



CHAPTER

20

Tobacco

Lesson 1

The Health Risks of Tobacco Use

BIG Idea The chemicals in all tobacco products harm your body.

Lesson 2

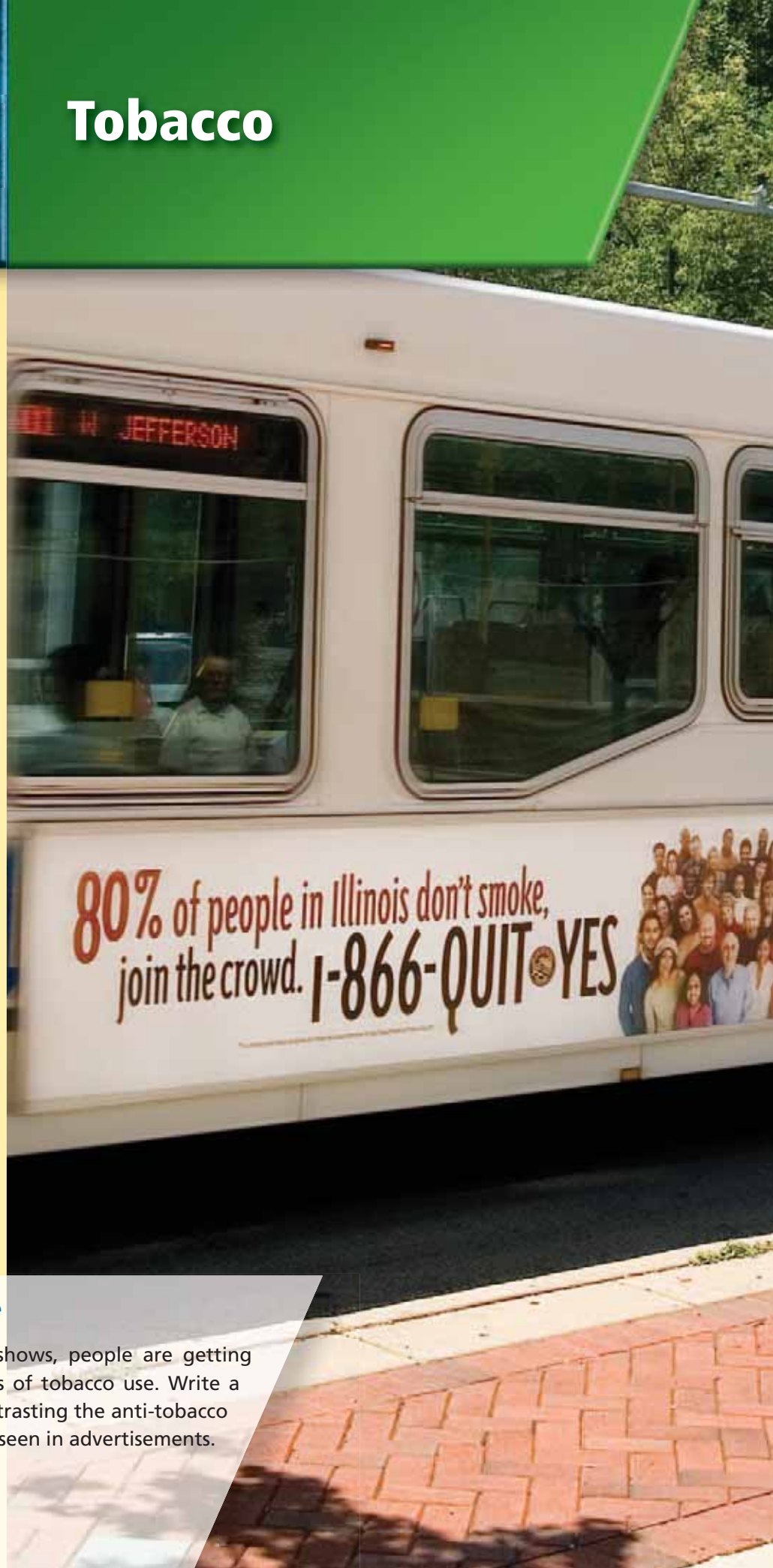
Choosing to Live Tobacco-Free

BIG Idea Avoiding tobacco use will bring lifelong health benefits.

Lesson 3

Promoting a Smoke-Free Environment

BIG Idea Secondhand smoke is harmful, but there are ways you can reduce your exposure.



Activating Prior Knowledge

Using Visuals As this billboard shows, people are getting the message out about the dangers of tobacco use. Write a short paragraph comparing and contrasting the anti-tobacco and pro-tobacco messages you have seen in advertisements.

Chapter Launchers

Health in Action

Discuss the **BIG** Ideas

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

- ▶ In what ways does tobacco harm your body?
- ▶ What are the consequences of tobacco use?
- ▶ Why should you avoid secondhand smoke?

Watch the **Health eSpotlight** Video Series



The Truth and the Lies

What would you say to encourage a friend to avoid tobacco use? How do tobacco ads lie to the public?

Assess Your Health



Visit glencoe.com and complete the Health Inventory for Chapter 20.



LESSON 1



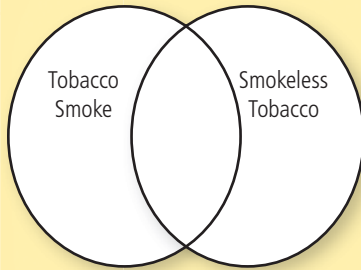
GUIDE TO READING

BIG Idea *The chemicals in all tobacco products harm your body.*

Before You Read

Create a Venn

Diagram. Draw a Venn diagram that has two overlapping circles. Label one circle "Tobacco Smoke" and the other circle "Smokeless Tobacco." Write the risks of each in the circles. Put the risks shared by both in the area where the circles overlap.



New Vocabulary

- ▶ addictive drug (p. 543)
- ▶ nicotine (p. 543)
- ▶ stimulant (p. 543)
- ▶ carcinogen (p. 543)
- ▶ tar (p. 543)
- ▶ carbon monoxide (p. 543)
- ▶ smokeless tobacco (p. 544)
- ▶ leukoplakia (p. 544)

The Health Risks of Tobacco Use

Real Life Issues

Dealing with Stress. Elena's older brother, Victor, attends high school, has a part-time job, and is on the soccer team. He feels stressed because he does not have enough time to work, play soccer, and study. Victor has started smoking because he thinks it will help him deal with his stress.



Writing Write a dialogue having Elena tell Victor what she has learned in health class about the dangers of tobacco use. Have Elena suggest other ways that Victor can deal with his stress.



Health Risks of Tobacco Use

Main Idea All forms of tobacco contain chemicals that are dangerous to your health.

