

Reading

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World Health in the Twenty-first Century

UNIT

1



SKILLS AND STRATEGIES 1-3

- Continuing Ideas
- Cause and Effect
- Passive Sentences

READINGS

- Heart Disease and Changing Attitudes
- Cardiovascular Disease: A Good News – Bad News Story
- Medicine and Genetic Research: Promise and Problems
- AIDS – Not Someone Else’s Problem
- Better Health for Everyone: Health Care in Two Worlds



READING 1

HEART DISEASE AND CHANGING ATTITUDES

GETTING INTO THE TOPIC

Before you read an article, think of what you already know about the subject. Discuss the following questions with a partner.

- 1 What do we know today about the causes of heart disease that people fifty years ago did not know?
- 2 What ways do we have to prevent heart disease and to treat it?

GETTING A FIRST IDEA ABOUT THE ARTICLE

You will understand an article more easily if you can get an idea of its organization and content before you start reading. A quick way to do this is to read the first sentence of each paragraph. First sentences can help you because they often introduce the ideas that the writer will develop and explain in that paragraph.

For each paragraph, read the first sentence and think of a question that you expect this paragraph to answer. Then choose the question below that is most like your question. The first paragraph has been done for you as an example.

- _____ A How has the change in attitude affected people's behavior?
- _____ B How are attitude and behavior changes affecting people's health?
- _____ C How are people's attitudes changing?
- 1 D What are the effects of these discoveries about heart disease?

WHILE YOU READ

As you read the article, stop at the end of each sentence that contains boldface text and follow the instructions in the box in the margin.

Heart Disease and Changing Attitudes

In the last decades of the twentieth century, medical researchers showed that heart disease is associated with certain factors in our daily lives: stress, smoking, poor nutrition, and lack of exercise. Doctors and other health experts began to emphasize the fact that we can reduce the risk of heart disease by paying attention to **these factors**. As a result, many people realize that there is a connection between heart disease and lifestyle.

This is a continuing idea. Check back and highlight the words that show its meaning.

This new awareness is changing public attitudes about health. In the past, people tended to think that it was sufficient to have access to doctors on whose expertise they could rely. Now people understand that merely receiving the best treatment for illness or injury is not enough. They have learned to take more responsibility for maintaining and improving their own health.

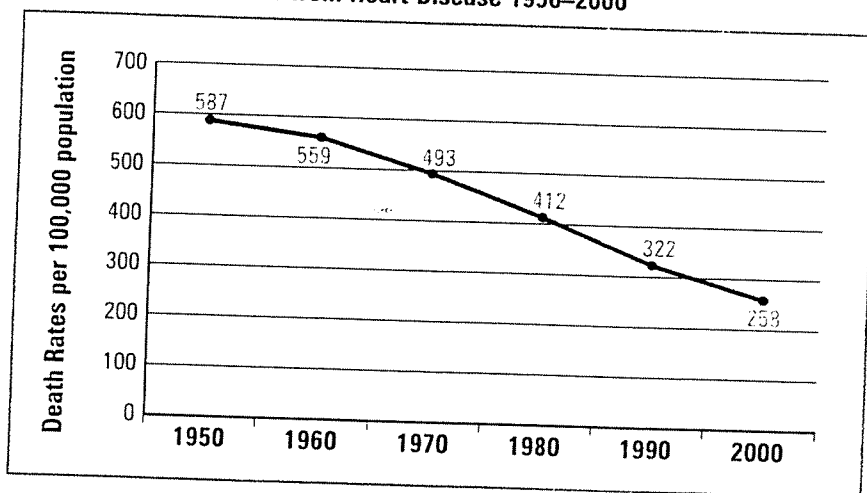
This also is a continuing idea. Check back for the meaning of *The shift in attitude*. Highlight it.

The shift in attitude can be seen in some behavioral changes that have occurred since the 1970s. In the United States today, many smokers have broken the habit and fewer people take it up. The percentage of smokers is far below the level of the 1960s and 1970s. People are becoming more serious about reducing stress. Many have changed their diets and are eating food with less fat and cholesterol. More people are aware of the benefits of regular and frequent exercise like walking, running, and swimming; some even walk or bicycle to work instead of driving or using public transportation.

The health effects of these changes in attitude and behavior are clear. Since the 1950s, the number of deaths from heart disease per 100,000 has fallen. (See Figure 1.1.) A partial explanation for this is that better diagnosis and treatment is helping people avoid or survive heart attacks. However, health experts have no doubt that much of **the improvement** has occurred because a better-educated public has become aware of the benefits of prevention.

Check back for the meaning of the phrase *the improvement*. Highlight it.

FIGURE 1.1 U.S. Deaths from Heart Disease 1950–2000



MAIN IDEA CHECK

Identify the sentence that best expresses the main idea of the article.

- a Better methods of diagnosis and treatment have reduced the number of deaths from heart disease in the United States.
- b Medical research has shown that people should reduce the amount of fat they eat.
- c As a result of information about the causes of heart disease, people are changing the way they think about health care and are leading healthier lives.
- d The percentage of Americans who smoke today is much lower than it was in the 1970s.

A CLOSER LOOK

Look back at the article to answer the following questions.

- 1 What factor does the writer *not* associate with heart disease?
 - a Unhealthy food
 - b Cigarettes
 - c Poverty
 - d Lack of regular exercise
- 2 The article suggests that doctors in the past did not always inform their patients about the importance of exercise and good nutrition for health. True or False?
- 3 According to the article, what happens to your risk of getting heart disease if you don't smoke, if you exercise regularly, and if you reduce the fat in your food?
 - a The risk increases.
 - b The risk decreases.
 - c The risk remains the same.
 - d The article does not discuss this question.
- 4 What change in attitude does the writer describe?
 - a More and more people are realizing that medical science can cure heart disease.
 - b Many people are realizing that they should take better care of their health.
 - c More and more people are realizing that they need a good doctor.
 - d A decreasing number of people are dying from heart disease.
- 5 It is still too early to see results from the change in attitude that the article describes. True or False?

VOCABULARY STUDY: SYNONYMS

Find words in the article that are similar in meaning to the following.

- 1 a period of ten years (*n*) Par. 1
- 2 to be connected with something or someone (*v*) Par. 1
- 3 pressure (*n*) Par. 1
- 4 the food the body needs (*n*) Par. 1
- 5 to give special importance to something (*v*) Par. 1
- 6 realization (*n*) Par. 2
- 7 enough (*adj*) Par. 2
- 8 to depend on someone or something (*v*) Par. 2
- 9 only (*adv*) Par. 2
- 10 to keep something in good condition (*v*) Par. 2
- 11 the food a person eats (*n*) Par. 3
- 12 happening often (*adj*) Par. 3
- 13 the way people think and feel about something (*n*) Par. 4
- 14 a feeling of not being sure (*n*) Par. 4
- 15 helpful effect (*n*) Par. 4

VOCABULARY STUDY: WORDS IN CONTEXT

Complete the sentences with words from the list below. If necessary, review the words in the Key Vocabulary from the Readings on page 245.

tend regular sufficient factors diagnose
expertise access to treatments prevent survive

- 1 A vitamin deficiency occurs when a person's diet does not have _____ vitamins to maintain good health.
- 2 We need to _____ heart disease as early as possible if we want to increase our chances of treating it successfully.
- 3 Because early diagnosis is important, you should have _____ examinations by your doctor.
- 4 Some people _____ not to think about their health until they become ill. Clearly they still don't understand the importance of prevention.
- 5 Stress and smoking are _____ that increase the risk of heart disease. Two others are diabetes and high blood pressure.
- 6 Medical scientists are researching new ways to fight cancer. Some of these _____ have been successful in studies on human patients.
- 7 Because of modern medicine, many people _____ diseases and injuries that would have killed them several decades ago.

