovascular fitness, and heavy drinkers have much higher risk of heart disease. Heavy drinking also increases blood pressure, and can contribute to hypertension. The electrical control patterns of the heart can be disrupted by an episode of heavy drinking, which can cause the heart to race or skip beats, even in young people with no previous history of heart disease.

The Brain and Nervous System

The human brain is sometimes the first organ to be damaged by heavy drinking. Alcohol kills nerve cells, and many heavy drinkers show evidence of brain damage. If this process continues for a period of years, the brain literally shrinks in size, due to the destruction of so many brain cells. Such shrinkage can be observed (by special X-rays known as a "CAT scan") in about half of people in treatment for alcohol problems.

It is not surprising, then, that heavy drinkers also show significant decreases in their mental abilities. Alcohol damages the ability to learn and remember new material, to think abstractly, and to adjust flexibly to changes. One recent study found a strong relationship between amount of drinking and grades in college students: the more they drank, the lower their grade point average. After years of heavy drinking, a disease known as Wernicke-Korsakoff syndrome can occur, permanently damaging the person's ability to remember things from one day to the next. The damaging effects of alcohol have been likened to a premature aging of the brain. The mental abilities of a 30-year-old heavy drinker may resemble those of an 80-year-old nondrinker.

Nerve cells outside the brain are also damaged by heavy drinking. Usually the first effects are experienced in the legs and feet, or arms and hands. The signs include muscle weakness, pain, tingling, or numbness. These result from "peripheral neuropathy," the dying off of nerve channels that serve the legs and arms.

The good news is that the nervous system, including the brain, can repair itself to some extent if a heavy drinker stops drinking. Although once dead, brain cells are not replaced, the brain has a remarkable ability to make new connections, and former drinkers often show significant improvement in their mental abilities during their first year or so without alcohol.

The Digestive System

Alcohol can irritate and damage the sensitive tissue of the digestive system. Perhaps the most direct experience of this is to take a drink of straight liquor. It burns — all the way down. It irritates the lining of the lips, mouth, throat and stomach. Alcohol also releases digestive acid in the stomach, which adds to the irritating effect of the alcohol itself. Heavy drinkers experience higher rates of gastritis, ulcers, and bleeding of the digestive system. Pancreatitis, an extremely painful and sometimes fatal inflammation of the pancreas, also occurs at higher rates in heavy drinkers.

Cancers of the digestive system are much more common in heavy drinkers — some occurring at more than 40 times the normal rate. Heavy drinkers account for a majority of head and neck cancers: those in the mouth, tongue, throat, and esophagus.

Because alcohol contains a high level of empty calories — those with no nutritional value — heavy drinkers also tend not to eat properly. They may drink up to half of their daily calories. This can result in both weight gain and nutritional deficits. To make matters worse, alcohol prevents the body from fully absorbing and using even those vitamins and other nutrients that are available.

The Liver

The liver is the body's main defense against poisons and impurities in the blood. It is also important in manufacturing energy for the whole body, including the brain, muscles, and heart. Because alcohol is a toxic chemical, it is the liver's job to remove it from the bloodstream. When alcohol is present, the liver gives priority to getting rid of it, and in the process does not perform some of its normal work, such as getting rid of fats and body waste products.

As a result, heavy drinkers tend to pile up fat in the liver and bloodstream. The liver itself becomes fatty and enlarges, contributing to the "beer belly" appearance.

This condition is reversible, but if the heavy drinking continues a different kind of damage occurs. Liver cells begin to die off, and are replaced by scar tissue. The beginnings of this irreversible process can be seen long before it reaches the disease stage known as cirrhosis. As living liver tissue is replaced by scars, the liver is less and less able to produce energy and filter impurities (including alcohol) from the bloodstream.