Advertisements for tobacco products often feature healthy, attractive people, sending the message that using tobacco has no health consequences. So what's the truth about tobacco? All tobacco products display warning labels stating that using tobacco products can be harmful to an individual's health.

Medical studies have shown that tobacco use is the leading cause of preventable death and disability in the United States. Any form of tobacco use, such as smoking, chewing, or dipping tobacco, can cause health problems. Smoking has been linked to lung disease, cancers, and heart disease. About 90 percent of adult smokers began the habit as teenagers. Most teens think that they can just quit whenever they choose. The reality is that quitting is difficult. It's easier to avoid tobacco use rather than quit later.



■ **Figure 20.1** All tobacco products must carry warning labels showing they are harmful to your health. *Why do people who use tobacco ignore these warnings?*

Nicotine

Tobacco users have difficulty quitting because tobacco contains an **addictive drug**, a substance that causes physiological or psychological dependence. All tobacco products contain **nicotine**, the addictive drug found in tobacco leaves. Nicotine is a **stimulant**, a drug that increases the action of the central nervous system, the heart, and other organs. Using nicotine raises blood pressure, and increases the heart rate. You will learn more about the effects of addictive drugs in Chapter 22.



Go to [glencoe.com](https://www.glencoe.com) and complete the Student Web Activity on the efforts tobacco companies make to market their products to teens.



Poisonous Substances in Tobacco Smoke

Tobacco is an addictive and toxic drug. It's a **carcinogen**, a cancer-causing substance. Tobacco smoke contains tar and carbon monoxide. It also contains the same poisonous compounds found in products such as paint, rat poison, and toilet cleaner.

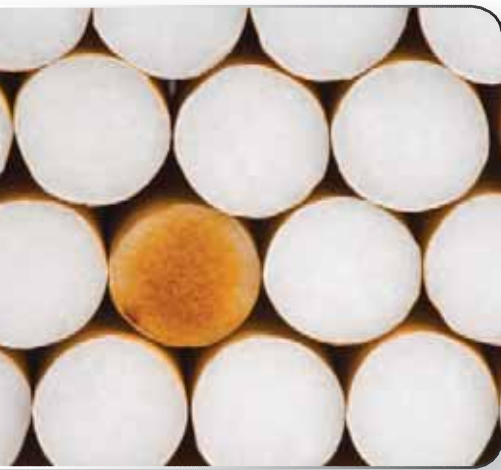
Tar Cigarette smoke contains **tar**, a thick, sticky, dark fluid produced when tobacco burns. The tar damages a smoker's respiratory system by paralyzing and destroying cilia, the tiny hairlike structures that line the upper airways and protect the body against infection. Tar also destroys the alveoli, or air sacs, which absorb oxygen and rid the body of carbon dioxide. Lung tissue is also damaged, reducing lung function. Smokers are susceptible to diseases such as bronchitis, pneumonia, emphysema, heart disease, and cancer. As many as 87 percent of cancer deaths result from smoking.

Carbon Monoxide **Carbon monoxide**, a colorless, odorless, and poisonous gas, is another compound found in cigarette smoke. It is absorbed more easily than oxygen. Carbon monoxide deprives the body's tissues and cells of oxygen. It also increases the risk of high blood pressure, heart disease, hardening of the arteries, and other circulatory problems.



READING CHECK

Identify List three harmful substances in tobacco smoke.



■ **Figure 20.2** Cigarette filters do not protect smokers from the more than 50 carcinogens, including cyanide and arsenic, which are in tobacco products. The filters themselves contain poisonous chemicals such as those used in insecticides, paint, toilet cleaner, antifreeze, and explosives. *How can you warn others about the risks of using tobacco products?*

Pipes, Cigars, and Smokeless Tobacco

Martin Dineen/Getty Images

Main Idea No tobacco product is safe to use.

The dangers of tobacco use are not limited to smoking cigarettes. The smoke from pipes and cigars also causes serious health consequences. Cigars contain significantly more nicotine and produce more tar and carbon monoxide than cigarettes. One cigar can contain as much nicotine as an entire pack of 20 cigarettes. Pipe and cigar smokers also increase the risk of developing cancers of the lips, mouth, throat, larynx, lungs, and esophagus.

Another form of tobacco that some believe to be safer to use than cigarettes is **smokeless tobacco**, *tobacco that is sniffed through the nose, held in the mouth, or chewed*. Smokeless (sometimes called “spit”) tobacco products are *not* a safe alternative to smoking. The nicotine and carcinogens in these products are absorbed into the blood through the mucous membranes in the mouth or the digestive tract.

The harmful chemicals of smokeless tobacco are absorbed into the body at levels up to three times the amount of a single cigarette. That’s because the exposure to harmful chemicals in smokeless tobacco is often three times longer than that of a smoked cigarette. Using smokeless tobacco also irritates the sensitive tissues of the mouth, causing **leukoplakia** (loo-koh-PLAY-kee-uh), or *thickened, white, leathery-looking spots on the inside of the mouth that can develop into oral cancer*. Smokeless tobacco causes cancers of the mouth, throat, larynx, esophagus, stomach, and pancreas. People who chew eight to ten plugs of tobacco each day take in the same amount of nicotine as a smoker who smokes two packs of cigarettes a day. Smokeless tobacco is as addictive as smoked tobacco, making quitting just as difficult as it is for someone who uses smoked tobacco.



Harmful Effects of Tobacco Use

Main Idea Tobacco use causes both short-term and long-term damage to your body.

Academic Vocabulary

decade (*noun*): a group or set of ten

Health officials have warned the public about the dangers of tobacco use for several **decades**. **Figure 20.3** shows how smoking can damage one body system, the lungs. If a pregnant female smokes, she risks the health of her fetus, as well as her own health. Pregnant women who smoke during pregnancy risk giving birth to an infant with a low birth weight and other health problems.



Short-Term Effects

Some effects of tobacco use occur immediately. These short-term effects include the following:

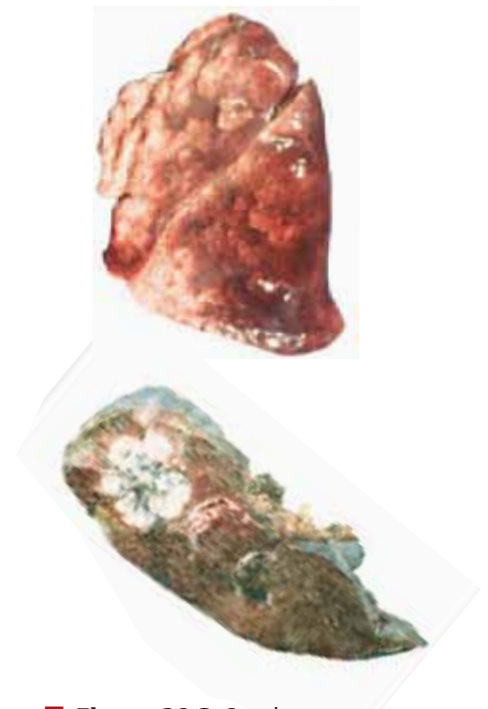
- **Brain chemistry changes.** The addictive properties of nicotine cause the body to crave more of the drug. The user may experience withdrawal symptoms, such as headaches, nervousness, and trembling as soon as 30 minutes after the last tobacco use.
- **Respiration and heart rate increase.** Breathing during physical activity becomes difficult and endurance is decreased. Nicotine may cause an irregular heart rate.
- **Taste buds are dulled and appetite is reduced.** Tobacco users often lose much of their ability to enjoy food.
- **Users have bad breath, yellowed teeth, and smelly hair, skin, and clothes.** If tobacco use continues for any length of time, these unattractive effects can become permanent.