- 8 It is possible to get excellent medical care in the United States. However, many other people don't have _____ such care because they have no health insurance.
- 9 It takes many years of study, training, and hard work to develop the _____ that is needed to become a world-class heart surgeon.
- 10 Health education teaches people to help _____ disease, for example, by following a healthy diet and exercising regularly.

Research

Do Internet or library research to find additional, up-to-date information on heart disease.

Discussion

Discuss the following question with a partner.

What connection might there be between heart disease and poverty? ✓

Writing

Write a short report on the results of your research or your discussion.

READING 2

CARDIOVASCULAR DISEASE: A GOOD NEWS — BAD NEWS STORY

GETTING INTO THE TOPIC

Thinking about the title of an article can help you get an idea of the content. Read the title of this article and discuss the following questions with a partner.

- 1 What do you think the good news about cardiovascular disease might be?
- 2 What do you think the bad news about cardiovascular disease might be?

GETTING A FIRST IDEA ABOUT THE ARTICLE

Sometimes you will want to get specific information from an article without reading the complete article. Scanning is a skill that will help you get an idea of the content and organization of an article or part of an article before you read it. Successful scanning has the following steps.

- ☛ Decide what information you want to find.
- ☛ Think of key words (and synonyms) that might help you find that information.
- ☛ Quickly look through the text for your key words.
- ☛ When you find a key word, stop scanning and start reading carefully to find the information you want.

Scan only the first sentence of each paragraph to find which paragraphs contain the good news and which contain the bad news about cardiovascular disease. Then complete the chart. Write *GN* for good news or *BN* for bad news. List the key words that help you. Paragraph 1 has been done for you as an example.

1	GN	Deaths . . . decrease
2		
3		
4		
5		
6		

WHILE YOU READ

As you read the article, stop at the end of each sentence that contains boldface text and follow the instructions in the box in the margin.

* Related to the heart and blood vessels.

Cardiovascular Disease: A Good News— Bad News Story

Deaths from cardiovascular disease (CVD), which includes heart disease, high blood pressure, and strokes, first began to decrease in the 1960s in Western countries and have continued to do so since then. In the United States, the death rate from heart disease fell by over 35 percent between 1980 and 1997. Similar decreases have occurred in other Western countries.

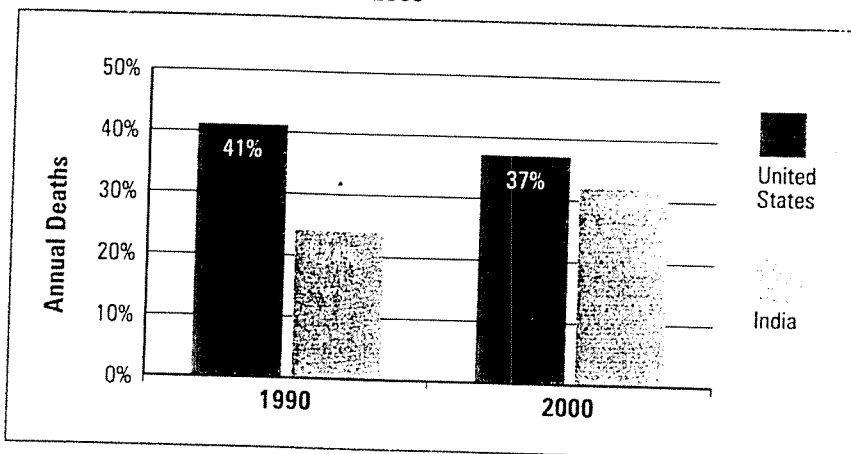
How can we explain this encouraging development? One factor is that well-informed people are willing to change to a healthier lifestyle in order to reduce their risk of CVD. Another important factor is that the diagnosis and treatment of the disease have improved. Advances in technology have made possible the early diagnosis of conditions that may cause serious problems later. As a result, doctors can treat these conditions either by prescribing drugs to lower blood pressure or cholesterol or by performing surgery to repair damage to the heart. For patients who have already suffered a heart attack, the news is also good. Thanks to high-tech equipment, drugs, and experienced surgeons, many people recover and lead active lives after operations that were impossible four or five decades ago.

The news about cardiovascular disease, however, is not all good. First, in spite of the fall in death rates, CVD is still the most common cause of death in most Western countries. The 2000 statistics for the United States, for example, show that heart disease was responsible for more than 30 percent of deaths in that year and was the greatest single cause of death. The numbers, of course, would be even worse if we included deaths that are associated with high blood pressure and strokes. (See Figure 1.2.)

This encouraging development is a continuing idea. Check back for its meaning. Highlight it.

Scan forward to find out how many problems there are. Highlight the words that help you. Then come back and continue reading.

FIGURE 1.2 Cardiovascular Disease as a Cause of Death in the United States and India: 1990 and 2000



At the same time as CVD deaths are falling in developed countries, they are increasing in developing countries.

The second piece of bad news is that CVD, which was once considered a problem exclusively in wealthier countries, is becoming a major health problem in developing countries. (See Figure 1.2.) Here, rapid social change is introducing the risk factors that we usually associate with CVD – a decrease in physical activity, an increase in smoking, and a change to a less healthy diet. In 2001, the World Health Organization predicted that CVD would be the leading cause of death in the developing world within ten years. Clearly, CVD is a health risk that needs urgent attention worldwide.

What can be done to fight this killer disease? The surgical treatment of heart disease will continue to benefit patients in countries where the expertise, equipment, and other resources are available. By itself, however, **such treatment** is not an adequate response to the CVD problem – for the following reasons. It is so expensive that it is an enormous burden even for the wealthy nations that can afford to offer it at present. For developing countries, which often do not have the necessary financial, technological, and human resources, large treatment programs are simply not possible.

For these reasons, health experts have concluded that a global strategy to fight CVD must emphasize prevention of the disease through community and government programs. Community programs can attempt to reduce the major risk factors of CVD by educating people about the connection between lifestyle and CVD. Governments can discourage smoking and encourage healthier eating – for example, by not allowing tobacco and food industries to advertise unhealthy products. There are, however, considerable obstacles to the success of such programs. In the next section of this article, we will turn our attention to these obstacles.

Check back for the meaning of *such treatment*. Highlight it.

Check back to identify the reasons. Number them.

MAIN IDEA CHECK

Identify the sentence that best expresses the main idea of the article.

- a Cardiovascular disease is still the most common cause of death in the Western world.
- b In spite of progress in fighting it, cardiovascular disease is still a major problem in the developed world and is becoming one in the developing world.
- c Modern medicine is helping people recover from heart disease and live active lives afterward.
- d Because of advances in medicine, cardiovascular disease is no longer the problem it used to be in the industrial countries.

A CLOSER LOOK

Look back at the article to answer the following questions.

- 1 Cardiovascular disease and heart disease are the same. True or False?
- 2 According to the article, what could explain the fall in the CVD death rate in the wealthier countries?
 - a Better drugs, earlier diagnosis, high-tech equipment, and expert surgeons
 - b The public's readiness to make changes in lifestyle
 - c A public that understands more about the causes of CVD
 - d All of the above
- 3 According to health experts, where should we place the greatest emphasis when we develop a strategy to reduce CVD worldwide?
 - a On preventing CVD
 - b On treating CVD
 - c On buying high-technology equipment for heart operations
 - d All of the above
- 4 According to the writer, why can heart surgery not be the main response to CVD in the countries of the developing world?
 - a They do not have enough trained specialists.
 - b They cannot afford to offer large treatment programs for people with CVD.
 - c The high-tech equipment that is necessary for such surgery is not available.
 - d All of the above
- 5 According to the article, fighting CVD through community and government programs will be easy. True or False?

