

Lesson 1

Alcohol Use and Abuse

Guide to Reading

● Building Vocabulary

As you read this lesson, make a flashcard for each new term.

- alcohol (p. 264)
- intoxicated (p. 265)
- blood alcohol concentration (p. 265)
- cirrhosis (p. 269)
- ulcer (p. 269)
- alcohol abuse (p. 270)
- alcoholism (p. 271)

● Focusing on the Main Ideas

In this lesson, you will be able to

- **identify** the dangers of using alcohol.
- **describe** the short-term effects of alcohol use.
- **explain** ways that alcohol use can damage body systems.
- **apply** accessing-information skills to find facts about alcohol abuse.

● Reading Strategy

Organizing Information Using the diagram below as a guide, create a chart that lists the reasons why using alcohol is dangerous.

Reasons	Why Using Alcohol is Dangerous
Reason 1	Alcohol can affect your control of your body.

FOLDABLES Study Organizer Use the Foldable® on p. 263 as you read this lesson.

Quick Write

Write a few sentences describing what you already know about alcohol.

Alcohol: What Is It?

Alcohol is a drug. In fact, it is one of the most widely used and abused drugs in the United States. **Alcohol** is a drug created by a chemical reaction in some foods, especially fruits and grains. Alcohol is addictive. It affects a person physically, mentally, emotionally, and socially. Alcohol use can greatly harm a person's health. It is against the law for any person under the age of 21 to purchase it.

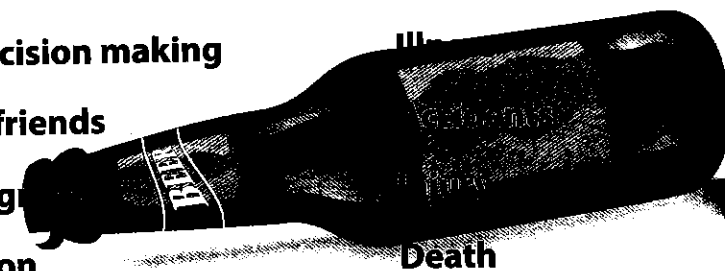
- ▶ Alcohol abuse can lead to a wide range of physical, mental/emotional, and social problems. Name two social problems caused by alcohol use.

Poor decision making

Losing friends

Failing grades

Addiction



Death

The Forms of Alcohol

By this point in your life, you have likely seen many TV commercials for alcohol. You may know that the three main forms of alcohol are beer, wine, and liquor. These drinks contain ethanol, a kind of alcohol that forms when the sugars from fruits, grains, or vegetables are fermented with yeast.

Reading Check

Identify What are the three main forms of alcohol?

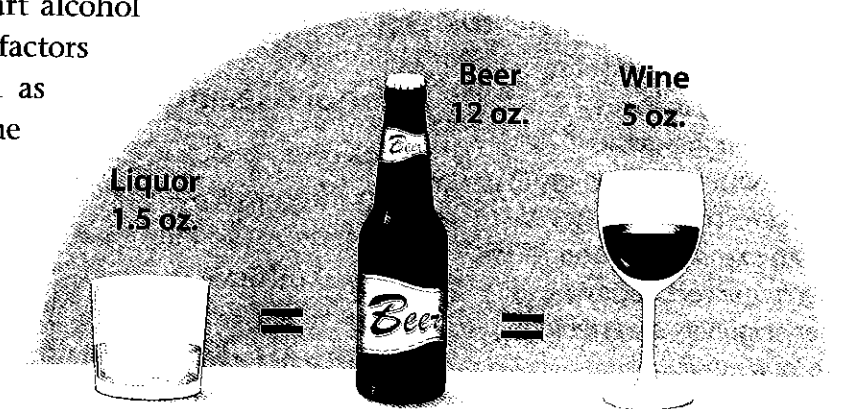
The Dangers of Alcohol Use

Using alcohol is a dangerous behavior. It affects your ability to make good decisions and harms your physical health. Alcohol is a *depressant*, a drug that can slow down the activity of the brain and nervous system. A person may feel the effects of using alcohol right away. Judgment gets worse, making it more likely that a person will make bad decisions. Using alcohol can cause loss of control of motor skills, such as walking. If a person uses alcohol for a long time, he or she may develop many diseases. In fact, a person can die from drinking alcohol just once if he or she consumes too much in a short amount of time.

