



CHAPTER

21

Alcohol

Lesson 1

The Health Risks of Alcohol Use

BIG Idea Alcohol use can harm your body and your brain and cause you to make poor decisions.

Lesson 2

Choosing to Live Alcohol-Free

BIG Idea Choosing not to use alcohol protects you from dangerous health consequences.

Lesson 3

The Impact of Alcohol Abuse

BIG Idea Problem drinking and alcoholism harm both the drinkers and the people around them.



Activating Prior Knowledge

Using Visuals The teens in this photo are looking at a car that was crashed as a result of a drunk-driving accident. Summarize how choosing to stay alcohol-free can help teens avoid risky behaviors such as drunk driving.



Chapter Launchers

Health in Action

Discuss the **BIG** Ideas

Before beginning this chapter, think about how you would answer these questions:

- ▶ How does alcohol use contribute to risky behaviors?
- ▶ In what ways does problem drinking harm people?
- ▶ How can you encourage others to stay alcohol-free?

Watch the **Health eSpotlight** Video Series



The Risks of Use and Abuse

How does alcohol abuse impact your health triangle? How does the media impact alcohol use?

Assess Your Health



Visit glencoe.com and complete the Health Inventory for Chapter 21.



LESSON 1



GUIDE TO READING

BIG Idea *Alcohol use can harm your body and your brain and cause you to make poor decisions.*

Before You Read

Make an Outline.

Use the headings of this lesson to make an outline of what you'll learn about the harmful effects of alcohol use. Use a format like this to help you organize your notes.

I.	
A.	
1.	
2.	
B.	
II.	

The Health Risks of Alcohol Use

Real Life Issues

Knowing the Risks. Sarah is worried because she has seen her younger sister, Jamie, experiment with alcohol. Jamie is only in high school, and Sarah feels that her sister does not fully understand the risks of her behavior. Jamie doesn't think there is a problem because she has had alcohol only a few times with her friends. Sarah is concerned that her sister is putting herself at risk, and she knows it's against the law to drink if you're under 21.



Writing Write a dialogue in which Sarah tries to convince Jamie to change her behavior. Sarah should communicate her concern to Jamie.



New Vocabulary

- ▶ ethanol (p. 566)
- ▶ fermentation (p. 566)
- ▶ depressant (p. 567)
- ▶ intoxication (p. 567)
- ▶ binge drinking (p. 569)
- ▶ alcohol poisoning (p. 569)



Alcohol

Main Idea Alcohol is an addictive drug.

Alcohol advertisements show images of happy, healthy-looking young adults to promote and sell a drug that is addictive, physically damaging, and often an entry into other drug use. Alcohol, or more accurately, **ethanol**—the type of alcohol in alcoholic beverages—is a powerful and addictive drug. It's a drug that can have serious consequences for teens who use alcohol. Using alcohol during the teen years can affect brain development. Ethanol can be produced synthetically, or naturally by fermenting fruits, vegetables, and grains. **Fermentation** is the chemical action of yeast on sugars. Water, flavoring, and minerals are mixed with ethanol to produce beverages such as beer, wine, and flavored malt-liquor drinks. Alcohol also can be processed to create spirits, or liquors, such as whiskey and vodka.



Short-Term Effects of Alcohol

Main Idea Alcohol impairs the central nervous system.

Alcohol is a **depressant**, a drug that slows the central nervous system. Using alcohol slows reaction time, impairs vision, and diminishes judgment. If a person consumes too much alcohol, he or she will become intoxicated. **Intoxication** is the state in which the body is poisoned by alcohol or another substance, and the person's physical and mental control is significantly reduced. Alcohol stays in a person's system until the liver can metabolize it, or break it down. The amount of alcohol that can cause intoxication varies from person to person. **Figure 21.2** on page 568 describes many of alcohol's effects.

Factors that Influence Alcohol's Effects

Some factors that influence the onset and intensity of alcohol's effects include:

- **Body size.** A smaller person feels the effect of the same amount of alcohol faster than a larger person does.
- **Gender.** Alcohol generally moves into the bloodstream faster in females than in males, because females tend to have smaller bodies than males.
- **Food.** Food in the stomach slows down the passage of alcohol into the bloodstream.
- **Rate of intake.** If a person drinks alcohol faster than the liver can break it down, the person becomes intoxicated.
- **Amount.** As the amount of alcohol consumed increases, the level of alcohol in the bloodstream rises.
- **Medicine.** Alcohol can interfere with the effects of medicines, and medicines can heighten the effects of alcohol.