Long-Term Effects

Over time, tobacco use can cause damage to many body systems, as shown in **Figure 20.4** on page 546. People who are exposed to others who smoke can also suffer many health problems. Here are some of those health problems:

- **Chronic bronchitis** can occur when the cilia in the bronchi become so damaged that they are useless. This leads to a buildup of tar in the lungs, causing chronic coughing and excessive mucus secretion.
- **Emphysema** is a disease that destroys the tiny air sacs in the lungs. The air sacs become less elastic, making it more difficult for the lungs to absorb oxygen. A person with advanced emphysema uses up to 80 percent of his or her energy just to breathe.
- **Lung cancer** can develop when the cilia in the bronchi are destroyed, and extra mucus cannot be expelled. Cancerous cells can multiply, block the bronchi, and move to the lungs. Nearly 90 percent of lung cancer deaths are caused by smoking.
- **Coronary heart disease and stroke** can be caused by nicotine. Nicotine constricts blood vessels, which cuts down blood flow to the body's limbs. Nicotine also contributes to plaque buildup in the blood vessels, which can lead to hardened arteries, a condition called *arteriosclerosis*. Arteries may become clogged, increasing the risk of heart attack and stroke. The risk of developing heart disease is greater for smokers than for nonsmokers.
- **A weakened immune system** from long-term tobacco use makes the body more vulnerable to disease.



■ **Figure 20.3** Smokers cause severe damage to their lungs. Compare the healthy lung (top) with the one damaged by tobacco smoke (bottom). *How do tar and the other substances in tobacco smoke affect the respiratory system and its ability to function?*



READING CHECK

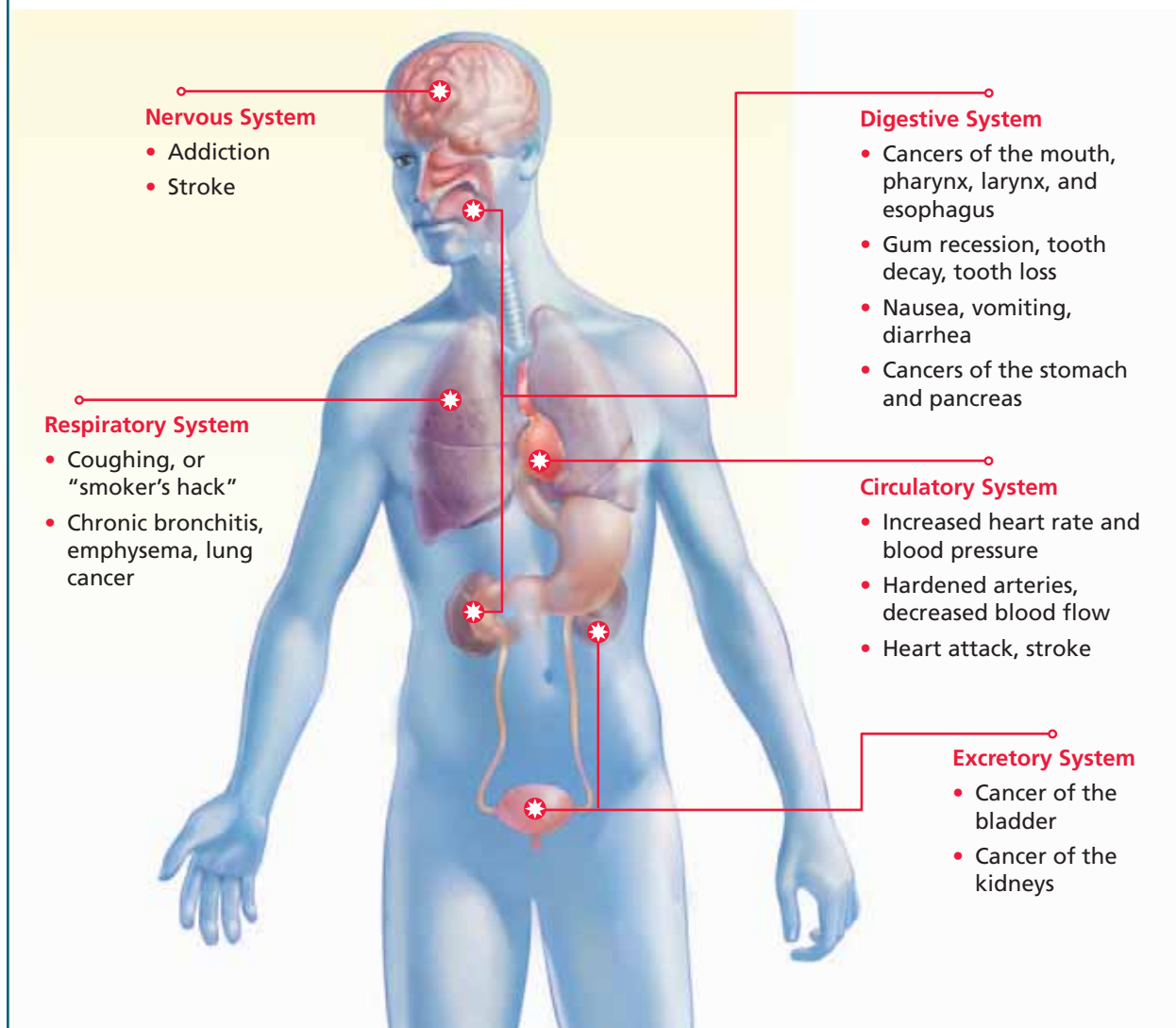
Describe Name two ways in which the health of long-term tobacco users will suffer.



Figure 20.4

Long-Term Health Risks of Tobacco

Tobacco use increases your risk of developing many severe health problems.



Other Consequences of Tobacco Use

Main Idea As well as health risks, tobacco use is costly.

Making the decision to avoid the use of tobacco products will safeguard your health.