How Alcohol Affects Individuals

Not all people are affected by alcohol in the same way. A person is intoxicated (in-TAHK-suh-kay-tuhd) when he or she feels the effects of drinking alcohol. Being very **intoxicated** is also called *being drunk*. Some people can drink more alcohol than others before they become intoxicated. However, the amount of alcohol a person drinks is only one factor in understanding how drinking affects a person. **Figure 9.1** on the next page shows some other factors.

The more alcohol that is put into the body, the more the body is affected. The **blood alcohol concentration**, or BAC, is *the amount of alcohol in the blood*. A BAC of 0.10 percent means that there is 1 part alcohol per 1,000 parts of blood. Several factors determine a person's BAC, such as how much the person weighs, the amount of alcohol the person drank, and how much food is in the person's stomach.



Alcohol—A Depressant Drug

Alcohol is a kind of drug known as a depressant. What are some other depressants?

Do research to find out how alcohol acts as a depressant. Show what you learned in a pamphlet or on a poster.

- ▼ A 12-ounce bottle of beer contains about the same amount of alcohol as a 5-ounce glass of wine or 1.5 ounces of liquor. **Why might the same amount of alcohol affect two people differently?**

▼ FIGURE 9.1

ALCOHOL: DIFFERENT EFFECTS ON DIFFERENT PEOPLE

A person's body size helps determine how he or she will be affected by alcohol. What are some other factors that explain how a person will be affected by alcohol?

Factor	Description
Size and gender	Males can usually consume more alcohol before being affected by it than females. Also, the less a person weighs, the more easily and quickly he or she will be affected by alcohol.
Food in the stomach	If there is food in the stomach, the body will absorb the alcohol more slowly.
How fast a person drinks	Drinking quickly raises the level of alcohol in the blood because the body has less time to process it.
Other substances in the body	Drinking alcohol while taking certain medications and other drugs may have dangerous effects and can even be fatal.

In most states, a person is legally intoxicated when the BAC is greater than 0.08 percent, while in a few states, it is 0.01 percent. In most states, anyone under 21 is legally intoxicated if the BAC is greater than 0.02 percent. Police officers can measure the BAC in a person's body if they think that the person is driving drunk.

Over time, alcohol can damage the brain, heart, liver, and kidneys. It can also change how some medications act in the body. Consuming alcohol can also cause weight gain. It dehydrates the body, making your skin look older.

Reading Check Explain What does *intoxicated* mean?

Short-Term Effects of Alcohol Use

Alcohol has both short- and long-term effects on the body. Some of the harmful short-term effects of alcohol are listed in Figure 9.2.

Alcohol Use and the Brain

Alcohol is absorbed into the bloodstream and reaches the brain almost as soon as it is consumed. Immediately, the brain and nervous system slow down. Even after only one drink, it becomes difficult to think. That's because alcohol blocks messages trying to get to the brain. After more drinks, it becomes harder to **concentrate** and remember. It is also hard to speak clearly or walk in a straight line. People who are drunk may also feel dizzy, have blurred vision, and lose their balance.

Academic Vocabulary

concentrate (KON suhn treyt) (verb) to focus on a thought; gather together; strengthen or thicken. *It is difficult for Reiko to concentrate on her homework because her neighbors are listening to loud music.*

Different parts of the brain have different functions. One part of the brain helps a person make decisions. When alcohol reaches that part of the brain, it becomes more difficult for the person to make good decisions. Because of this, a person who drinks alcohol can cause arguments, physical fights, and vehicle accidents. The person may also engage in risky behavior, such as using illegal drugs or engaging in sexual activity.