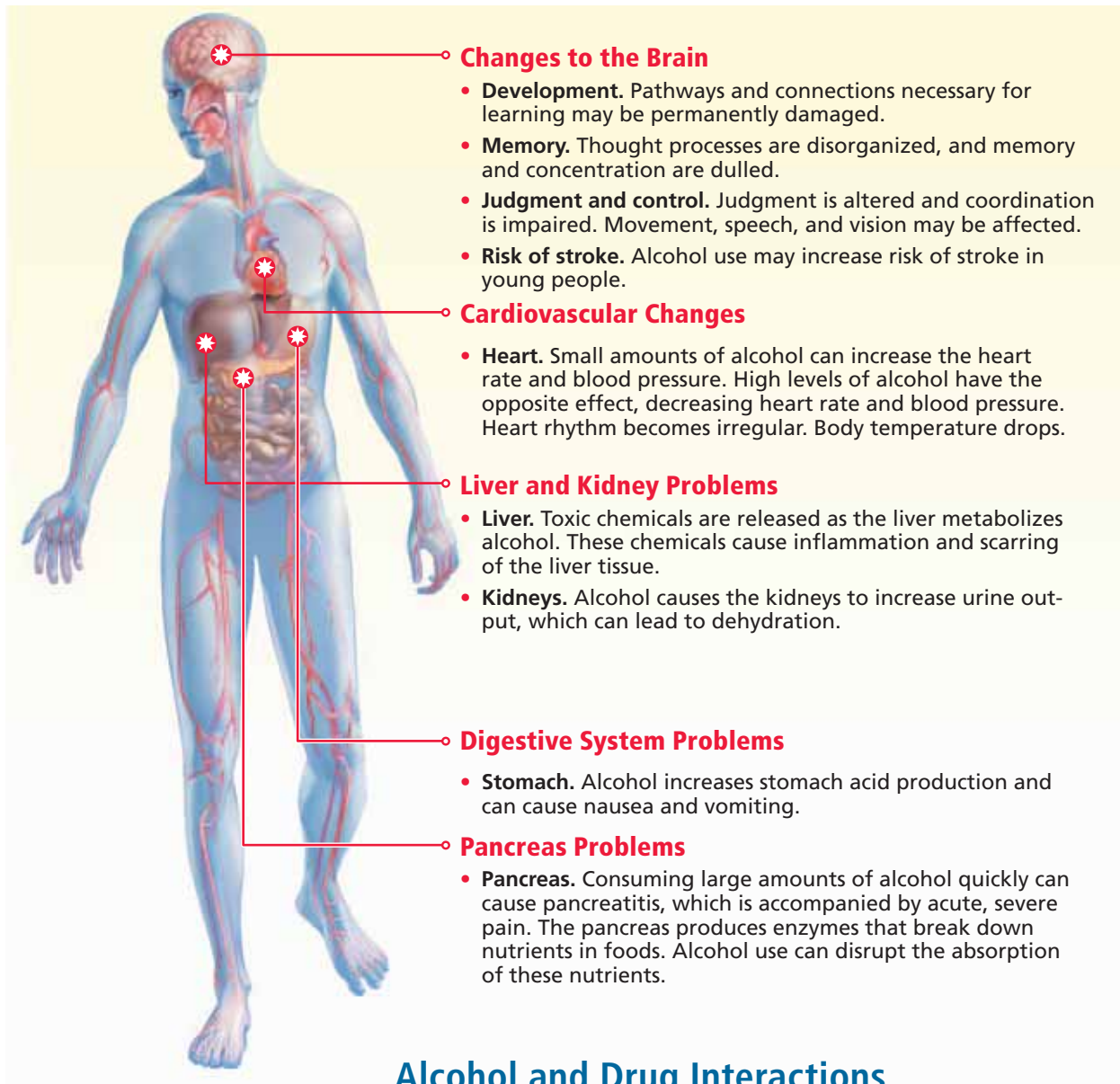


■ **Figure 21.1** Alcohol impairs both physical and mental abilities. *How can alcohol use decrease your performance in activities that you enjoy?*

Figure 21.2

Short-Term Effects of Alcohol

Physical and mental impairment begin with the first drink of alcohol and increase as more alcohol is consumed.



Alcohol and Drug Interactions

Alcohol can change the effect of medicines. These interactions can lead to illness or death. Medicines that may cause reactions have warning labels that advise people not to use alcohol. Note these typical alcohol-drug interactions:

- The body may absorb the drug or alcohol more slowly, increasing the length of time that alcohol or the drug is in the body.
- Alcohol use can decrease the effectiveness of some medications, and increase the effectiveness of others.
- Enzymes in the body can change some medications into chemicals that can damage the liver or other organs.



READING CHECK

Describe How can alcohol change the way a medicine affects your body?



Long-Term Effects of Alcohol

Main Idea Alcohol use can have negative effects on a person's health.

Alcohol use can have long-term effects on a user's physical, mental/emotional, and social health. The effects of alcohol use may also be felt by the people who are close to someone who uses alcohol. Excessive alcohol use over a long period of time can damage many of the body systems, such as:

- damage to brain cells and a reduction in brain size,
- increase in blood pressure, which may lead to a heart attack or stroke,
- buildup of fat cells in the liver, which can lead to cell death,
- damage to the digestive lining of the stomach causing ulcers and cancer of the stomach, and
- destruction of the pancreas.

If a person stops using alcohol, some of the physical effects of long-term alcohol use can be reversed over time. The negative effects of alcohol use can also include damage to relationships with family, friends, and others. Excessive alcohol use over a prolonged period of time can damage most body systems. **Figure 21.4** on page 570 shows more of the long-term effects of alcohol abuse.



READING CHECK

Explain How does long-term alcohol use affect the liver?

■ **Figure 21.3** The effects of alcohol depend on many factors, including gender and body size. *Why might women be affected more by alcohol use than men?*



Binge Drinking and Alcohol Poisoning

Main Idea Consuming a large amount of alcohol over a short period of time can be fatal.

Some people choose to drink large amounts of alcohol during one session. **Binge drinking**, *drinking five or more alcoholic drinks at one sitting*, is a serious problem. Rapid binge drinking is sometimes done on a bet or a dare. Whatever the reason for binge drinking, it can have dangerous consequences. Drinking any alcohol can impair a drinker's physical and mental abilities.

Binge drinking can severely impair the drinker's body systems. It can lead to **alcohol poisoning**—*a severe and potentially fatal physical reaction to an alcohol overdose*. Alcohol acts as a depressant on body organs. Involuntary actions, such as breathing and the gag reflex that prevents choking may be impaired. Alcohol is also a stomach irritant.

**Figure 21.4**

Long-Term Effects of Alcohol

Alcohol has a negative effect on many of the body organs, and excessive long-term alcohol use can cause death.

The Brain	The Cardiovascular System	The Digestive System	The Pancreas
Addiction Physical dependence can lead to the inability to control the frequency and amount of drinking. Loss of brain functions Loss of verbal skills, visual and spatial skills, and memory. Brain damage Excessive use of alcohol can lead to brain damage and to a reduction of brain size. The learning ability and memory of adolescents who drink even small amounts can be impaired.	Heart damage The heart muscles become weakened and the heart becomes enlarged, reducing its ability to pump blood. This damage can lead to heart failure. Reduced blood flow can also damage other body systems. High blood pressure Damages the heart and can cause heart attack and stroke.	Irritation of digestive lining Can lead to stomach ulcers and cancer of the stomach and esophagus. Fatty liver Fats build up in the liver and cannot be broken down, leading to cell death. Alcoholic hepatitis Inflammation or infection of the liver. Cirrhosis of the liver Liver tissue is replaced with useless scar tissue. Cirrhosis can lead to liver failure and death.	Swelling of the pancreas lining The passageway from the pancreas to the small intestine can become blocked, and chemicals needed for digestion cannot pass to the small intestine. The chemicals begin to destroy the pancreas itself, causing pain and vomiting. A severe case of pancreatic swelling can lead to death.