- **Costs to society.** Tobacco-related illnesses cost the United States about \$165 billion each year. Productivity suffers when smokers call in sick due to tobacco-related illnesses.
- **Cost to individuals.** A person smoking one pack of cigarettes a day will spend about \$1,500 a year on the habit.
- **Legal consequences.** Selling tobacco products to individuals under the age of 18 is illegal. Using tobacco products on school property may lead to suspension or expulsion.



Real World CONNECTION

Health Risks of Tobacco

Latoya knows that tobacco use causes serious health problems. She wants to encourage her friends to avoid tobacco use. She does Internet research to learn more about the health effects of tobacco use.

Latoya researches statistics on tobacco-related deaths. She finds figures from the CDC listing the estimated annual number of smoking-related deaths in the United States:

- ▶ Lung cancer 123,800 deaths
- ▶ Other cancers 34,700 deaths
- ▶ Chronic lung disease 90,600 deaths
- ▶ Coronary heart disease 86,800 deaths
- ▶ Stroke 17,400 deaths
- ▶ Other diagnoses 84,600 deaths



Reading / Writing

Using reliable resources, conduct research to learn more about tobacco use among teens. Search for the following information:

1. How many teens begin smoking each year?
2. How can tobacco use affect a teen's physical health?
3. What impact can tobacco use have on a teen's mental/emotional and social health?

After completing your research, write a persuasive essay urging teens who use tobacco to quit. Include information urging teens who have never smoked not to start the habit.



LESSON 1



ASSESSMENT

After You Read

Reviewing Facts and Vocabulary

1. What is an *addictive drug*? What is the addictive drug in tobacco?
2. List three types of toxic substances found in cigarette smoke. Why are these substances harmful?
3. Explain four ways using tobacco immediately affects your body.

Thinking Critically

4. **Identify.** What are three ways in which tobacco use affects the respiratory system?
5. **Analyze.** In addition to protecting your health, explain reasons you should not use any form of tobacco.

Applying Health Skills

6. **Advocacy.** Write an editorial for a newspaper that encourages people to quit using tobacco products, and explain the long-term effects of tobacco use on the body.

Writing Critically

7. **Persuasive.** Create a pamphlet raising awareness of the health risks of tobacco use. Include information on the long-term effects of tobacco use.



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

LESSON 2



GUIDE TO READING

BIG Idea *Avoiding tobacco use will bring lifelong health benefits.*

Before You Read

Make a T-Chart. Make a two-column chart like the one below. Label one column “Start” and the other column “Quit.” Fill in the first column with reasons why teens start using tobacco. Fill in the second column with reasons why tobacco users want to quit using tobacco.

Start	Quit



New Vocabulary

- ▶ nicotine withdrawal (p. 551)
- ▶ nicotine substitutes (p. 551)
- ▶ tobacco cessation program (p. 551)

Choosing to Live Tobacco-Free



Real Life Issues

Quitting Smoking. Juan started smoking a year ago. Juan does not like the hold that tobacco has on him, so he has decided to quit. It’s been harder than he thought it would be. His friends Joe and Pamela want to help Juan become tobacco-free, but they aren’t sure how.



Writing *Write a short essay explaining how Juan’s friends can encourage him to quit and support his efforts.*



Teens and Tobacco

Main Idea Fewer teens are starting to use tobacco.

The number of nonsmokers in the United States, including teens, is on the rise. Knowing the health risks of tobacco use helps teens make the healthful decision to stay tobacco-free. However, some teens are influenced by tobacco company advertisements and other pressures. These teens may begin to use tobacco.

Why Some Teens Use Tobacco

Teens start smoking for many reasons. Some teens falsely believe that smoking will help control their weight or cope with stress. Others believe that smoking will make them seem mature and independent. The truth is that smoking reduces the body’s capacity for physical activity, so it actually may lead to weight gain. Health problems caused by tobacco use and nicotine dependency may increase the tobacco user’s stress level. Many times, teens are influenced to try tobacco products by movies, TV, and advertisements. Media images may convince teens that tobacco use is glamorous.



■ **Figure 20.5** Teens who choose a tobacco-free lifestyle will feel mentally and physically better than teens who use tobacco. *What are some healthful ways to control weight and relieve stress?*

Reduced Tobacco Use Among Teens

More teens recognize the health risks of tobacco use and are avoiding the use of tobacco products. The CDC reports that 77 percent of high school students nationwide do not smoke. This number is up from 65 percent just a few years ago, as shown in **Figure 20.6**. Several factors contribute to this trend:

- **Tobacco legislation.** In 1998, tobacco companies and 46 states reached a legal settlement that restricts tobacco advertising aimed at young people. Tobacco companies are required to fund ads that discourage young people from smoking. It is illegal for anyone under the age of 18 to purchase tobacco products in the United States.
- **No-smoking policies.** Legislation has limited smoking in public places and businesses.
- **Family values.** Teens whose parents avoid tobacco use are more likely to avoid tobacco use themselves.
- **Positive peer pressure.** Teens who do not smoke act as healthy role models for other teens.
- **Health risks.** More teens understand that tobacco use can lead to diseases, such as health disease, cancer, and respiratory problems.



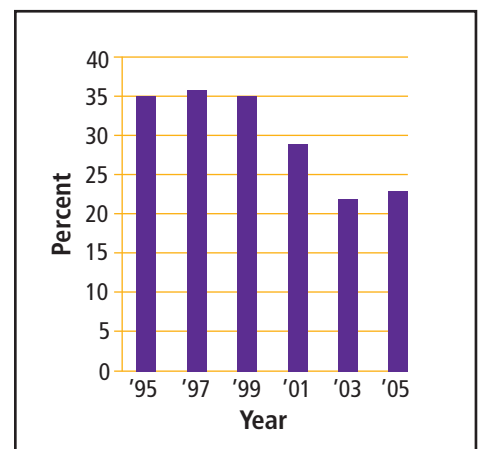
READING CHECK

Explain Why has tobacco use among teens decreased?

Figure 20.6

Teens Smoking Less

High school students who reported smoking a cigarette in the last 30 days



Source: Center for Disease Control and Prevention, 2005



Quit Smoking: New Year's Resolution

Analyze. Go to glencoe.com and watch the video *Quit Smoking: New Year's Resolution*. Consider the new approaches that companies and health care providers are taking to discourage nicotine use. In a paragraph, explain whether you think these methods will be effective.

■ **Figure 20.7** Health care professionals can help tobacco users find the resources they need to successfully quit using tobacco. *Why is it difficult for people to quit?*



Benefits of Living Tobacco-Free

Main Idea A tobacco-free lifestyle has many benefits.

If you do not use tobacco, you have better cardiovascular endurance and lung function. You can improve your fitness level and athletic performance. When you avoid tobacco, you reduce your risk of lung cancer, heart disease, and stroke.