The Immune System

Alcohol decreases the body's ability to fight off diseases and infections. The immune system — the body's defense — works less efficiently whenever a person drinks, and over a period of heavy drinking the body's defenses can be greatly weakened. As a result, the person becomes more vulnerable to infections, cancers, and other illnesses. The risk of cancers in general among heavy drinkers is twice that of other people. Sores and injuries tend to heal more slowly, and it becomes harder to shake off sickness.

The Reproductive System

Alcohol has clear negative effects on the reproductive system. In men, drinking decreases the body level of testosterone, the primary male hormone. If a man drinks heavily for a period of time, this loss of testosterone can result in a "feminization" of his body — the loss of body hair, enlargement of fatty tissue in the breasts, and a shrinking of the testicles. Heavy drinking can also contribute to sexual problems such as impotence.

In women, heavy drinking has been linked to increased rates of sexual, menstrual and other gynecological problems. Alcohol also changes sex hormone balances in women, and can promote a loss of feminine body characteristics. Heavy drinking during pregnancy has been clearly linked to increased rates of miscarriage and still-birth, and to birth defects, behavior problems, and mental retardation of children exposed to alcohol in the womb. Alcohol consumed by a pregnant woman directly affects the fetus, and there is no known safe level of drinking during pregnancy.

Summary

In short, once alcohol is consumed, it is rapidly distributed throughout the body, where it affects virtually every organ system. There are no proven beneficial health effects of drinking, but there are many proven harmful effects of heavy drinking. Many of these damaging effects can be reversed, at least partly, when a heavy drinker stops drinking. In general, the longer the period of heavy drinking, the less reversible the damage, but quitting usually results in improved health and fitness, even after many years of excess.

Social and Psychological Problems

The damaging physical effects of heavy drinking are only part of the picture. Heavy drinkers are also at risk for many other kinds of problems.

Risk-Taking and Accidents

Alcohol-related accidents and violence are the leading cause of death among Americans under the age of 35. How can this be?

There are several reasons. First, as many people know, drinking makes a person less in control. Alcohol, even at levels well under the "legal limit" can cause dangerous changes in a person's ability to react, to control muscles, and to perceive the world accurately.

These changes are made all the more dangerous by something else that happens when a person drinks. Among the first things to be changed by alcohol is a person's *judgment*. Experienced race drivers, for example, become much poorer drivers after even a few drinks, but may actually perceive themselves to be *better* drivers under the influence of alcohol. In short, a person cannot tell how much he or she is being affected. You can't judge when your judgment is affected!

These judgment changes, in turn, often make a person overconfident, and more likely to take foolish risks. After a few drinks, people are less able to make good decisions, and are more likely to do things they would never do while sober. Sometimes the result is only embarrassment, but other times it is much more serious. A majority of people in prison, for example, committed their crimes while under the influence of alcohol. When drinking, people are more likely to misjudge others as threatening or challenging them, and to react impulsively, aggressively, even violently. Other misjudgments can be disastrous as well. Tens of thousands of deaths and hundreds of thousands of injuries happen each year because people drink before driving vehicles, using power tools or firearms, or engaging in fun but hazardous sports such as swimming, boating, or skiing — activities where even a small misjudgment can be very dangerous.

Mood

Drinking also affects mood. After one or two drinks, some people feel happier, more relaxed, less tense and anxious. Interestingly, these same changes happen when people *believe* they are drinking alcohol, even if they are not. Alcohol itself is a *depressant* drug, and its effects, in heavier doses at least, are to turn good feelings bad, and to make bad feelings worse. After several drinks, mood tends to take a turn for the worse. It is around this same point, however, that alcohol also affects memory, so people tend not to remember the

depressing effects of drinking — only the seemingly positive effects of the first drink or two.

Among heavy drinkers, depression is common. There are many possible reasons for this. Yet when heavy drinkers get treatment and quit, usually their depression goes away after a few weeks. Alcohol is not a stimulant or an upper. It is a downer.