Effects of Alcohol Poisoning

A person who drinks too much alcohol may eventually pass out. Even though the person is unconscious, alcohol that is in the stomach continues to enter the bloodstream. So, even if someone is unconscious, that person's blood alcohol level will continue to rise. This increases the risk of alcohol poisoning. It is dangerous to assume that a person who has passed out after consuming a lot of alcohol will be fine if left to "sleep it off." Some of the symptoms of alcohol poisoning include:

- mental confusion and stupor.
- coma and an inability to be roused.
- vomiting and seizures.
- slow respiration—ten seconds between breaths or fewer than eight breaths per minute.
- irregular heartbeat.
- hypothermia or low body temperature—pale or bluish skin color.

If you suspect that a person has alcohol poisoning, call 911 immediately.



Health Skills Activity

Refusal Skills

A Drink at Home

Zach is going to Karen's house on Saturday to watch a couple of movies with friends. When Zach arrives at Karen's house, he is surprised to find that many of the teens there are drinking beer.

Karen sees him. "Hi, Zach. Do you want a beer?"

"Where did you get those?" asks Zach. "Aren't your parents home?"



"No, they're not home. What they don't know won't hurt them," says Karen. "Come on, I'll get you a beer. It's no big deal."

Zach has an agreement with his parents that he won't drink alcohol. He knows his parents would not approve of him drinking. He doesn't want his friends to think he's not part of the crowd, but he knows he needs to make it clear that he is not going to drink.

Writing Write a script completing the dialogue between Zach and Karen. How can Zach refuse alcohol and still remain friends with Karen? When writing your dialogue, use the following refusal skills:

1. Say no in a firm voice.
2. Explain why you are refusing.
3. Suggest alternatives to the proposed activity.
4. Back up your words with body language.
5. Leave the situation if necessary.



LESSON 1



ASSESSMENT

After You Read

Reviewing Facts and Vocabulary

1. What is *intoxication*? What influences how fast a person becomes intoxicated?
2. Explain how alcohol acts as a *depressant* on the central nervous system.
3. What is *binge drinking*? What can happen as a result of binge drinking?

Thinking Critically

4. **Analyze.** Is it safe to take an over-the-counter medicine after drinking alcohol? Explain your reasoning.
5. **Describe.** How can drinking even moderate amounts of alcohol permanently affect teens?

Applying Health Skills

6. **Advocacy.** Write a PSA script that advises other teens of the dangers of binge drinking. Include the health risks and what to do if someone drinks too much alcohol.

Writing Critically

7. **Persuasive.** Write a letter to your city council member asking that police prosecute stores that sell alcohol to anyone who is underage.



Visit glencoe.com and complete the Interactive Study Guide for this lesson.

LESSON 2



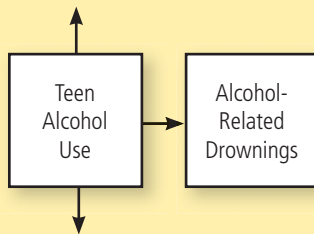
GUIDE TO READING

BIG Idea *Choosing not to use alcohol protects you from dangerous health consequences.*

Before You Read

Make a Cause-and-Effect Concept Map.

Draw a box around the phrase “Teen Alcohol Use,” as shown here. Write at least three consequences of alcohol use, each in its own box. Connect the consequence boxes to the Teen Alcohol Use box as shown.



New Vocabulary

- ▶ psychological dependence (p. 572)
- ▶ physiological dependence (p. 572)
- ▶ alcohol abuse (p. 575)
- ▶ alcoholism (p. 575)

Choosing to Live Alcohol-Free

Real Life Issues

Avoiding Alcohol. Kyle’s friend Andrew says he will start drinking because his other friends drink, and he wants to fit in. Andrew also wants to buy alcohol even though he is underage. He wants Kyle to ask his older brother to buy alcohol for an upcoming party. Kyle wants to avoid using alcohol, and he does not want to do anything illegal.



Writing *Write a paragraph describing what you would do if you were Kyle. Explain your decision to Andrew.*



Alcohol Use

Main Idea Several factors influence teen alcohol use.

Alcohol use by responsible adults is legal. Anyone who drinks alcohol, however, increases the risk of the negative consequences. One consequence of alcohol use is **psychological dependence**, a condition in which a person believes that a drug is needed in order to feel good or to function normally. Overuse of alcohol can lead to a **physiological dependence**, a condition in which the user has a chemical need for a drug.

Factors that Influence Alcohol Use

A teen’s choices about alcohol use are influenced by

- **peer pressure.** When alcohol use is not an accepted activity in a group, a teen will not feel pressure to drink.
- **family.** When a teen’s parents discourage and avoid the use of alcohol, the teen is more likely to do the same.
- **media messages.** Media messages may make alcohol use seem glamorous and fun.



■ **Figure 21.5** Exercise, eating a balanced diet, and avoiding alcohol can help teens stay healthy. *Why should teens avoid alcohol?*

Advertising Techniques

Companies that produce alcohol spend billions of dollars each year to associate their product with youthful, healthy people who seem to be having fun. These companies advertise in ways that are visible to teens and children, on billboards, TV, and radio, and in magazines and newspapers. Alcohol companies also sponsor sporting events, music concerts, art festivals, exhibits, and college events. Manufacturers and advertisers, however, never show consumers the negative side of alcohol use.

Alcohol companies target teens and young adults by marketing beverages that appear safer than other alcoholic beverages. These drinks are sweet and look similar to non-alcoholic carbonated beverages. In reality, these beverages contain alcohol.



Health Risks of Alcohol Use

Main Idea Alcohol can harm more than just your health.

In the United States, nearly 50 people die each day as a result of alcohol-related traffic collisions. Alcohol use is linked to deaths from drowning, fire, suicide, and homicide. A nondrinker's risk of being injured increases if the friends that person is with are drinking.

Alcohol and the Law

It is illegal for anyone under the age of 21 to buy, possess, or consume alcohol. For teens who break the law, the consequences can be very serious. Teens who use alcohol can be arrested and sentenced to a youth detention center.



READING CHECK

Explain How do advertisements try to encourage teens to start drinking?