Living tobacco-free has mental/emotional and social benefits, too. You will have a sense of freedom because you know that you are not dependent on an addictive substance. You will have less stress because you do not have to worry about tobacco-related health problems. You will have more confidence in social situations because you look and feel better.

Strategies for Avoiding Tobacco

The best way to avoid the negative consequences of tobacco use is never to start using tobacco products. With these strategies, you can stick to your decision to live tobacco-free:

- **Surround yourself with positive influences.** Being around people who share your healthy-living values and beliefs will strengthen your commitment to lead a tobacco-free life. Choose friends who do not use tobacco.
- **Reduce peer pressure.** By staying away from situations where tobacco products may be used, you reduce the chance of being pressured to use tobacco.
- **Be prepared with refusal skills.** Practice in advance what you will say if someone offers you tobacco. Be assertive, and leave the situation if the pressure continues. Be confident and stand up for your healthy choices.

Quitting Tobacco Use

Main Idea There are good reasons for quitting tobacco use.

Teens who use tobacco give these reasons for quitting:

- They begin to have health problems, such as asthma, coughing, or respiratory infections.
- They realize the high cost of tobacco or find it difficult to purchase tobacco products if they are under 18.
- They realize that using tobacco can lead to other risky behaviors, such as the use of alcohol and other drugs.
- They understand the damaging effects of secondhand smoke and do not want to harm others.
- They feel more powerful because they are not controlled by an addiction to nicotine.



■ **Figure 20.8** Choosing friends who support a tobacco-free lifestyle will help you stay tobacco-free. *What are some health benefits of living tobacco-free?*

Ending the Addiction Cycle

Overcoming nicotine addiction can be difficult, but millions of people have succeeded. It is not impossible. It is common to experience symptoms of **nicotine withdrawal**, *the process that occurs in the body when nicotine, an addictive drug, is no longer used*. Symptoms can include irritability, difficulty concentrating, anxiety, sleep disturbances, and cravings for tobacco. To relieve the symptoms, some people use **nicotine substitutes**, *products that deliver small amounts of nicotine into the user's system while he or she is trying to give up the tobacco habit*. These include gum, patches, nasal sprays, and inhalers. Some are over-the-counter products; others require a doctor's prescription. Smoking while using nicotine substitutes is dangerous due to increased nicotine exposure.



Getting Help to Quit Tobacco Use

People who want to quit can try the following strategies:

- **Prepare for the quit day.** Set a target date, and stick to it. Prepare your environment and avoid tobacco triggers.
- **Get support and encouragement.** Tell everyone you know about your plan to quit. Support from family and friends will increase a person's chance of success.
- **Access professional health services.** Seek advice from a doctor, enroll in a **tobacco cessation program**—*a course that provides information and help to people who want to stop using tobacco*—or join a support group. Other helpful resources include the American Lung Association, the American Cancer Society, the Centers for Disease Control and Prevention (CDC), and local hospitals. Many high schools also sponsor tobacco cessation programs.
- **Replace tobacco use with healthy behaviors.** Try sugarless gum or carrots until cravings pass. Physical activity, good nutrition, avoiding drugs and alcohol, and using stress-management techniques can help you succeed.



READING CHECK

Describe What are the symptoms of nicotine withdrawal?



Explore glencoe.com and complete the Student Web Activity on the American Lung Association's recommendations for quitting smoking.



Health Skills Activity

Advocacy

Helping Teens Stay Tobacco-Free



Isabella recently quit smoking with the help of her friend, Anthony. Isabella told Anthony that she started smoking after giving in to the peer pressure. She also believed that tobacco products were not harmful to her health. She felt that tobacco products in a locked case at her local supermarket looked appealing. Anthony and Isabella want to discourage other teens from using tobacco by asking store managers to use less prominent product displays.

Writing Write a persuasive letter to a store manager asking that tobacco products be removed from open display areas. Include the following information in your letter:

1. Health problems caused by tobacco use.
2. The number of deaths each year from tobacco use.
3. The financial cost of tobacco-related health issues.

Image100/SuperStock (RF)



LESSON 2



ASSESSMENT

After You Read

Reviewing Facts and Vocabulary

1. What are four reasons that smoking among teens is on a downward trend?
2. List three reasons that you might use to convince a friend to quit using tobacco products.
3. Why might some people use nicotine substitutes when quitting smoking?

Thinking Critically

4. **Evaluate.** How will staying tobacco-free benefit your physical, mental/emotional, and social health?
5. **Synthesize.** Explain how the media influences teens to use and not to use tobacco products.

Applying Health Skills

6. **Refusal Skills.** Write a scenario describing a teen being pressured to use tobacco. Develop three refusal statements that the teen can use to avoid tobacco use.

Writing Critically

7. **Narrative.** Write a short story from the point of view of someone who is trying to quit smoking. Include at least three reasons for quitting and why it might be difficult to quit.



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



Barbara Penoyar/Getty Images (RF)

Promoting a Smoke-Free Environment

Real Life Issues

Avoiding Secondhand Smoke.

Ken visits his aunt and uncle once a week. Ken's uncle smokes and often lights up a cigarette while Ken is in the room. Ken doesn't like breathing secondhand smoke, but he doesn't want to offend his uncle. He is not sure what he can do to convince his uncle not to smoke.



Writing Write a paragraph about what you would do in this situation if you were Ken.



Health Risks of Tobacco Smoke

Main Idea Tobacco smoke can harm nonsmokers.

The health effects of tobacco smoke affect smokers and nonsmokers alike. Nonsmokers who breathe air containing tobacco smoke are also at risk for health problems. **Environmental tobacco smoke (ETS)**, or secondhand smoke, is *air that has been contaminated by tobacco smoke*. ETS is composed of **mainstream smoke**, the smoke exhaled from the lungs of a smoker, and **sidestream smoke**, the smoke from the burning end of a cigarette, pipe, or cigar. Because mainstream smoke has been exhaled by a smoker, it contains lower concentrations of carcinogens, nicotine, and tar. For this reason, sidestream smoke is more dangerous than mainstream smoke. ETS from cigarettes, cigars, and pipes contains more than 4,000 chemical compounds. More than 50 of those chemicals are cancer-causing carcinogens. Some studies show that infants and young children who are exposed to ETS are more likely to develop asthma than their peers who are not exposed to ETS. Inhaling ETS is a serious health risk.

LESSON 3

GUIDE TO READING



BIG Idea Secondhand smoke is harmful, but there are ways you can reduce your exposure.

Before You Read

Make an Outline. Use the headings of this lesson to make an outline of what you will learn about the risks of smoking. Use a format like this to help you organize your notes.