CONCRETE STUDY SYNDROMES

Find words in the article that are similar in meaning to the following.

- 1 causing feelings of hopefulness (*adj*) Par. 2
- 2 ready or eager (*adj*) Par. 2
- 3 improvements; progress (*n*) Par. 2
- 4 a medical operation (*n*) Par. 2
- 5 tools that are necessary for a task or activity (*n*) Par. 2
- 6 to get better after an illness (*v*) Par. 2
- 7 frequent (*adj*) Par. 3
- 8 only; not including anyone or anything else (*adv*) Par. 4
- 9 needing to be done immediately (*adj*) Par. 4
- 10 able to be found and used (*adj*) Par. 5
- 11 very large (*adj*) Par. 5
- 12 a difficult responsibility (*n*) Par. 5
- 13 to have sufficient money (*v*) Par. 5
- 14 big enough to be important (*adj*) Par. 6
- 15 things that prevent progress (*n*) Par. 6

VOCABULARY REVIEW: SAME OR DIFFERENT

The following pairs of sentences contain vocabulary from Readings 1 and 2. Write *S* in the blank if the two sentences have the same meaning. Write *D* if the meanings are different.

- | | |
|---|---|
| <p>_____ 1 The patient is recovering after suffering a heart attack last Monday.</p> | <p>The patient's condition is improving after her heart attack last Monday.</p> |
| <p>_____ 2 Experts are sure that we can lower the death rate from heart disease if we emphasize the fact that exercise is important for maintaining health.</p> | <p>Experts have no doubt that we can reduce the number of deaths from heart disease by stressing the importance of exercise for health.</p> |
| <p>_____ 3 John is going to perform major surgery tomorrow.</p> | <p>John is going to have a major operation tomorrow.</p> |
| <p>_____ 4 A recent study concluded that, for millions of Americans, lack of health insurance is a major obstacle to getting access to good health care.</p> | <p>According to a recent study, good health care is readily available to millions of Americans who lack health insurance.</p> |
| <p>_____ 5 We can decrease health care costs if we stress disease prevention and early diagnosis.</p> | <p>By emphasizing the prevention and early diagnosis of disease, we can reduce the financial resources we need to spend on health care.</p> |

_____ 6 According to medical research, there is a clear association between heart disease and stress, poor diet, and insufficient exercise.

Medical research shows that stress, poor nutrition, and lack of physical exercise are all factors that increase the risk of heart disease.

_____ 7 Instead of merely increasing resources to correct deficiencies in hospital care, the government is also financing programs to make people aware of the benefits of good nutrition.

The government is not spending more money on hospital care; instead, it is paying for programs that educate people about the importance of a healthy diet.

_____ 8 Early diagnosis may explain why survivors of cancer or heart disease are more common among Americans who have health insurance than among uninsured Americans.

Access to early diagnosis is the probably the reason why the death rate from heart disease is lower among Americans who have health insurance than among Americans without insurance.

Research

Do Internet or library research to find additional, up-to-date information on CVD in the developing world. The Web site of the World Health Organization (WHO) would be a good place to start.

Discussion

Discuss the following situation with a small group.

You belong to a government committee on health care. You have \$20 million to finance a project that is intended to lower the death rate from heart disease. As a committee, decide which of the following two projects should receive the \$20 million.

Project 1. Develop an artificial human heart.

Project 2. Inform the public about the link between heart disease and lifestyle.

Writing

Write a short report on the results of your research or your discussion.

READING 3

MEDICINE AND GENETIC RESEARCH: PROMISE AND PROBLEMS

GETTING INTO THE TOPIC

Study the title of the article. Then discuss the following questions with a partner.

- 1 What is genetic research?
- 2 What advances have genetic researchers achieved in recent years?
- 3 What is the possible connection between medicine and genetic research?

GETTING A FIRST IDEA ABOUT THE ARTICLE

Scan only the first sentence of each paragraph. If you expect the paragraph to be about positive developments, write *Promise* in the chart; if you think the paragraph will contain negative developments, write *Problems*. List the key words that help you. Paragraph 1 has been done for you as an example.

PARAGRAPH	TYPE OF INFORMATION	KEY WORDS
1	Promise	progress . . . benefitting
2		
3		
4		
5		
6		
7		

WHILE YOU READ

As you read the article, stop at the end of each sentence that contains boldface text and follow the instructions in the box in the margin.

Genetics: The branch of biology that deals with - heredity, etc. the mechanisms of heredity transmission

Medicine and Genetic Research: Promise and Problems

Since the 1970s, medicine has been benefiting from progress in genetic research. Decades ago, for example, scientists succeeded in identifying the genes that are associated with some serious diseases and birth defects. **These advances** helped medical science to develop tests that, in turn, have enabled doctors to inform their patients about the potential risks of such genes for themselves and for their children. Some of the tests can determine if the patients themselves are carriers of a defective gene. Others, such as amniocentesis, can identify a variety of genetically inherited and often fatal abnormalities in unborn babies.

These early genetic tests offered the possibility of slowing the spread of, or even eliminating, a number of incurable genetic diseases. We can begin to do this, health experts argue, by informing people who carry defective genes about the health risks for any children they might have. This practice is already quite common in many countries. For example, after tests have shown that they have the faulty gene that causes Huntington's disease, a slow-developing but fatal neurological condition, some people have decided not to have children. They are unwilling to take the 1-in-2 risk that a child of theirs will inherit the gene and suffer from the same condition.

In the 1990s, genetic research advanced rapidly. Research institutions, biotechnology companies, and investors became more aware of the enormous potential of genetic medicine. This led to a rapid increase in financial support for the field, which, in turn, helped researchers

Check back for the meaning of these advances. Highlight it.

is a test offered during pregnancy to check if your baby has a genetic or chromosome condition.

- Genetic (Exhibition) (Death in brain cells).

Cause and Effect Marker! Underline the cause and highlight two effects.



Thanks to advances in genetic research and medicine, we can look forward to a future in which babies are free of genetic disease.

to make rapid advances. By the year 2000, researchers had begun to develop and test treatments for life-threatening genetic illnesses. The early results of some of these tests were very promising. In 2000, for example, French doctors reported success with a procedure in which they treated three babies who suffered from a rare type of immune deficiency. They introduced into the infants' bone marrow a gene that functioned normally. Ten months later, the children's immune systems appeared completely normal.

2 genetic disorder affecting the lungs
treatment of illness
تطبيق بيولوجي

تطبيق البيولوجيا

However, in spite of the successes during this first decade, gene-therapy research experienced considerable problems and limitations. Some researchers overstated the progress that had been made and understated the many major problems that still remained. For example, they predicted that they would soon be able to cure diseases like cystic fibrosis and cancer. However, they ignored the fact that their successes had occurred in small numbers of patients with less complex genetic conditions.

As you continue reading this paragraph, highlight the final outcome in each problem. Then mark the cause of each problem by writing Cause in the margin.

direct observation of a patient

Cause and Effect Marker! Underline the cause of the problems. Use it to help you with the rest of the paragraph.

There were also more serious problems. First, some researchers conducted clinical trials of new procedures before sufficient evidence was available that the procedures were capable of producing a scientific or medical benefit. As a result, the success rate in many trials was disappointing. Worse, clinical trials sometimes took place before researchers had adequately assessed the risks to the human participants. In one such case, an eighteen-year-old volunteer subject died after he developed an extreme immune system reaction to the procedure.