Visit glencoe.com and complete the Student Web Activity on reducing alcohol use among teens.



■ **Figure 21.6** Your decision to avoid alcohol is influenced by the people around you. *How can having friends who do not use alcohol help you to stay alcohol-free?*

Any arrest and conviction can affect a teen's future. An arrest can limit college and employment options. Breaking the law can also damage a teen's reputation and cause that teen to lose the trust of friends and family members.

Alcohol and Violence

Teens can protect their health by avoiding situations where alcohol is present. Fights are more likely to break out at parties where alcohol is used. Teens who are involved in fights face school or police disciplinary action. Teens who drink are also more likely to be victims or perpetrators of violent crimes, such as rape, aggravated assault, and robbery. It is estimated that alcohol use is a factor in one-third to two-thirds of sexual assaults or date-rape cases.

Alcohol and Sexual Activity

Alcohol impairs judgment and lowers inhibitions, and can cause a person to compromise his or her values. Teens who use alcohol are more likely to become sexually active at an earlier age, and to engage in unprotected sexual activity. Approximately 25 percent of sexually active teens use alcohol or drugs before engaging in sexual activity. Teens who drink often are twice as likely to contract an STD as teens who do not drink.



We learned about alcohol use at a school assembly. The speaker said that people who start drinking before the age of 15 are five times more likely to have alcohol-related problems later in life. They also said that new research shows that alcohol use by teens can harm our brains and that our brains are still developing. After hearing that, I have even more reason to refuse alcohol. For more fitness tips, visit the Online Fitness Zone at glencoe.com.



Real World CONNECTION

Analyzing the Media

What media images come to mind when you think of advertisements for alcohol? Many ads feature attractive young people whose message seems to be, "You can be like us if you use this product." When you see ads like this, ask yourself the following:

- ▶ **What is really being advertised?** Is it alcohol or the desire to be viewed as someone who is attractive and fits into a large group of friends?
- ▶ **What is the hidden message?** Are the advertisers trying to say you need alcohol to have fun?
- ▶ **What is the truth?** What are some other reasons that the people in the ad may be enjoying themselves?

Activity Reading / Writing

Use a critical eye when examining alcohol ads in magazines, newspapers, television, and billboards. Select three alcohol ads and ask yourself the following questions.

1. What is really being advertised?
2. What is the hidden message?
3. What is the truth?
4. How do the advertisers distort the truth about alcohol?

After analyzing the ads, select one and create a poster showing how the ad distorts the truth. Use your creativity to show how the ad, or even just elements of the ad, can be misleading.



Alcohol and the Family

It is estimated that 25 percent of all youth are exposed to **alcohol abuse**—the excessive use of alcohol—within their families. Young people who live in a household in which a family member abuses alcohol are at a high risk for

- neglect, abuse, or social **isolation**.
- economic hardship.
- personal use of alcohol themselves.
- mental illness or physical problems.

Studies show that a person who begins drinking alcohol as a teen is four times more likely to develop alcohol dependence than someone who waits until adulthood to use alcohol. This dependence, called **alcoholism**, is a disease in which a person has a physical or psychological dependence on drinks that contain alcohol.

Alcohol and School

Most schools have adopted a zero-tolerance policy for students found using alcohol on school property. Students who use alcohol may become ineligible for or be suspended from school activities or graduation, or expelled from school. These students could also be placed in an alternate education program. Ultimately, a student may find that his or her options for choosing a college or job may be limited.

Academic Vocabulary

isolation (*noun*): the state of being withdrawn or separated



READING CHECK

List Name three risky behaviors that can be caused by alcohol use.



Avoiding Alcohol

Main Idea You will experience many benefits if you choose to live alcohol-free.

Living alcohol-free is a choice that some adults make. Many other adults choose to drink alcohol occasionally and responsibly. Alcohol is addictive, and once you start drinking, it may be difficult to stop. Teens who start drinking by age 15 are five times more likely to become dependent on alcohol than people who do not start drinking until age 21.

Benefits of Living Alcohol-Free

Many teens make the commitment to stay alcohol-free. Avoiding alcohol will help you with the following:

- **Maintaining a healthy body.** You will avoid the damage alcohol can do to the brain and body organs and decrease the likelihood of being injured in an accident.
- **Establishing healthy relationships.** You can be open and honest with your family about your activities and habits.
- **Making healthy decisions.** Avoiding intoxication will allow you to make decisions that protect your health.
- **Avoiding risky behaviors.** You will reduce the risk of making unhealthy choices, such as drinking and driving.
- **Avoiding illegal activities.** You can avoid arrest and legal problems by being alcohol-free. Purchasing or possessing alcohol is against the law for anyone under 21.
- **Avoiding violence.** Avoiding alcohol reduces your risk of being a victim of or participating in a violent crime.
- **Achieving your goals.** Being alcohol-free allows you to stay focused on your short-term and long-term goals.

■ **Figure 21.7** Avoiding alcohol use can help you avoid risky behaviors. *How can teen alcohol use put your future at risk?*





Refusing Alcohol

At times, it may be difficult to avoid situations in which you are pressured to use alcohol. Saying no is much easier when you know how you will respond *before* you are faced with the situation. If you find yourself in a situation where alcohol is present, be assertive and use refusal skills. Call your parents or another trusted adult for a ride home, if needed. Here are some examples of refusal statements:

- “I don’t like the taste.”
- “No, thanks. I need to be in top shape for the game this week.”
- “I don’t drink alcohol—besides, I’m heading home.”
- “I really can’t, my parents would be angry. We have an agreement.”
- “I don’t want to risk getting kicked off the team.”

Another strategy to avoid alcohol use is to plan alcohol-free activities with friends. Avoid parties or social gatherings where alcohol is served. Practice your refusal skills to build confidence when you are with peers who may use alcohol.



Figure 21.8 Having a strategy to stay alcohol-free will help you avoid the risks of alcohol use.

What are some ways to avoid using alcohol?



READING CHECK

Explain How can staying alcohol-free help you stay physically and mentally healthy?



LESSON 2



ASSESSMENT

After You Read

Reviewing Facts and Vocabulary

1. What is *alcohol abuse*, and how are teens likely to be affected if it occurs in their family?
2. How does *alcohol abuse* differ from *alcoholism*?
3. Explain whether teens are at risk of alcohol dependence.