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



New Vocabulary

- environmental tobacco smoke (ETS) (p. 553)
- mainstream smoke (p. 553)
- sidestream smoke (p. 553)

Review Vocabulary

- Healthy People (Ch.1, L.4)



■ **Figure 20.9** Smoking is prohibited in many restaurants, and some restaurants are required to have a nonsmoking section. *How does this rule protect the health of restaurant customers and employees?*

Health Risks to Nonsmokers

Secondhand smoke causes about 3,000 deaths from lung cancer every year. ETS causes eye irritation, headaches, ear infections, and coughing in people of all ages. It worsens asthma and other respiratory problems, and it increases the risk of coronary heart disease.

Health Risks to Unborn Children and Infants

Choosing to live tobacco-free is one of the healthiest choices a pregnant female can make for her baby. Smoking during pregnancy can seriously harm the developing fetus. Nicotine passes through the placenta, constricting the blood vessels of the fetus. Carbon monoxide reduces the oxygen levels in the blood of the mother and fetus. This increases the risk of impaired fetal growth, spontaneous miscarriage and prenatal death, premature delivery, low birth weight, deformities, and stillbirths. The infant may also suffer from growth and developmental problems during early childhood.

Babies of mothers who smoked during pregnancy or who are exposed to ETS are more likely to die of sudden infant death syndrome (SIDS). Infants exposed to ETS after birth are twice as likely to die of SIDS. They may have severe asthma attacks, ear infections, or respiratory tract infections.



READING CHECK

Analyze How do mainstream smoke and sidestream smoke differ?



■ **Figure 20.10** Parents protect the health and development of their children by staying tobacco-free. *How can tobacco use harm young children?*

Health Risks to Young Children

Young children are particularly sensitive to ETS. Children of smokers are more likely to be in poor health than children of nonsmokers. Consider these facts:

- Children of smokers tend to have a higher incidence of sore throats, ear infections, and upper respiratory problems than children of nonsmokers.
- Secondhand smoke can slow lung development. Children who live with smokers are more likely to have weaker lungs than children of nonsmokers.

Also, children learn by example. The children of smokers are more than twice as likely to smoke themselves.



Reducing Your Risks

Main Idea You can take action to reduce the effects of ETS.

Since you spend so much time in your home, you can make an effort to minimize the health effects of ETS. If a family member smokes, encourage that person to quit by telling him or her the health effects of tobacco smoke. Try to establish smoke-free areas in the house, or make a rule that smokers go outside. If a smoker cannot always smoke outside, air cleaners can help remove some contaminants from the air. Open windows to allow fresh air in.

If you have a visitor who smokes, politely request that he or she does not smoke inside your home. If you are visiting a home in which someone smokes, try to stay outside or in a different room as much as possible. Ask to open the windows to provide fresh air. Suggest meeting elsewhere, such as in your home or at a library. In restaurants and other public places, request seating in a nonsmoking area. Express your preference wherever you can for a smoke-free environment.



I hate the smell of cigarette smoke. It reminds me that my grandfather has emphysema. He coughs and struggles to breathe all the time. When he was my age, he ran track and played football. Smoking made it hard for him to breathe, and so he stopped being active. I don't ever plan to smoke because I've seen what it did to my grandfather's health. For more fitness tips, visit the Online Fitness Zone at glencoe.com.

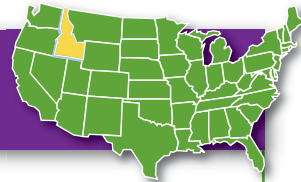


For more vocabulary practice, go to the Interactive Health Tutor at glencoe.com.



TEENS

Making a Difference



"Teens really do have a voice!"

A Voice for Change

Elizabeth W., of Idaho, is a member of the Magic Valley Tobacco-Free Coalition. The group challenged part of the Idaho Clean Indoor Air Act requiring all public buildings accessible to youth—except bowling alleys—to be tobacco-free. Elizabeth's group surveyed owners of bowling alleys. "Most owners actually wanted to be smoke-free," explains Elizabeth. "They said they didn't lose revenue by going tobacco-free."

On Lobby Day, when a bill was being presented, the teens met with representatives in favor of the exemption, presenting them with facts on the dangers of tobacco. Their hard work paid off. The vote passed to remove the exemption. Elizabeth says, "Young people think they don't have a voice, but when something like this happens, you find out you really do."



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

- 1 What can you do to make your community healthier for teens?
- 2 Does your state have a Clean Indoor Air Act? Is it similar to the Idaho law? If so, what businesses are exempt?
- 3 What actions did Elizabeth's group take to change the law? What impact did these teens have?



Creating a Smoke-Free Society

Main Idea In most states, it is illegal to sell tobacco to teens under the age of 18, and it is illegal to smoke in public places.



READING CHECK

List What are three ways you can reduce your exposure to ETS?

Medical research shows that any exposure to secondhand smoke can cause health problems. When a smoker chooses to smoke, that person makes a decision that affects his or her health, and the health of others. In the United States, efforts to create a smoke-free society continue to grow. The health effects of tobacco use, and the cost of health-related illnesses are just some of the reasons for this movement.

According to the U.S. Surgeon General, the only way to fully protect people from the damaging health effects of ETS is to prohibit smoking in public places. Many states now prohibit smoking in any workplace. Advertisements aimed at young people encourage them not to smoke, and public service announcements encourage parents not to smoke near their children.

Supporting National Health Goals

One of the goals of *Healthy People 2010* is to reduce tobacco use and the number of tobacco-related deaths. States and local communities are also supporting the efforts to create a smoke-free society. Laws prohibiting the sale of tobacco to minors have been enacted. Some states have successfully sued tobacco companies to recover the costs of treating tobacco-related illnesses. The money awarded in these cases may be used to fund anti-smoking campaigns or to offset the medical costs related to tobacco use. Community activities that promote a healthy lifestyle provide everyone with the opportunity to practice healthful behaviors. These activities allow anyone to become a role model encouraging others to avoid tobacco use.



■ **Figure 20.11** Laws restrict where people may smoke, as well as who can buy tobacco products. *What are the benefits of having smoke-free public places?*

LESSON 3



ASSESSMENT

After You Read

Reviewing Vocabulary and Facts

1. What is *environmental tobacco smoke*, and what chemical does it contain?
2. List three ways that ETS affects children.
3. What are two public policies aimed at reducing ETS?

Thinking Critically

4. **Analyze.** How can smoking during pregnancy have long-term effects on the child?
5. **Explain.** Why should you try to avoid ETS, and how can you reduce your exposure to ETS?

Applying Health Skills

6. **Analyzing Influences.** Keep a log of how many tobacco ads you see in one week. Note what type of media was used (print, audio, video), where you saw the ad, and who was targeted. List steps you could take to eliminate these influences in your community.