These problems, critics said, were **attributable to** the relationship between commercial biotechnology companies and researchers in clinics and universities, who are under pressure to find funding for their work. In this relationship, companies make funding available to researchers, who then test products and procedures that the companies are developing. The result was predictable. To make the profits that would satisfy their investors, biotech companies pressed researchers for early clinical trials. The researchers naturally wanted their funding to continue. In these circumstances, some researchers understated the risks to patients and test subjects and moved into clinical trials too soon.

For many researchers in genetic medicine, the criticism was justified. They accepted the need to return to the caution that is necessary in medical research. They became more careful both in deciding to proceed to clinical trials and in talking about any success they had achieved in very limited clinical trials. They did not lose their belief in the enormous potential of gene therapy to treat conditions like cancer, diabetes, and heart disease. However, they now warned that **such treatment** was still years, sometimes decades, in the future.

Check back for the meaning of such treatment. Highlight it.

MAIN IDEA CHECK

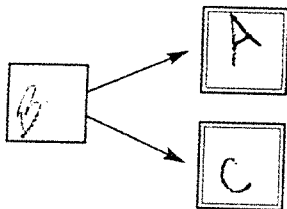
Identify the sentence that best expresses the main idea of the article.

- a Genetic researchers made progress toward treating or eliminating a small number of fatal diseases, but they also made some serious mistakes.
- b Thanks to progress in genetic research, doctors can now identify people whose children will be born with certain genetic abnormalities.
- c Medicine has benefited a great deal from the advances that have been made in genetic research since the 1980s.
- d In the 1990s, there was an enormous increase in funding for genetic research and for research into gene therapy.

A CLOSER LOOK

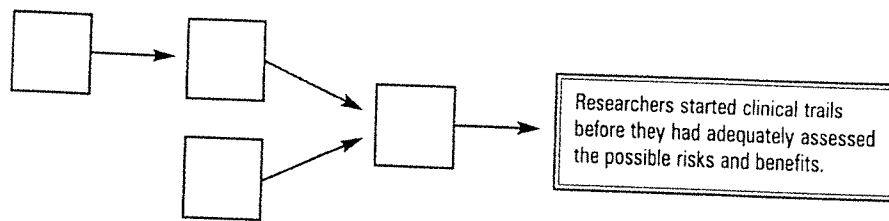
Look back at the article to answer the following questions.

- 1 What are the names of some diseases with a genetic component?
- 2 How did the early genetic tests offer the chance to fight some genetic diseases?
 - a They helped people make informed decisions about having children.
 - b They used new technology to cure the diseases.
 - c They enabled doctors to perform surgery on children with genetic defects.
 - d They enabled us to eliminate a number of incurable genetic diseases.
- 3 During the 1990s, people in gene therapy research always spoke realistically about the progress they had made and about the obstacles that remained. True or False?
- 4 In paragraph 5, the writer gives a general cause and effect explanation of serious problems with early gene-therapy research. Reread the paragraph. Then complete the cause and effect diagram with sentences A-C. Write the correct letter in each box.



- A Not many of the clinical trials were successful.
- B Researchers started clinical trials before they had adequately assessed the possible risks and benefits.
- C A participant in one trial died.

- 5 A chain of cause and effect explains why researchers in the 1990s sometimes conducted clinical trials too early. Reread paragraph 6 for its details. Then complete the cause and effect diagram with sentences A–D. Write the correct letter in each box.



- A Researchers wanted their funding to continue because their jobs depended on it.
 B To satisfy their investors, biotech companies wanted profits as soon as possible.
 C Under this pressure, researchers did not pay enough attention to safety.
 D Biotech companies put pressure on researchers to conduct early clinical trials.
- 6 What does this article suggest about the state of gene therapy at the end of the twentieth century?
- a It was so successful that some treatments were becoming widely available.
 b It was successful enough that we could look forward to the availability of some genetic treatments in the future.
 c It experienced enough failures to cause serious doubts about gene therapy ever being worthwhile.
 d It was not receiving sufficient funding to conduct the basic research that was needed.

VOCABULARY STUDY: SYNONYMS

Find words in the article that are similar in meaning to the following.

- 1 not working correctly (*adj*) Par. 1
- 2 to receive from an earlier generation in one's family (*v*) Par. 2
- 3 people who buy a share of a business in order to make a profit (*n*) Par. 3
- 4 very dangerous (*adj*) Par. 3
- 5 a method of doing something, often in medicine (*n*) Par. 3
- 6 to work; to operate (*v*) Par. 3
- 7 to describe something as greater than it really is (*v*) Par. 4
- 8 not to pay attention to someone or something (*v*) Par. 4
- 9 able to do something (*adj*) Par. 5
- 10 something that protects the human body from disease (*n*) Par. 5
- 11 with the purpose of making money (*adj*) Par. 6
- 12 money that is available for a project (*n*) Par. 6
- 13 expected before it happens (*adj*) Par. 6
- 14 having a good reason (*adj*) Par. 7
- 15 to get something you want by working for it (*v*) Par. 7

VOCABULARY STUDY: WORDS IN CONTEXT

Complete the sentences with words from the list below. If necessary, review the words in the Key Vocabulary from the Readings on page 248.

assess conduct eliminate fatal cautious
profit potential evidence determine ignore

- 1 Before researchers start to test new treatments on human subjects, they need to _____ the possible risks to their subjects.
- 2 In assessing risks to their human subjects, researchers should be extremely _____. It's better to overstate than to understate the possible dangers.
- 3 In 1967, the World Health Organization began a program whose goal was to _____ smallpox. In 1979, doctors treated the last case of wild smallpox.
- 4 Malaria is a disease that can be _____ if it is not treated in time. It kills over a million children under five every year.
- 5 After a new drug is developed and tested on animals, the next step is to _____ clinical trials with human subjects.
- 6 One purpose of clinical trials is to _____ if a new drug is beneficial for the treatment of a medical condition.
- 7 This new discovery has the _____ to revolutionize the treatment of disease. However, it may take years before we know if our hopes are justified.
- 8 A low fever in a child is usually not a cause for alarm. But don't _____ it! Keep an eye on the fever. If it gets worse, call your doctor.
- 9 Drug companies often invest millions of dollars to research a new drug before they start making a _____ from selling the drug.
- 10 The results of genetic tests are now used as _____ in criminal trials. Sometimes such tests can show conclusively who did or did not commit the crime.

READING 4

AIDS — NOT SOMEONE ELSE'S PROBLEM

GETTING INTO THE TOPIC

Activating what you know about a topic before you start reading is a good strategy. Work with a partner and share what you already know by discussing the following questions.

- 1 When was AIDS first recognized and named as a disease?
- 2 What can cause someone to get AIDS?
- 3 What are some of the symptoms of AIDS?
- 4 What is the treatment for AIDS?

GETTING A FIRST IDEA ABOUT THE ARTICLE

Read the first sentence of paragraph 1. Decide what the topic of the paragraph will be and then match your idea to one of the topics below. Write the number of the paragraph in the blank. Then do the same for paragraphs 2–6.

- _____ A The spread of HIV/AIDS in the United States
- _____ B The results of early research into HIV/AIDS
- _____ C The first appearance of AIDS in the United States
- _____ D Reasons for the slow reaction to the appearance of AIDS in the United States
- _____ E A discussion of how to solve the problem of HIV/AIDS
- _____ F The global spread of HIV/AIDS

WHILE YOU READ

As you read the article, stop at the end of each sentence that contains boldface text and follow the instructions in the box in the margin.