Thinking Critically

4. **Evaluate.** What are four possible consequences of poor decisions made while under the influence of alcohol?
5. **Analyze.** Explain how teens can stay alcohol-free.

Applying Health Skills

6. **Refusal Skills.** You arrive at a party and see that other teens are drinking alcohol. Write a dialogue describing how you use refusal skills effectively to stay alcohol-free.

Writing Critically

7. **Descriptive.** Write a scenario between a teen and a parent. The teen is providing reasons for remaining alcohol-free.



Visit glencoe.com and complete the Interactive Study Guide for this lesson.



LESSON 3



Image Source/Agfotostock



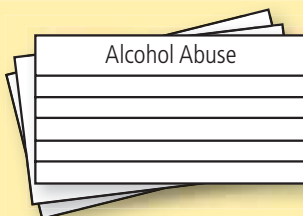
GUIDE TO READING

BIG Idea Problem drinking and alcoholism harm both the drinkers and the people around them.

Before You Read

Make Note Cards.

Label one note card "Alcohol Abuse." Then, make a note card for each vocabulary term in this lesson. On each note card, write what you already know about each term. As you read the lesson, add information to each card about each term.



New Vocabulary

- ▶ blood alcohol concentration (BAC) (p. 578)
- ▶ fetal alcohol syndrome (FAS) (p. 580)
- ▶ alcoholic (p. 581)
- ▶ recovery (p. 582)
- ▶ sobriety (p. 582)

The Impact of Alcohol Abuse

Real Life Issues

Living with Alcohol Abuse. Lily's mother drinks alcohol every day. She is always drunk and out of control. Lily thinks her mother may be an alcoholic. Her mother says that drinking helps her unwind at the end of the day. Recently, Lily's mother lost her job because she was drunk at work. Lily often finds herself taking care of her mother whenever she is drunk.



Writing Write a letter to Lily's mother as if you were Lily. In your letter, explain how her mother's drinking is affecting Lily's life.



Alcohol and Driving

Main Idea Drinking and driving is very dangerous.

Driving after drinking can have disastrous and even deadly results. One-fifth of all teen drivers involved in fatal car accidents have a blood alcohol concentration of 0.01 percent. A person's **blood alcohol concentration (BAC)** is the amount of alcohol in a person's blood, expressed as a percentage. BAC depends on the quantity and type of alcohol that was consumed, the rate of consumption, and body size and gender. **Figure 21.9** illustrates how the alcohol content varies in common alcoholic beverages. Any amount of alcohol in the blood can cause the following:

- Slow reflexes
- Reduced ability to judge distances and speeds
- Increase in risk-taking behaviors
- Reduced concentration and increased forgetfulness

**Figure 21.9**

Comparing Beer, Wine, and Spirits

Each of these beverages contains the same amount of pure alcohol.

Drink	Alcohol by Volume	Alcohol Content
Beer (12 oz.)	4%	0.5 oz.
Wine (5 oz.)	10%	0.5 oz.
Vodka or Whiskey (1.25 oz.)	40%	0.5 oz.

Driving While Intoxicated

Driving while intoxicated (DWI), or driving under the influence (DUI), is illegal. Adult drivers who have a BAC of 0.08 percent can be charged with drunk driving. For those under 21, there is no acceptable BAC, since it's illegal to use alcohol. The consequences for DWI or DUI include

- injuries to or death of the driver and others.
- arrest, jail time, court appearance and fine or bail, a police record, and possible lawsuits.
- severely restricted driving privileges and/or immediate confiscation of driver's license.
- higher auto insurance rates or a canceled insurance policy.

Riding in a vehicle with a driver who has been drinking is just as dangerous as if you were the one drinking and driving. If someone you're with has been drinking, find a ride with someone who has not been drinking, or call home for a ride.



Explore [glencoe.com](https://www.glencoe.com) and complete the Student Web Activity to learn more about alcoholism and how it can be treated.



READING CHECK

Explain Why is it dangerous to drive after drinking alcohol?



■ **Figure 21.10** Approximately 17,000 people die in alcohol-related crashes each year. *What are other consequences of drinking and driving?*



Alcohol and Pregnancy

Stock Image/SuperStock (RM)

Main Idea A female who drinks during pregnancy can harm her fetus.

When a pregnant female drinks, alcohol passes directly from her body into the bloodstream of the fetus. A fetus processes alcohol much more slowly than the mother does. As a result, there is more alcohol in the fetus's system for a longer period of time. Infants born to mothers who drink during pregnancy are at risk of **fetal alcohol syndrome (FAS)**, a group of alcohol-related birth defects that include physical and mental problems.

■ **Figure 21.11** When a pregnant female drinks, so does her fetus. *What effect can alcohol have on a fetus?*

Effects of Fetal Alcohol Syndrome (FAS)

The effects of FAS are both severe and lasting. Infants born with FAS may have the following problems:

- Small head and deformities of face, hands, or feet
- Heart, liver, and kidney defects
- Vision and hearing problems
- Central nervous system problems, developmental disabilities, and poor coordination
- Difficulties learning and short attention span
- Hyperactivity, anxiety, and social withdrawal

FAS is one of the leading preventable causes of mental retardation. Females who are trying to become pregnant or may be pregnant should not drink *any* alcohol.



READING CHECK

List Name four problems that a baby born to a mother who drank alcohol during pregnancy may have.



Alcoholism

Main Idea Alcoholism is a disease that affects the person who drinks and others around him or her.

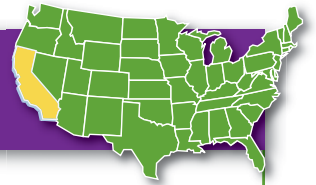
Alcoholics are physically or psychologically dependent on alcohol. The symptoms of alcoholism include the following:

- **Craving**—Feeling a strong need for alcohol to manage tension or stress, and a preoccupation with alcohol
- **Loss of control**—Inability to limit alcohol consumption
- **Physical dependence**—Withdrawal symptoms, such as nausea, sweating, shakiness, and anxiety
- **Tolerance**—A need to drink increasingly more alcohol in order to feel its effects



TEENS

Making a Difference



*"A young person
can make a
difference."*

Advocating for Change

Elianna Y., of California, joined the substance-free group Friday Night Live as a freshman. Three years later, Elianna is one of the leaders of the group.