Writing Critically

7. **Personal.** Describe a situation in which you were exposed to ETS. Include how you felt afterward physically and mentally. Then write about how you could have prevented being exposed to ETS in that situation.



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



A growing number of teen activists has declared a media war on big tobacco companies.

“Do you want to be deceived?” yells the speaker at the podium, 17-year-old Andy Berndt. “No!” roar the more than 700 teenage antismoking activists who have packed New Jersey’s Liberty Science Center. The shout seems loud enough to be heard all the way across the Hudson River—at Philip Morris’s Manhattan headquarters. That’s where this protest is aimed: at the giant cigarette companies that, the activists believe, target teen smokers.

A Stand Against Smoking

Each of the teens in the auditorium wears a white T-shirt declaring “Not for Sale.” This means that they can’t be bought by the millions of dollars tobacco companies spend every day advertising cigarettes. They’ve come here to declare something else—the creation of a statewide teen antitobacco group called REBEL (Reaching Everyone by Exposing Lies). It’s the newest in a pack of teen-led antismoking organizations starting up nationwide. Their mission: to teach teens not just about the health risks of smoking, but about the tactics tobacco companies use to hook young people on their products.

Recently “Not for Sale” commercials began airing on MTV and Nickelodeon.

Over the last decade, the audience meant to benefit from that message has been growing. Every day, 6,000 teenagers try smoking for the first time and 1,200 Americans die from tobacco-related disease. Studies show that nearly 80 percent of regular smokers light up their first cigarette by their 18th birthday.

Andy Berndt doesn’t think that lectures about health risks that can occur years down the road will convince teens to stop smoking. “No adult can make kids understand the issues like another kid,” he says. “If we educate other kids about all the ways the tobacco industry is trying to deceive them, we’ll win the war.” ■

TIME to THINK...

About Smoking

By yourself or in a small group, create your own antismoking advertisement for a magazine or a newspaper. Pay careful attention to the message you want to send by your choice of words and images. Share your ad with the class.



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 Tobacco Use****Key Concepts**

- ▶ All tobacco products contain harmful chemicals, including carcinogens and nicotine, an addictive drug.
- ▶ In addition to carcinogens and other toxic substances, tobacco smoke contains tar and carbon monoxide.
- ▶ Tobacco use causes both short-term and long-term damage to your body, such as lung cancer and heart disease.
- ▶ Tobacco use can also cause legal, social, and financial problems.

Vocabulary

- ▶ addictive drug (p. 543)
- ▶ nicotine (p. 543)
- ▶ stimulant (p. 543)
- ▶ carcinogen (p. 543)
- ▶ tar (p. 543)
- ▶ carbon monoxide (p. 543)
- ▶ smokeless tobacco (p. 544)
- ▶ leukoplakia (p. 544)

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

- ▶ Some teens are influenced by peers or the media to use tobacco, but many who start want to quit.
- ▶ The number of tobacco-free teens is steadily increasing.
- ▶ You can avoid using tobacco by carefully choosing your friends, avoiding places where tobacco is present, and having a refusal plan.
- ▶ Tobacco users often find it difficult to quit using tobacco because they experience nicotine withdrawal.

Vocabulary

- ▶ nicotine withdrawal (p. 551)
- ▶ nicotine substitutes (p. 551)
- ▶ tobacco cessation program (p. 551)

LESSON 3**Promoting a Smoke-Free Environment****Key Concepts**

- ▶ Environmental tobacco smoke (ETS) is harmful to nonsmokers and smokers because it contains toxic substances.
- ▶ A pregnant mother should avoid tobacco to protect the fetus.
- ▶ ETS is especially harmful to infants and young children.
- ▶ Laws and public policies are reducing ETS in public places.

Vocabulary

- ▶ environmental tobacco smoke (ETS) (p. 553)
- ▶ mainstream smoke (p. 553)
- ▶ sidestream smoke (p. 553)
- ▶ *Healthy People* (p. 557)



LESSON 1

Vocabulary Review

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

1. A(n) *stimulant* is a cancer-causing substance.
2. Tobacco users can become addicted to the *carbon monoxide* in tobacco.
3. When tobacco burns, it produces a thick, sticky, dark fluid known as *leukoplakia*.

Understanding Key Concepts

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

4. Which physical response is *not* caused by nicotine?
 - a. Increased heart rate
 - b. Physiological addiction
 - c. Reduced oxygen in the blood
 - d. Higher blood pressure
5. Leukoplakia can develop into which condition?
 - a. Emphysema
 - b. Oral cancer
 - c. Heart disease
 - d. Bad breath
6. Which of the following are ways that tobacco harms the cardiovascular system?
 - a. Increased heart rate, hardened arteries, chronic bronchitis
 - b. Increased heart rate, hardened arteries, increased risk of heart attack
 - c. Increased heart rate, chronic bronchitis, emphysema
 - d. Chronic bronchitis, emphysema, lung cancer
7. Which of the following is a way that tobacco use immediately affects the body?
 - a. Chronic bronchitis
 - b. Increased risk of cancer
 - c. Leukoplakia
 - d. Increased heart rate

Thinking Critically

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

8. **Explain.** Is smokeless tobacco less harmful than cigarettes? Why or why not?
9. **Analyze.** If you started smoking today and continued to smoke until you are 30 years old, would you have a higher risk of developing cancer? If so, why?
10. **Explain.** How does nicotine cause an increased risk of stroke?
11. **Discuss.** Kate says that it is her choice to smoke, and that she is the only one who has to worry about her health. How does her decision to smoke affect other people?
12. **Identify.** How can using tobacco impact the social life of a tobacco user?



LESSON 2

Vocabulary Review

Use the vocabulary terms listed on page 559 to complete the following statements.

13. When a tobacco user no longer uses tobacco, the body no longer gets nicotine, and the user experiences _____.
14. A(n) _____ can be used to deliver small amounts of nicotine to the body while a tobacco user is quitting tobacco.
15. A person who wants to successfully quit tobacco could join a(n) _____ that will help the person learn how to quit.