AIDS - Not Someone Else's Problem

By the late 1970s, an unusual health problem was beginning to appear in the United States. Healthy young people, most of them white homosexual males, started to suffer from infections that doctors had rarely seen. In some cases, treatment was not effective and the infections worsened. In other cases, the infections were successfully treated but they recurred. In all cases, the patients weakened and ultimately died. Their infections were symptoms of a condition that was unknown at that time. In 1982, the condition came to be known as AIDS (acquired immune-deficiency syndrome).

Scan forward. Highlight the words that show you where to look for each of these reasons. Then come back and continue reading for the main idea.

In these early days, the response to AIDS in the United States was slow - for at least **three reasons**. First, many medical experts disregarded the possibility that it was a completely new disease. Second, problems at the Centers for Disease Control slowed this important organization's reaction to the situation. Third, the White House did not feel comfortable talking about the two behaviors that seemed to be associated with the disease - illegal drug use and homosexual sex. From 1981 to 1984, in fact, the government prevented its top health official, the surgeon general, from making any public statements on AIDS.

However, in spite of the slow government response, medical science began to provide answers to basic questions about the disease. By 1982, research had established that the condition was transmitted through blood-to-blood contact with an infected person. The most common transmission routes also became clear: unprotected sexual contact with an infected person, the use of contaminated hypodermic needles in illegal drug use, and contact between an infected mother and her child during pregnancy. Another advance came in 1983, when French scientists identified the cause of AIDS - a virus that attacks the human immune system. They named it HIV (human immune-deficiency virus). Finally, in 1985, U.S. researchers developed the first blood test to identify the virus.

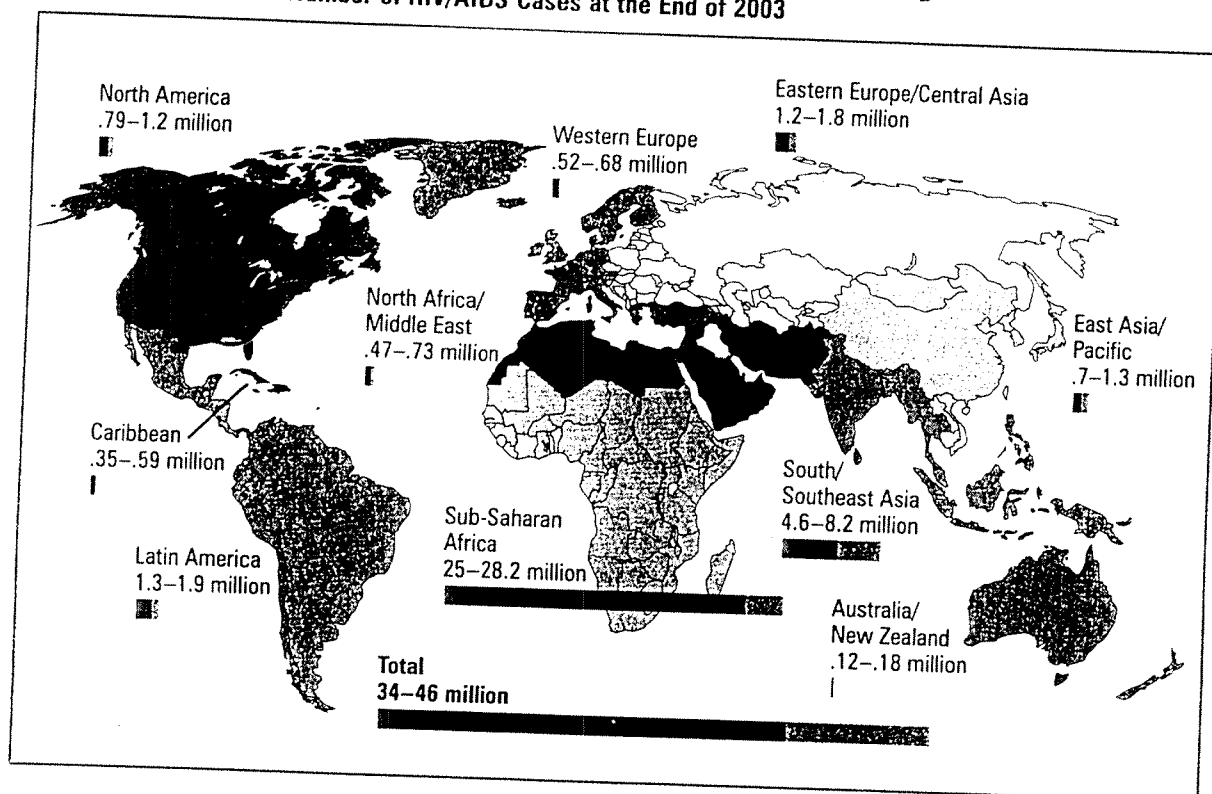
Scan forward and highlight the words that identify these groups. Then come back and continue reading for the main idea.

Between 1984 and 1989, the number of annual cases of AIDS in the United States rose by an enormous 660 percent. After that, the rate of infection fell, but HIV/AIDS continued to spread into **other social groups**. For example, between 1989 and 1992, the number of American teenagers who were infected with the virus rose by 75 percent. In 2001, a government study in six major U.S. cities found that 30 percent of young, gay, African American men were HIV-positive. In the same year, African Americans made up 68 percent of new infections among women. By 2001, more than 420,000 Americans had died of the disease and over 900,000 others were living with HIV/AIDS.

Scan forward and highlight 4-5 words or phrases that show the worldwide nature of the problem. Then come back and continue reading for the main idea.

Statistics show that HIV/AIDS quickly became a **worldwide problem**. By 1985, it had begun to kill large numbers of young, educated adults in sub-Saharan Africa. By 2000, experts estimate, it had left 12 million children without parents. In South Africa the rate of HIV infection was a catastrophic 25 percent of the adult heterosexual population. In South and Southeast Asia, the estimated number of people with HIV/AIDS increased from 600,000 to 5.8 million within the last decade of the twentieth century. In the countries of the former Soviet

FIGURE 1.3 Estimated Number of HIV/AIDS Cases at the End of 2003



Union, 700,000 people were living with HIV/AIDS in 2000, an increase of 55 percent over the estimated figures for 1999. Worldwide, by 2004, AIDS had killed more than 21 million men, women, and children. Furthermore, between 34 and 46 million people were living with HIV/AIDS (see Figure 1.3). These numbers left no doubt that HIV/AIDS was a truly global epidemic.

Where should we look to find an answer to this global catastrophe? Research into the disease has been continuing since the mid-1980s, when AIDS became a high priority in Western nations. Enormous sums of money have been made available to fund AIDS research – the U.S government alone contributed \$2.1 billion in the year 2000. And the research has produced some advances. Antiviral drugs that were introduced in the mid-1990s proved to be effective in slowing the development of AIDS in some HIV-infected patients. By 2001, a number of experimental vaccines were in development.

However, despite some encouraging progress, most experts were not optimistic that a complete answer to HIV/AIDS would appear soon – for at least two reasons. First, the antiviral drugs in use by 2001 were not effective in all cases and were certainly not a cure. Second, developing an effective vaccine will be very difficult, perhaps even impossible, because the virus is capable of changing very rapidly, up to 100,000 times faster than the influenza virus, and because it directly attacks the human immune system.

Under these circumstances, the only realistic response to the AIDS crisis is to make treatments more accessible and affordable, and

Cause and Effect Marker!
You already know the effect. Draw a simple cause and effect arrow diagram in the margin as you read on.

to emphasize prevention. At the same time, the task of developing effective prevention programs appears simple. For one thing, despite some success in treating the symptoms, AIDS remains a fatal disease. This fact should be a sufficient incentive to avoid becoming infected. In addition, we know how to prevent most cases of HIV/AIDS – people should avoid having unprotected sex or sharing a hypodermic needle with someone who might already be infected.