Relationships

Heavy drinking can damage close relationships. "You always hurt the one you love" seems to be especially true for people who drink too much. Heavy drinkers have, on average, more problems in their marriages and other relationships, and higher rates of separation and divorce. One's ability to be a good parent can also be harmed by overdrinking, resulting in family problems. Child abuse and neglect are more common among heavy drinking parents.

Problems and Coping

One reason why heavy drinkers' relationships may get into trouble is that the person begins to drink alcohol as a *solution* to problems: as a way of trying to cope. Drinking takes the place of talking and working out difficulties in other ways. It can be a tempting trap. Alcohol dulls memory, and makes the problems seem to go away — at least for the time being.

Yet while people are drinking to ease cares and worries, the troubles aren't really going away. In fact, they often get worse, because the drinker makes little or no attempt to find better ways to handle things. It's just easier to let things go, to take a break, to forget. So things begin to fall apart — sometimes a little at a time, sometimes in bigger shocks — and it happens in different ways for different people:

- Friends pull back or drift away
- Problems start showing up on the job or at school: coming in late, missing days, not working up to your abilities, making more mistakes, missing opportunities, having accidents, putting off responsibilities
- Tension builds up in the family: more complaints, problems, and arguments, less fun and closeness
- Health and fitness begin to be affected
- Money problems increase: too much is spent on alcohol, and on paying for problems or poor decisions related to drinking

Because alcohol can make it hard to see what is really happening, heavy drinkers often feel misunderstood, unfairly treated, harassed, or just unlucky. And as things get worse, the temptation is — to drink.

Personal Risk

Many people drink alcohol moderately without ever experiencing significant problems. Why is it that some people have trouble with alcohol while others do not?

Part of the answer, of course, lies in *how much* a person drinks. The more one drinks, the greater the risk of suffering the negative health, psychological and social consequences. Yet that is not the whole picture. Certain people have a greater risk than others. Here are a few factors that have been shown to increase a person's danger for overdrinking and running into significant problems with alcohol:

- Having a family history of relatives with alcohol or other drug problems
- Drinking to get drunk
- Being able to "hold your liquor" — seeming to be less affected by alcohol than most people
- Having one or more memory "blackouts" due to drinking
- Drinking to relieve bad feelings or to escape from problems
- Having friends who are heavy drinkers
- Thinking of alcohol as a positive life influence, which helps people be more friendly, happy, relaxed, successful, etc.
- Using other drugs which, when combined with alcohol, increase the effects and dangers of drinking

People with these characteristics seem to have higher risk for the kinds of problems described earlier. A person doesn't *have* to have any of these in order to be harmed by alcohol, of course. It's just that these are risk factors, which increase one's chances for harm from overdrinking.

Alcohol and You

Probably most of the things mentioned earlier have not happened to you. Even heavier drinkers can sometimes go for many years without piling up too many of these problems. Yet maybe you do see yourself in some of these descriptions, or perhaps you see what might happen to you if your drinking continues as it is.

Is it time for you to make a change? That is your choice. In fact, no one else can decide about your drinking, or change your drinking for you, not even if they want to. To be sure, other people may be able to help quite a bit if you let them, but still in the end it's your decision.

If you want to change your drinking, there are many ways to do it. Some people just decide, and go ahead. Others find that it's easier with some help from friends, professionals, or other people who have been through it. There's no one approach that is best for all. The truth is that there are many different ways, and you keep trying until you find what works for you. If one approach isn't working, try something else. There are books, self-help groups, skilled counselors and psychologists and physicians; spiritual approaches, medications, clinics, and hospitals. There's no one magic answer for everybody, but there are many helpful people and approaches to try.

And in the long run, the chances for change are very good. If you do try to change your drinking and you're like most people, you may not succeed the very first time. It is common to have some setbacks, and it can be tough to make an important change in your life. One try may not do it. Or two, or five. Yet each try brings you closer to getting free, to succeeding in change. Studies show that most people who have problems with alcohol do get better in the long run. For those who decide to do something about their drinking, there is hope.