Understanding Key Concepts

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

16. Which is a strategy to keep you from becoming a tobacco user?
 - a. Practicing refusal statements
 - b. Saving money
 - c. Trying a cigarette
 - d. Using nicotine gum
17. Which of the following is a reason that a teen tobacco user should quit the habit?
 - a. Tobacco use looks sophisticated.
 - b. Their friends also smoke.
 - c. They can quit as adults.
 - d. They will experience health problems.
18. Why do people who are trying to quit tobacco experience physical symptoms such as irritability and anxiety?
 - a. They are not committed to quitting.
 - b. They are experiencing nicotine withdrawal.
 - c. They are upset that other people want them to quit.
 - d. They are not engaged in healthier behaviors.
19. Which is *not* a strategy that can help people give up tobacco?
 - a. Develop a new daily routine.
 - b. Take up a physical activity.
 - c. Model adults who smoke.
 - d. Join a support group.
20. People gain which health benefit by *not* using tobacco?
 - a. Good refusal skills
 - b. Friends who do not use tobacco
 - c. Lower risk of many diseases
 - d. Less money to spend on other interests



Thinking Critically

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

21. **Describe.** Why do tobacco users try to quit the habit?
22. **Infer.** Why did tobacco use among teens begin to decrease after 1998?
23. **Identify.** Why do some teens choose to use tobacco and other teens do not?
24. **Predict.** What are two reasons that teen tobacco users find quitting tobacco difficult?
25. **Describe.** What can a person do to quit using tobacco successfully?

LESSON 3

Vocabulary Review

Choose the correct term in the sentences below.

26. Environmental tobacco smoke is another name for *secondhand smoke* / *sidestream smoke*.
27. *Mainstream smoke* / *Sidestream smoke* comes from a smoker's lungs.
28. Higher concentrations of toxic substances are in *mainstream smoke* / *sidestream smoke*.

Understanding Key Concepts

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

29. Which is *not* a way that smoking during pregnancy affects the fetus?
 - a. Prenatal death
 - b. High birth weight
 - c. Premature delivery
 - d. Developmental problems
30. How can you reduce your risk from ETS?
 - a. Become a smoker.
 - b. Take vitamins.
 - c. Allow visitors to smoke in your house.
 - d. Visit places that are smoke-free.



Assessment

31. Which is a way that the government is reducing ETS exposure?
 - a. Banning smoking in public places
 - b. Distributing more tobacco licenses
 - c. Forming youth antismoking groups
 - d. Giving away air cleaners
32. ETS can cause which of these conditions?
 - a. Headache
 - b. Lung cancer
 - c. Sudden infant death syndrome
 - d. All of the above

Thinking Critically

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

33. **Identify.** If parents stop smoking, how will that decision help their children's health?

34. **Apply.** Your friend invites you over for dinner, but you know that your friend's parent smokes. What can you do?
35. **Infer.** What can you do to promote public policies that support a smoke-free environment?
36. **Explain.** How does the *Healthy People 2010* program promote health?



37. **Analyze.** Jim smokes around his friends, who do not smoke. Jim's friends say that they're not worried about the health effects of breathing the ETS created by Jim's tobacco smoke. Are they right *not* to be worried about their health? Explain your answer.



Project-Based

ASSESSMENT

Smoking in the Movies

Background

Smoking tobacco is discouraged or forbidden in many places. Restaurants, public buildings, schools, offices, airplanes, and even some outdoor parks are smoke-free zones. Yet, many movies continue to show people using tobacco products. In this activity, you will encourage filmmakers to stop showing people smoking in film.

Task

Compose a letter to the editor opposing smoking in movies, especially in movies aimed at teens.

Audience

Students in your school

Purpose

Take a public position on the dangers of media that influence teens to smoke tobacco.

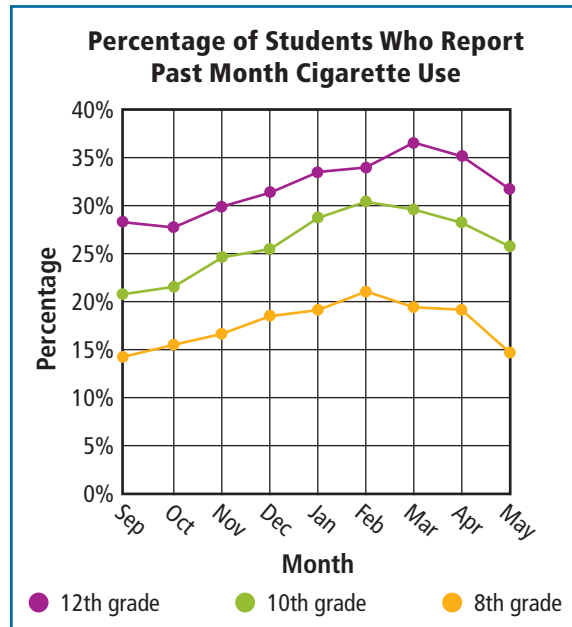
Procedure

- 1 Review your text for information on the health effects of tobacco use.
- 2 Conduct research to determine why people start smoking and what influences teens to smoke.
- 3 Learn the position of health advocacy organizations on smoking in movies and on television.
- 4 Read various letters to the editor in your local newspaper to study the structure and language.
- 5 Write a letter to the editor, making a clear argument opposing smoking in movies.
- 6 Follow-up by reading the letters to the editor section of the paper to see if your letter is published. Collect your letter and any responses in a file.



Math Practice

Interpret Graphs. Fred has decided to conduct a survey over the school year to find out what percentage of students in 8th, 10th, and 12th grades at his school reported cigarette use each month. Use the information Fred gathered in the graph to answer Questions 1–3.



- Which grade level had the highest percentage of smokers from September to May?
A. 8th grade
B. 10th grade
C. 12th grade
D. All grade levels were the same.
- During which time span was smoking the most common for 8th, 10th, and 12th graders?
A. Sep.–Oct. C. Jan.–Mar.
B. Nov.–Jan. D. Mar.–May
- In general, what trend is common to all three grade levels from September to May, according to the chart shown here? What influences do you think contributed to this trend?



For more test practice, visit glencoe.com and complete the Online Quizzes for Chapter 20.

Reading/Writing Practice

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

Today you will make a number of decisions. These decisions may or may not have a lasting effect on your life. One decision that will have a lasting effect is the decision not to start smoking. As you know, smoking is dangerous to your health. Smokers have a greater chance than nonsmokers of dying of lung and heart diseases. Cigarette smoke is also dangerous to others: secondhand smoke harms the health of nonsmokers, including the smoker's friends and family.

Smoking is also addictive. Tobacco poisons the user, but the nicotine in tobacco smoke makes the user want—and need—more. Many smokers admit that they would like to quit, but they think they can't. Starting is easy; quitting is hard. If you start smoking now, you may be starting a habit that is dangerous to you, your friends, and your family.

- Which sentence best summarizes the writer's view of smoking?
A. Many smokers have difficulty quitting.
B. Smoking is a harmful habit.
C. Starting is easy, quitting is hard.
D. Smokers will get lung cancer.
- How does the writer support the statement that nicotine is addictive?
A. By explaining that nicotine makes users want more
B. By stating how easy it is to quit smoking
C. By telling how easy it is to start smoking
D. By describing the dangers to nonsmokers
- Create a podcast to encourage teens not to start smoking.

National Education Standards

Math: Data Analysis, Reasoning

Language Arts: NCTE 1, NCTE 3, NCTE 4