Under Elianna's leadership, Friday Night Live is targeting alcopops, sweet, malt-flavored beverages that contain distilled spirits. "They're popular with teens, even though it's illegal for teens to drink alcohol. Currently alcopops are taxed the same as beer," says Elianna. Friday Night Live has petitioned California legislators to raise the tax.

"I feel like I am making a difference in people's lives not only with the policy changes, but also as a role model," said Elianna. "Being young doesn't mean you can't do anything. A young person can make a difference in the community."



Write your answers to the following questions in your personal health journal:

- 1 What issues in your community would motivate you to become a leader?
- 2 Describe two benefits that might result from the change in this tax law.
- 3 How can you make a difference in your community regarding alcohol and teens?



Alcoholics

An **alcoholic** is an addict who is dependent on alcohol. The behavior of alcoholics varies—some are aggressive and violent, while others may become withdrawn. Alcoholism is not limited to any age, race, or ethnic or socioeconomic group.

Growing scientific evidence suggests that alcoholism is partially due to genetics. One study shows that children of alcoholics are four times more likely to become alcoholics. Environmental factors such as family, friends, culture, peer pressure, availability of alcohol, and stress also contribute to alcoholism. The age at which a person starts drinking also influences the risk of alcoholism. Teens who start drinking are at a higher risk of becoming alcoholics during their lifetime than people who begin drinking as adults.



READING CHECK

Describe What are the symptoms of alcoholism?



■ **Figure 21.12** Alcohol causes serious damage to the liver. Compare the healthy liver (top) with the liver that has been damaged by alcohol abuse. *What effect does alcohol have on the liver?*

Stages of Alcoholism

Alcoholism develops in three stages: abuse, dependence, and addiction. All alcoholics do not, however, experience each stage equally.

- **Stage 1—Abuse.** Alcoholism may begin with social drinking. A physical and psychological dependence develops. The person may experience memory loss and blackouts, and may begin to lie or make excuses to justify his or her drinking.
- **Stage 2—Dependence.** The person cannot stop drinking and is physically dependent on alcohol. The drinker tries to hide the problem, but performance on the job, at school, and at home suffers.
- **Stage 3—Addiction.** In the final stage of alcoholism, the person is addicted. At this stage, the liver may be already damaged, and so less alcohol may be required to cause drunkenness. If the alcoholic stopped drinking, he or she would experience severe withdrawal symptoms.

Photo Researchers



Effects on Family and Society

Main Idea Alcohol abuse plays a role in crimes and has negative effects on people who are around problem drinkers.

The United States is home to an estimated 15 million alcoholics and problem drinkers. Alcohol abuse affects more than just the drinker. It is a major factor in the four leading causes of accidental death: car accidents, falls, drowning, and house fires. Alcohol also plays a major role in violent crimes, such as homicide, forcible rape, and robbery. About 40 percent of violent crimes are alcohol related.

Often, people close to alcoholics develop mentally unhealthy behaviors, such as *codependency*. Codependents ignore their own emotional and physical needs and instead focus their energy and emotions on the needs of the alcoholic. In the process, codependents lose their self-esteem and their trust in others, and their own physical health suffers.

Figure 21.13

Steps to Recovery

Step 1—Admission

- The person admits to having a drinking problem and asks for help.

Step 2—Detoxification

- The person goes through detoxification, a process in which the body adjusts to functioning without alcohol.

Step 3—Counseling

- The person receives counseling to help him or her learn to change behaviors and live without alcohol.

Step 4—Recovery

- The person takes responsibility for his or her own life.



Treatment for Alcohol Abuse

Main Idea Alcoholics can recover if they get treatment.

Alcoholism cannot be cured, but it *can* be treated. **Recovery** is *the process of learning to live an alcohol-free life*. Recovering alcoholics must make a lifelong commitment to **sobriety**,



which is *living without alcohol*. The steps to recovery outlined in **Figure 21.13**, include admitting that alcohol use is a problem; detoxification, or adjusting to functioning without alcohol; receiving counseling to change behaviors; and recovery, or taking responsibility for one's own life. Here are a few of the resources and programs available to help alcoholics and problem drinkers, as well as their families and friends:

- **Al-Anon/Alateen** helps families and friends learn to deal with the effects of living with an alcoholic.
- **Alcoholics Anonymous** provides help for alcoholics.
- **Mothers Against Drunk Driving (MADD)** provides education to prevent underage drinking.
- **National Association for Children of Alcoholics** provides help for children of alcoholics.
- **National Drug and Alcohol Treatment Referral Routing Service** provides treatment referral and information about treatment facilities.
- **Students Against Destructive Decisions (SADD)** provides peer-led education about avoiding alcohol use.
- **SAMSHA's National Clearinghouse for Alcohol and Drug Information** provides information about alcohol and other drugs.



READING CHECK

Explain Describe what an alcoholic must do in order to recover.



LESSON 3



ASSESSMENT

After You Read

Reviewing Vocabulary and Facts

1. What is *blood alcohol concentration (BAC)*, and what is the legal BAC for teen drivers?
2. What is *fetal alcohol syndrome (FAS)*, and what causes it?
3. Why does an alcoholic go through detoxification when trying to become sober?

Thinking Critically

4. **Analyze.** How does a moderate amount of alcohol, which otherwise might not be harmful to a female, have the potential to harm her fetus?
5. **Discuss.** What are two possible outcomes of drinking and driving?

Applying Health Skills

6. **Accessing Information.** Use reliable sources to identify community and other resources that help alcoholics and their families. Then, design a webpage that lists these resources.

Writing Critically

7. **Narrative.** Write a one-page story showing how a teen can use refusal skills to avoid getting into a car with a driver who has been drinking.



Visit glencoe.com and complete the Interactive Study Guide for this lesson.



Keeping the Lid on the Bottle

Teens can make a difference when it comes to preventing underage drinking.

Kasey Folse, 16, is a member of the Louisiana Alliance to Prevent Underage Drinking. He works to enact laws that make it harder for those who are underage to buy alcohol, such as registration tags for beer kegs. These tags would allow police to trace kegs back to whomever purchased them and punish that person if the beer was being served to underage drinkers. Kasey is also working to offer teens a place to talk about alcohol issues. “Kids don’t really have anywhere to turn at my school,” says Kasey. “It would definitely help if we had someone to talk one on one with students to deal with alcohol and drug questions.”