How many factors? Scan forward and highlight the words that help you answer this question. Then come back and continue reading for the main idea.

However, the task of developing prevention programs is made much more complex by a **number of factors**. First, because HIV/AIDS threatens so many people worldwide, effective programs of prevention are enormously expensive. Often the countries that most urgently need such programs are the least capable of organizing and financing them.

Check back for the meaning of *this reluctance*. Highlight it.

The second factor results from attitudes to sexual behavior, the main method of transmission for HIV. People are often unwilling to speak openly about sex, especially sexual behavior that societies tend to regard as less acceptable – homosexual sex, sex with prostitutes, sex with multiple partners, and underage sex. We see **this reluctance** not only in individuals but also among governments and other social institutions, including schools and churches. These institutions are not always willing to speak plainly and directly to people about the link between high-risk sexual behavior and HIV/AIDS. In fact, a common first response has been to deny that the disease could be a problem.

Check back for the meaning of *these groups*. Highlight it.

The third factor that complicates the task of developing effective prevention programs is a false sense of security about HIV/AIDS among the general population. People still tend to regard it as a disease that is exclusive to homosexual men and illegal-drug users. The majority of people believe that they have no contact with either of **these groups**. Even among high-risk sections of the U.S. population, by the year 2000 there were signs of a false sense of security in younger people who were disregarding warnings about unsafe sexual behavior. Perhaps they were being unrealistically optimistic about AIDS treatments. The statistics, however, show that such attitudes can have fatal consequences.

If they are to defeat HIV/AIDS, health experts must get the public to accept two basic facts. First, everyone is at risk; second, the risk decreases greatly if people avoid illegal drugs and follow the rules for safe sexual behavior. As the epidemic develops, however, experts do not underestimate the enormous obstacles that stand in the way of their completing the task.

MAIN IDEA CHECK

Here are the main ideas of each paragraph in the article. Match each paragraph to its main idea. The first one has been done for you as an example.

Paragraphs 1-6

- 9
- ~~3~~ A Researchers soon began to provide basic information about AIDS – its cause, transmission, and diagnosis.
- ~~1~~ B In 1982, researchers identified an unknown illness that had appeared in the United States in the late 1970s and named it AIDS.
- ~~2~~ C There are at least three reasons why the U.S. government and medical experts reacted slowly to AIDS.
- 10 ~~6~~ D Research into HIV/AIDS has received a lot of funding and has made some progress towards treating and preventing the disease.
- ~~4~~ E In the United States, HIV/AIDS at first spread very rapidly and then slowed but continued to infect new victims.
- ~~5~~ F HIV/AIDS quickly spread, and by the end of the twentieth century was an enormous global problem.

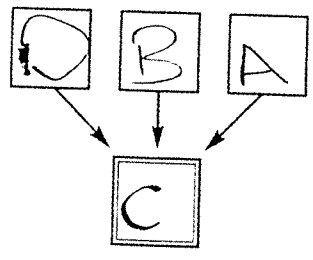
Paragraphs 7-12

- 11 ~~10~~ G Another obstacle to effective prevention of HIV/AIDS is people's reluctance to speak openly about sexual behavior, especially less socially acceptable behavior.
- ~~9~~ H One of the major obstacles to developing effective prevention programs for HIV/AIDS is their high cost.
- 12 ~~1~~ I Experts know that persuading people to change their AIDS-related attitudes and behaviors will be very difficult.
- ~~7~~ J By 2001, most HIV/AIDS experts did not believe that an effective treatment or vaccine for the disease would appear in the near future.
- 2 ~~14~~ K A final obstacle to successful prevention is that many people mistakenly believe they are not at risk for HIV/AIDS.
- ~~8~~ L Because HIV/AIDS is fatal and because we know how to prevent infections, the task of developing prevention programs would seem easy.

A CLOSER LOOK

Look back at the article to answer the following questions.

1 Reread paragraph 2. Then complete this cause and effect diagram with sentences A-D. Write the correct letter in each box.



- A The government was reluctant to talk openly about AIDS.
- B There were problems at the Centers for Disease Control.
- C In the United States, the early response to AIDS was slow.
- D Medical experts were not expecting a new infectious disease.

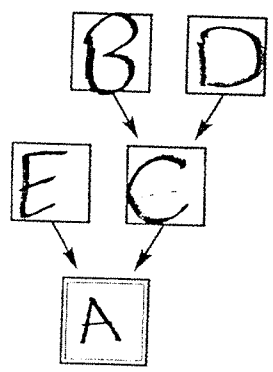
2 After reading paragraphs 1 and 2, you would be justified in believing that politics helped to determine the early U.S. response to AIDS. True or False?

3 Identify the way, according to the article, in which a person could *not* have become infected with the AIDS virus in the early 1980s.

- a Through sexual contact with an infected person
- b Before birth, from his or her mother
- c By sharing a drug needle with an infected person
- d By living in the same house as an infected person

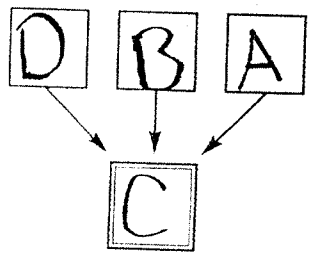
4 The history of AIDS shows that heterosexual sex carries no risk of AIDS. True or False?

5 Reread paragraph 7. Then complete this cause and effect diagram with sentences A-E. Write the correct letter in each box.



- A Experts do not expect an answer for AIDS soon.
- B HIV can change very fast.
- C Developing an AIDS vaccine will be very difficult, perhaps impossible.
- D HIV attacks the human immune system.
- E Medication to fight HIV/AIDS does not work in every case, nor is it a cure.

6 Reread paragraphs 9-11. Then complete the cause and effect diagram with sentences A-D. Write the correct letter in each box.



- A The majority of people believe that they are not at risk for HIV/AIDS.
- B Society is often not willing to discuss the sexual behaviors that place people at high risk for HIV/AIDS.
- C It is very difficult to develop effective prevention programs for HIV/AIDS.
- D The costs of education and prevention for HIV/AIDS are extremely high.

VOCABULARY STUDY: SYNONYMS

Find words in the article that are similar in meaning to the following.

- 1 a condition that is caused by a bacteria or a virus in the body (*n*) Par. 1 *Symptom*
- 2 finally (*adv*) Par. 1 *ultimately*
- 3 to give people something that is needed (*v*) Par. 3 *provide*
- 4 to determine the truth about something (*v*) Par. 3 *establish*
- 5 containing dangerous bacteria, viruses, or poisons (*adj*) Par. 3 *contaminated*
- 6 yearly (*adj*) Par. 4 *annual*
- 7 to calculate something without having exact information (*v*) Par. 5 *estimate*
- 8 disastrous (*adj*) Par. 5 *catastrophic*
- 9 worldwide (*adj*) Par. 5 *global*
- 10 situation (*n*) Par. 8 *Circumstance*
- 11 something that encourages people to do something (*n*) Par. 8 *incentive*
- 12 a piece of work that a person has to do (*n*) Par. 9 *task*
- 13 difficult to deal with (*adj*) Par. 9 *Complex*
- 14 against the law (*adj*) Par. 12 *illegal*
- 15 to think that something is smaller than it really is (*v*) Par. 12 *underestimate*

VOCABULARY REVIEW: SAME OR DIFFERENT

The following pairs of sentences contain vocabulary from Readings 3 and 4. Write *S* in the blank if the two sentences have the same meaning. Write *D* if the meanings are different.