▼ FIGURE 9.2

How ALCOHOL HARMS THE BODY

Alcohol has both short- and long-term effects on body systems. What effect does alcohol have on the blood vessels?

Brain

Immediate effects: Impaired judgment, reasoning, memory, and concentration; slowed reaction time; decreased coordination; slurred speech; distorted vision and hearing; reduced inhibitions; alcohol poisoning, causing unconsciousness and even death

Long-term effects: Brain cell destruction, nervous-system disorders, and memory loss

Heart

Immediate effects: Increased heart rate

Long-term effects: Irregular heartbeat; heart-muscle damage

Liver

Immediate effects: Processes of the liver, which filters out over 90% of the alcohol in the body, may become unbalanced

Long-term effects: Scarring and destruction of liver tissue and liver cancer, which can both cause death

Kidneys

Immediate effects: Increased urination, which can result in dehydration, headache, and dizziness

Long-term effects: Kidney failure resulting from high blood pressure

Blood Vessels

Immediate effects: Widened blood vessels, creating a false sense of warmth

Long-term effects: High blood pressure, stroke

Stomach

Immediate effects: Vomiting, which can lead to choking and death

Long-term effects: Ulcers (open sores) in the stomach lining; stomach cancer



Alcohol and the Heart

Alcohol affects the way the heart pumps blood through the body. It makes the blood vessels wider, bringing the blood closer to the surface of the skin. This makes the person drinking alcohol feel warm, even though his or her body temperature is actually dropping. Alcohol also slows down a person's heart rate.

Alcohol and the Liver and Kidneys

Short-term use of alcohol affects the liver and kidneys. The liver acts like a filter, taking alcohol from the bloodstream and removing it from the body. However, the liver can only do this for about half an ounce of alcohol each hour. The extra alcohol stays in the bloodstream and affects the body.

Alcohol causes the kidneys to make more urine. This can lead to dehydration, which is the loss of important body fluids. This is why people who drink too much often feel thirsty the next day.

Reading Check

Identify What is one short-term effect of alcohol on the kidneys?

Long-Term Effects of Alcohol Use

Drinking over a long period of time can lead to major health problems and even death. Long-term alcohol use can cause cirrhosis of the liver and ulcers in the stomach. Drinking alcohol while pregnant can also cause harm to the unborn child.



► The picture on the left shows a normal liver. The one on the right shows a liver affected by cirrhosis, a disease often caused by alcohol use. **What other organs are affected by alcohol?**

Health Skills Activity

Accessing Information

Alcoholism

People who are addicted to alcohol are called alcoholics. There are various ways for alcoholics to get help for their addiction. To find valid information about overcoming alcoholism, follow these steps:

1. Research alcohol addiction.
2. Learn about local organizations that provide help to alcoholics.
3. Contact Alcoholics Anonymous (AA) and learn about their 12-step program for dealing with this addiction.

With a Group

Find out if your community has a chapter of Al-Anon or Alateen. These organizations support people whose friends or relatives have problems with alcohol. Al-Anon and Alateen can provide you with more information about alcoholism. Once you and your group have gathered your information, create a poster to present your findings to the class. As a class, organize an Alcoholism Awareness Day at your school. Put up your posters and hand out flyers containing the information you found about this disease and stating how people can get help for alcoholism.

Cirrhosis

Using alcohol can severely damage the liver. If used over a long period of time, it can cause **cirrhosis** (suh-ROH-suhs), which is *the scarring and destruction of liver tissue*. If a person keeps abusing alcohol, the normal liver cells turn into scar tissue. This scar tissue keeps blood from flowing normally through the liver. This can make it very difficult for the liver to carry out its important functions, which can cause serious health problems.