Things weren’t all that different at Andrew Araiza’s Mary Carroll High School in Corpus Christi, Texas. Andrew says that many teens “don’t consider all the problems associated with alcohol, like poisoning, accidents, and suicide.”

Andrew is executive vice president of Texans Standing Tall, a coalition of youths and adults against underage drinking. He has successfully lobbied to remove liquor ads from the state’s hunting license handbook and helped lower the legal blood alcohol limit from .1 to .08. Andrew

says, “Having peer-group talks, where a teen with a problem describes what happened to him or her—that would get the message across.”

Thanks to Ann Miller, 18, that message is coming through loud and clear at Oregon’s Canby High. She educates teens about drinking, counsels those with problems, and encourages them to attend a local youth-oriented Alcoholics Anonymous meeting. The result is a greater awareness of the drawbacks of alcohol use and a population of teens who aren’t afraid to ask for help. “People with a drinking problem have got to have good treatment available and good support from the adults around them,” says Miller. ■

TIME
to **THINK...**

About Blood Alcohol Level

On the Internet or your school’s media center, look up government statistics about alcohol-related traffic accidents. Use those statistics to come up with three powerful reasons why people should not drink and drive.



To download quizzes and eFlashcards to your PDA, go to glencoe.com and click on the Study to Go icon.

LESSON 1**The Health Risks of Alcohol Use****Key Concepts**

- ▶ Alcohol is an addictive drug that slows the central nervous system (CNS) and impairs physical abilities and judgment.
- ▶ Mixing alcohol with medicines or other drugs is extremely dangerous.
- ▶ Long-term excessive alcohol use harms many of the body systems, and can possibly damage adolescent brain development processes.
- ▶ People who binge drink put themselves at serious risk of alcohol poisoning.

Vocabulary

- ▶ ethanol (p. 566)
- ▶ fermentation (p. 566)
- ▶ depressant (p. 567)
- ▶ intoxication (p. 567)
- ▶ binge drinking (p. 569)
- ▶ alcohol poisoning (p. 569)

LESSON 2**Choosing to Live Alcohol-Free****Key Concepts**

- ▶ Peer pressure, advertising, and family can influence a teen's choice to use or not to use alcohol.
- ▶ Alcohol use leads to risky behaviors that have serious consequences.
- ▶ Teens who do not use alcohol are more likely to make healthy decisions that maintain their health.
- ▶ In order to stay alcohol-free, teens should try to avoid situations where alcohol will be present, and they should have a refusal plan.

Vocabulary

- ▶ psychological dependence (p. 572)
- ▶ physiological dependence (p. 572)
- ▶ alcohol abuse (p. 575)
- ▶ alcoholism (p. 575)

LESSON 3**The Impact of Alcohol Abuse****Key Concepts**

- ▶ No one should drive after drinking alcohol because it impairs mental and physical abilities.
- ▶ If a female drinks while she is pregnant, her baby may be born with mental and physical birth defects.
- ▶ Dependence on alcohol causes alcoholics to harm themselves and the people around them.
- ▶ Alcoholics can recover if they seek help.

Vocabulary

- ▶ blood alcohol concentration (BAC) (p. 578)
- ▶ fetal alcohol syndrome (FAS) (p. 580)
- ▶ alcoholic (p. 581)
- ▶ recovery (p. 582)
- ▶ sobriety (p. 582)



LESSON 1

Vocabulary Review

Correct the sentences below by replacing the italicized term with the correct vocabulary term.

1. Drinking alcohol can lead to *fermentation*, a state of reduced physical and mental control.
2. *Intoxication* is when a person drinks five or more alcoholic drinks at one sitting.
3. *Binge drinking* is a potentially fatal reaction to an alcohol overdose.

Understanding Key Concepts

After reading the question or statement, select the correct answer.

4. Which is *not* a short-term effect of alcohol?
 - a. Coordination is impaired.
 - b. Vision is impaired.
 - c. More stomach acid is produced.
 - d. Judgment is altered.
5. Which type of person is most likely to be quickly affected by alcohol?
 - a. A small female who has not eaten
 - b. A large female who just ate dinner
 - c. A small male who just ate dinner
 - d. A large male who has not eaten
6. Which is a potential consequence of long-term excessive alcohol use?
 - a. A heart attack
 - b. The need for a liver transplant
 - c. Swelling of the brain
 - d. An increased ability to control drinking
7. Which person is most likely to be at risk for alcohol poisoning?
 - a. A person who has two drinks a week
 - b. A person who has two drinks per day
 - c. A person who binge drinks
 - d. A person who drinks until he or she is drunk

Thinking Critically

After reading the question or statement, write a short answer using complete sentences.

8. **Describe.** Why are teens who drink more likely to put themselves in risky situations?
9. **Evaluate.** Terry takes a 12-hour allergy medication, and then drinks alcohol after waiting an hour. Explain why this is not a safe behavior.
10. **Explain.** How does long-term excessive drinking affect the brain?
11. **Analyze.** Dana drinks only occasionally, but when he drinks he does things that he later regrets. His friends assure him that he is fun when he drinks, and that he should not worry about his actions. Does Dana have a drinking problem? Explain.
12. **Evaluate.** A person passes out after drinking. Explain the dangers of leaving the person alone, and what action should be taken.



LESSON 2

Vocabulary Review

Use the vocabulary terms listed on page 585 to complete the following statements.

13. Teens are likely to experience neglect or abuse if there is _____ in their family.
14. People who have a chemical need for alcohol have a _____.
15. A dependence on drinks with alcohol is called _____.
16. When a person believes that alcohol use is needed to feel good or function normally, that person has a _____.



Understanding Key Concepts

After reading the question or statement, select the correct answer.