- | | | |
|-------------------------|---|---|
| <input type="radio"/> D | 1 In spite of the considerable advances that medicine has made in the last sixty years, we still have not eliminated many infectious diseases. | Many communicable diseases have disappeared because of what has been achieved in medicine in the last sixty years. |
| <input type="radio"/> S | 2 The World Health Organization has reduced the number of cases of infectious diseases in developing countries through mass immunization programs. | By vaccinating enormous numbers of people in developing countries, the World Health Organization has eliminated many infectious diseases there. |
| <input type="radio"/> S | 3 One of the obstacles to developing an effective response to the HIV/AIDS epidemic is people's unwillingness to be honest about their sexual behavior. | People are reluctant to be honest about their sexual behavior; this is one factor that makes it difficult to develop successful programs to fight HIV/AIDS. |
| <input type="radio"/> D | 4 Scientists are cautiously optimistic that the next decade will see the development of effective genetic treatments for a number of fatal diseases. | Scientists are reluctant to predict that genetic medicine will be able to treat any fatal diseases within the next ten years. |

- 5 In a number of countries, providing adequate sanitation and clean water is the top priority for the health care systems.
- In some countries, contaminated water and a lack of access to adequate sanitation are the two most urgent problems the health care systems must solve.
- 6 The first important task for HIV/AIDS researchers was to determine how the virus was transmitted.
- Establishing how the HIV/AIDS virus spread was the first priority for researchers.
- 7 Medical science is developing new, more effective vaccines for certain diseases.
- Medical researchers are developing new, more effective drugs for the treatment of certain diseases.
- 8 A reluctance to see a doctor for regular physical examinations or at the first sign of symptoms may explain why low-income Americans survive heart disease and cancer less frequently than others.
- Low-income Americans have a higher death rate from cancer and heart disease than others, perhaps because they are less willing to have regular physical examinations or to see a doctor when symptoms first occur.

Research

Do Internet or library research to find additional, up-to-date information on HIV/AIDS. Here are some possible topics.

- AIDS in a specific country or community
- Recent developments in AIDS research

Discussion

Discuss the following situation with a partner:

You are a doctor. A patient of yours, who is a student, tells you that he has discovered that his roommate is HIV-positive. He is very concerned and wants your advice. What would you tell him?

Writing

Write a short report on the results of your research or your discussion.

MAIN READING

BETTER HEALTH FOR EVERYONE: HEALTH CARE IN TWO WORLDS

GETTING INTO THE TOPIC

Read the title of this article. Work with a partner and discuss the health care system of a country you are familiar with.

- 1 How do people pay for their health care?
- 2 What are the strengths and weaknesses of the health care system?
- 3 How could the health care system be improved?
- 4 If you are familiar with the health care system of another country, how is that system better or worse?

GETTING A FIRST IDEA ABOUT THE ARTICLE

You can quickly develop an idea of the topics and organization of a longer article by reading the section headings and the introduction (especially its final paragraph) and by examining the illustrations.

Read the section headings, look at the illustrations, and scan the introduction of this article. Then complete the chart by matching each topic with the section that deals with it. Some sections may have more than one topic. Write the number of the section (I–IV) in the blank.

SECTION	TOPIC
	The chances of getting good health care in the rich nations of the world
	Solutions to health care problems in less developed countries
	Different health care issues in different parts of the world
	Solutions to the health care problems in wealthy countries
	The high cost of health care and its impact on possible solutions

WHILE YOU READ

Read the article section by section. Stop after each sentence that contains boldface text and follow the instructions in the box in the margin. After you read each section, answer the Main Idea Check and A Closer Look questions, which can be found on pages 49–53.

BETTER HEALTH FOR EVERYONE: HEALTH CARE IN Two Worlds

I. ONE EARTH – TWO WORLDS OF HEALTH

“How can we provide the best health care for our people?” This is a question that every responsible society is attempting to answer. In the wealthier nations, doctors and patients demand that the health care systems provide the highest standard of service regardless of cost. If certain drugs or procedures are not immediately available to patients, angry complaints are heard. In the poorer countries, however, the priorities seem very different. Here an estimated 1.7 million children die annually from treatable infections; from common, curable diarrhea, and from infectious diseases like measles and whooping cough – diseases that have almost completely disappeared in the industrial nations. In the developing countries, it is believed, about 80 percent of all illnesses are the result of contaminated water and inadequate sanitation.

It seems, therefore, that there are two worlds of medicine and that these two worlds have **nothing in common** with each other. The industrial world is concerned about illnesses like heart disease and cancer, which are often still incurable; the developing world is concerned about illnesses that would disappear if basic health programs could be afforded. One world seeks to provide the latest, most advanced treatments for the small section of the population who are ill; the other has difficulty providing, for the majority of its people, things the industrial world takes for granted – clean drinking water, vaccines, and the drugs essential to medical care. The immediate problems that face these two worlds seem very different. However, when we examine the challenges and possible solutions, we see almost as many similarities among nations as differences.

II. HEALTH CARE COSTS AND ACCESS IN THE WEALTHIER COUNTRIES

Although the health care available in the wealthy countries is the best in the world, their health care systems are experiencing serious problems. By far the most urgent, complex difficulty is financial. Medical costs are already enormously high. For example, in Germany in 1995, total health care spending stood at \$210 billion. In the United States, total spending in 2000 was more than \$910 billion. Even more problematic, health care costs increased very rapidly. In the United States, for example, the rate of increase for 2001 was a troubling 11 percent.

Responses to rising costs caused access to health care to be reduced rather than maintained or increased. For example, in Britain, a country which provides publically funded health care to all its citizens, the government was reluctant, for political reasons, to increase the tax burden on the population and so had no additional money to invest in the country's health care system. As costs rose and funding did not, it became necessary to reduce services. The

In this paragraph do you expect to read about (a) similarities or (b) differences?

Scan forward and find at least three effects of rising costs and number them. Then come back and continue reading for the main idea.

number of hospital beds fell; less high-tech equipment was bought; and fewer doctors and nurses were hired. As a result, there were waits of six months or longer for modern diagnostic procedures like MRIs and colonoscopies, and the most up-to-date treatments were not available to every seriously ill patient who needed them. For some types of nonemergency procedures, such as cataract and hip-replacement surgery, patients had to wait for up to three years.

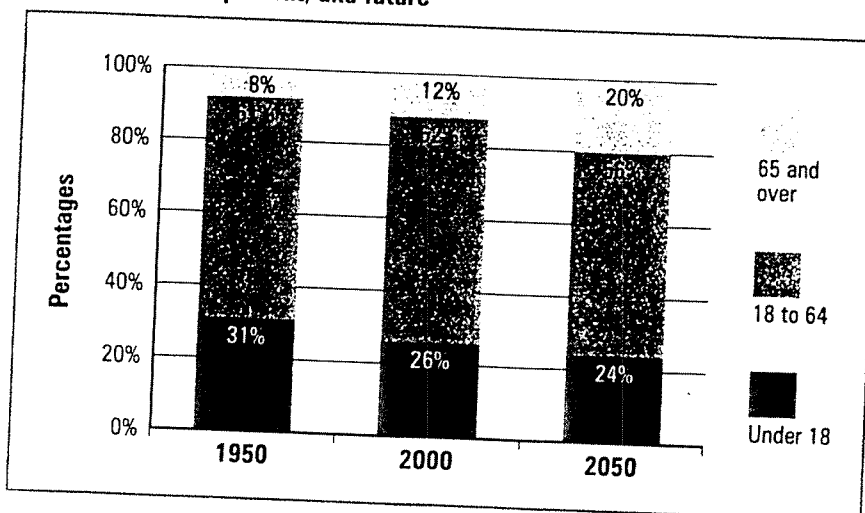
In the United States, where most health insurance is provided by employers, access to quality health care has also been reduced. In response to rising health care costs, the cost of insurance has increased. As a result, employers have found it difficult to maintain earlier levels of health care benefits. Many employers have had to reduce health care coverage for their employees, while others no longer can afford to provide any health insurance and have eliminated it completely. As a result, from 1987, the number of Americans without health insurance increased steadily; by 2002, an estimated 43 million people were uninsured. The changes affected almost everyone in some way, but clearly hit lower-income families harder.