Symptoms of cirrhosis may include nausea, weight loss, yellowing of the eyes and skin, bleeding in the digestive system, itching, and swelling of the legs and feet. Although liver damage cannot be reversed, treatment can help prevent further damage and control the symptoms. In some cases where the damage to the liver is too severe, a liver transplant may be the only option.

Ulcers

When a person uses too much alcohol over time, the lining of the stomach becomes irritated. This causes ulcers to form. An **ulcer** (UHL-ser) is *an open sore in the stomach lining*. When an ulcer

► This support group was formed to help families of people who suffer from alcoholism. What are some support groups for alcoholism in your area?



forms, the acid in the stomach can damage the intestine or stomach tissue. It is very painful. Ulcers can be treated with medication. Ulcers left untreated can cause life-threatening problems.

Fetal Alcohol Syndrome

Even babies who aren't born yet can be harmed by alcohol. Suppose a pregnant female drinks alcohol. It goes through her bloodstream to the umbilical cord, the tube that brings blood and oxygen to her unborn baby. This can cause fetal alcohol syndrome (FAS). An FAS baby may have birth defects such as a small head and small brain. As these babies grow, they may also have major speech and learning problems.

Alcohol Is Addictive

Like many other drugs, alcohol is addictive. An addiction is a psychological or physical need for a drug or other substance. Over time, the need for alcohol may become so strong that a person may feel sick without it. Using alcohol becomes the most important part of that person's life. A person who is addicted to alcohol is called an *alcoholic*.

Alcohol Abuse

Alcohol abuse is using alcohol in ways that are unhealthy, illegal, or both. People may abuse alcohol because they are worried about something or because they feel insecure. They may also drink to deal with their problems. However, alcohol doesn't make the problems go away. Alcohol abuse can lead to a disease known as *alcoholism*.

Alcoholism

Alcoholism is a disease in which a person has a physical and psychological need for alcohol. It is a curable disease that requires treatment like counseling or even spending time in a hospital.

People may be alcoholics if they frequently drink alone or get drunk. Alcohol becomes more important to them than any other part of their lives—more important than family, friends, and work. In fact, alcoholics may stop participating in other activities just so they can drink. They often make excuses for drinking or refuse to admit how much they drink. Also, alcoholics may have blackouts, or periods when they cannot remember what they said or did while drinking. They might hurt themselves or hurt others.

Alcoholics can recover from their addiction. Organizations and support groups, such as Alcoholics Anonymous (AA), can help people who are addicted to alcohol. These groups can also help friends and families of alcoholics.

Reading Check

Identify What are two symptoms of alcoholism?

Go Online

Visit glencoe.com and complete the Interactive Study Guide for Lesson 1.



Careers for the 21st Century

Substance Abuse Counselor

A substance abuse counselor helps individuals and families deal with substance abuse.

Substance abuse can be alcohol or drug abuse or both. Counselors perform many activities, including diagnosing the addiction, managing treatment, counseling, and prevention strategies. If you want to be a substance abuse counselor, you should take classes in biology and psychology.

What skills does a substance abuse counselor need? Go to Career Corner at glencoe.com to find out.

Lesson 1 Review

After You Read

Review this lesson for new terms, major headings, and Reading Checks.

What I Learned

- Vocabulary** Define *alcohol*.
- Identify** What is alcohol abuse?
- Explain** What are some short-term effects of alcohol on the body?
- Describe** What kinds of long-term damage can alcohol use cause?

Thinking Critically

- Evaluate** Explain how being addicted to alcohol can be harmful to your health.

- Analyze** Why is it risky for a pregnant female to drink alcohol?

Applying Health Skills

- Advocacy** Design a T-shirt that influences teens to lead an alcohol-free lifestyle. Use information about the short-term and long-term effects of alcohol to think of a catchy slogan and message that can be displayed on the T-shirt. What are some other facts you can add to your product to encourage teens to choose the positive health practice of being alcohol free?