17. Which of the following influences teens to stay alcohol-free?
 - a. Having peers who drink alcohol
 - b. Seeing alcohol ads on TV
 - c. Having parents who disapprove of alcohol use
 - d. Attending alcohol-sponsored sporting events
18. Which is *not* a result of the high-risk behaviors associated with alcohol use?
 - a. Increased deaths in traffic accidents
 - b. Increased frequency of date rape
 - c. Suspension from sports teams
 - d. Improved job prospects
19. If you stay alcohol-free, which is a likely benefit?
 - a. Decreased likelihood of getting a sexually transmitted disease
 - b. Increased likelihood of being injured in an accident
 - c. Decreased likelihood of making responsible decisions
 - d. Increased likelihood of being a victim of violent crime
20. Which is *not* a strategy to remain alcohol-free?
 - a. Planning an alcohol-free party
 - b. Practicing refusal statements
 - c. Attending parties with people who use alcohol
 - d. Calling for a ride home if alcohol is present



Thinking Critically

After reading the question or statement, write a short answer using complete sentences.

21. **Explain.** What are the dangers of adult alcohol use? What are the dangers for teens?
22. **Analyze.** How does sponsoring community events and music concerts help alcohol companies sell their products?
23. **Discuss.** How does teen alcohol use impact the community?
24. **Evaluate.** Why are alcohol-free teens more likely to achieve their long-term goals than teens who use alcohol?
25. **Examine.** Why is avoiding gatherings where alcohol is present the best way to stay alcohol-free?

LESSON 3

Vocabulary Review

Choose the correct term in the sentences below.

26. *Blood alcohol concentration (BAC)* / *Fetal alcohol syndrome (FAS)* is a condition that babies can be born with if a female drinks while pregnant.
27. The amount of alcohol in a person's blood that is expressed as a percentage is *blood alcohol concentration* / *fetal alcohol syndrome*.
28. An addict who is dependent on alcohol is *in/an sobriety* / *alcoholic*.

Understanding Key Concepts

After reading the question or statement, select the correct answer.

29. It is illegal for adults to drive when they have what BAC level?
 - a. 0.01
 - b. 0.02
 - c. 0.05
 - d. 0.08



Assessment

30. Which is *not* likely to occur if a person is caught drinking and driving?
- A field sobriety test will be conducted.
 - The person loses driving privileges.
 - The person loses insurance coverage.
 - There will be no penalty.
31. A baby born with FAS may have which of the following?
- Anxiety
 - Facial deformities
 - Kidney problems
 - All of the above
32. Which of the following is *not* part of the stages of alcoholism?
- Becoming intoxicated regularly
 - Going through detoxification
 - Making excuses for alcohol-related problems
 - Alcohol taking control of the drinker's life

Thinking Critically

After reading the question or statement, write a short answer using complete sentences.

33. **Identify.** What effects of alcohol make it risky to drive after drinking?
34. **Apply.** Jacob's mother is seven months pregnant. She thinks it is alright to start having an occasional glass of wine with dinner because the fetus is mostly developed. What should Jacob tell her?
35. **Analyze.** What factors increase one's likelihood of becoming an alcoholic?
36. **Synthesize.** Jesse knows she has a drinking problem and wants help. Explain what she can do to find help.



Project-Based

ASSESSMENT

The Power of Persuasion

Background

Companies that sell alcohol often use television advertising to convince people to buy and use their products. Alcohol commercials use powerful combinations of video and audio to sell their product. Anti-alcohol ads may also appear on television. These ads aim to reduce alcohol use among teens.

Task

Write a script for a 30-second TV ad demonstrating how saying no to alcohol is an attractive and practical option for teens.

Audience

Students in your class

Purpose

Persuade teens to say no to alcohol use.

Procedure

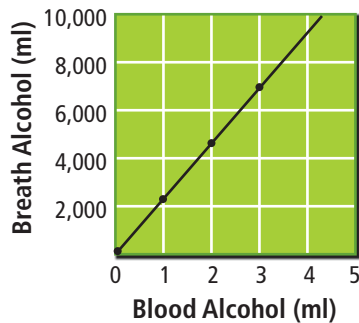
- Working with a small group, create a list of situations in which teens may be pressured by other teens to use alcohol.
- Select one situation that teens in your school may encounter. Conduct research using reliable sources to learn ways that advertisers might try to persuade teens to use their products.
- Write a script that includes dialogue for a narrator and two teens. Include a list of images and sounds that might be used in the ad.
- With your group, rehearse the ad. Make any necessary revisions.
- Perform the commercial for the whole class. Discuss the results.



Standardized Test Practice

Math Practice

Interpreting Graphs. The graph below shows the relationship between blood alcohol level and breath alcohol level. After reviewing the graph, answer the questions that follow.



- Based on the graph, how many milliliters of blood are equivalent to 3150 ml of air?
A. 1 ml
B. 1.5 ml
C. 3 ml
D. 2100 ml
- What type of function is shown on the graph?
A. Exponential
B. Higher degree
C. Linear
D. Quadratic
- An increase in body temperature of 1.8 degrees F results in an increase of 7 percent in the test results. If a graph similar to the one shown were drawn for a person with a temperature of 97 degrees F, would the slope be greater than or less than the slope of this graph?



For more test practice, visit glencoe.com and complete the Online Quizzes for Chapter 21.

Reading/Writing Practice

Understand and Apply. Read the passage below, and then answer the questions.

Having a natural mentor can help teens make positive choices, according to a study by Students Against Destructive Decisions (SADD). Natural mentors can include parents, other family members, teachers, coaches, members of the clergy, and other trusted adults.

In the study, 46% of teens who have a natural mentor reported having a higher sense of self. Only 25% of teens who did not have a natural mentor agreed that they have a higher sense of self.

More than half of the students surveyed also said that having a natural mentor impacted them in a positive way. Teens are willing to talk to their natural mentors about avoiding alcohol, drugs, and sexual activity.

- The study's findings show that
A. a mentor has no influence on teens.
B. a mentor can help teens make positive choices.
C. a natural mentor is always a parent.
D. teens with a natural mentor have a higher sense of self.
- Based on this article, a natural mentor is
A. another teen who may be one or two years older.
B. a parent or other trusted adult.
C. an adult the teen is paired with through a matching program.
D. a teacher or school counselor who has had training as a mentor.
- Write a one-page, persuasive essay describing the importance of having a natural mentor. Describe how mentors can help teens.

National Education Standards

Math: Number and Operations, Problem Solving
Language Arts: NCTE 3, NCTE 4