The continuing rise in the costs of health care is **attributable to a number of factors**. One of these, according to critics of our health care systems, is our emphasis on *crisis care*, the treatment of disease after it has become serious. According to the critics, however, such an approach to health care tends to ignore a basic fact: crisis care is usually more expensive and often less effective than prevention or treatment after an early diagnosis. For today's killers, such as cardiovascular disease, breast cancer, and colon cancer, early diagnosis can greatly increase recovery rates and reduce the need for expensive crisis care later.

A second factor behind rising health care costs is that people are living considerably longer than they used to. Average life expectancy

How many factors? Quickly scan paragraphs 6-8. Highlight the words that show you where to look for these factors.

FIGURE 1.4 Percent of U.S. Population by Age Group: Past, present, and future



As the number and percentage of older people increase, so too will spending on health care.

In industrial countries rose through most of the 1900s and reached 77 years of age by the end of the century. Many people are surviving into their eighties and nineties. Because older people tend to require the services of the health care system more often than younger people, health care spending has increased.

A third reason for increasing costs is found in the public's attitude toward medicine. Today, many people demand that their health care systems provide them with the best treatment available, regardless of cost. Consider, for example, the question of bone marrow transplants. By 2000, research had established that **this procedure**, which then cost more than \$700,000, could be an effective treatment for some types of leukemia. A majority of the public want this treatment to be available to all leukemia patients. Such a demand explains why health care providers invest enormous sums of money in the latest equipment for diagnosis and treatment. A similar demand also explains why researchers continue to develop expensive technology, procedures, and drugs.

Is there a solution to the problem of reduced access to health care? To answer this question, we must first answer a more basic one: Is it possible to bring about change in any of **the three factors that have been identified?**

It should be possible to reduce the emphasis on crisis care that is typical of Western health care systems. We need to give greater priority to *primary health care*, which emphasizes the prevention and early diagnosis of disease through education and regular visits to a primary care doctor. In fact, many countries have already started to focus on primary health care – with good results. For example, as a result of publicity about the factors that can contribute to heart disease, many people have made changes in the way they choose to live. As a result of greater public awareness, many more people are being tested regularly for breast and colon cancer and are paying closer attention to their blood pressure.

On the other hand, there is evidence that primary health care should be made more accessible to the considerable number of people it is not yet reaching, especially the young, the poor, and the less educated. For example, in spite of the information available about healthy nutrition, many Western countries, including the United States and the United Kingdom, are experiencing a growth in the rate of youth obesity, a condition that may be associated with diabetes later in life. In the United States and many European countries, the death rate from diabetes, unlike the death rate from heart disease, rose in the last decades of the twentieth century.

The other two factors that drive up health care costs, however, are much less open to change. First, people in the industrial world are living longer. Second, it is natural that people will continue to demand, for themselves and their families, the best health care that science can provide. These two facts of life point to one conclusion: people will need to pay more – in taxes or insurance – to fund the quality of health care they demand.

Check back for the meaning of *this procedure*. Highlight it.

Scan back through paragraphs 6–8 and number each of these three factors. Then come back and read paragraph 10.

As you continue to read, find these two factors and mark them *Factor 2* and *Factor 3*.

III. COSTS AND PRIORITIES: MEETING HEALTH CARE NEEDS IN POORER NATIONS

At first sight, developing and developed nations may seem to have very different problems and priorities in health care. **In three areas**, however, they have a great deal in common. The first of these is HIV/AIDS, which was identified as a major problem in the United States in the 1980s. By 2003, an estimated 38 million people in developing countries were living with HIV/AIDS, 90 percent of all global infections.

Second, cardiovascular diseases (CVD), illnesses of the heart and circulatory system, are no longer seen as exclusive to the wealthy nations. CVD is increasing in many developing countries as lifestyles change. Consider the recent history of Singapore, which has become one of the wealthier developed nations of the world. Between 1940 and 1979, while life expectancy rose from forty to seventy years of age, deaths from infectious diseases fell from 40 percent to 12 percent of total deaths. At the same time, however, deaths from cardiovascular diseases rose from 5 percent to 32 percent of all deaths. Similar changes are expected worldwide as other developing nations move away from traditional lifestyles. In 2001, the World Health Organization (WHO) predicted that CVD would be the leading cause of death in developing countries within ten years.

The health care systems of industrialized and developing countries have a third area of common concern: a tendency to focus on crisis care. Although they have less money to spend for health care, developing countries clearly have inherited the Western tendency to give priority to treating disease after it has developed. Recent statistics show that about 80 percent of health care funds in developing countries are spent to train doctors and to build hospitals.

We have already seen that an emphasis on crisis care creates problems for the industrial countries. Because crisis care is incapable of meeting the different health care priorities of poorer nations, **it has even more disastrous consequences there**. As Table 1.1 shows, in the world's

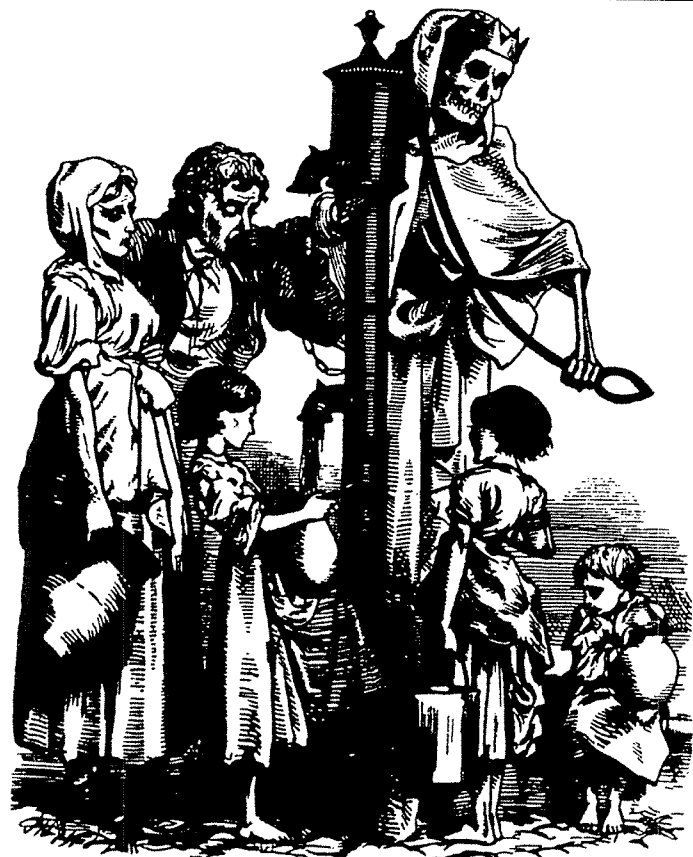
Scan forward through the text and highlight only the words that identify each of these areas. Number each area. Then come back and continue reading for the main idea.

TABLE 1.1 Health Care in Wealthier and Poorer Nations

		Type of country	
		Wealthier*	Poorer†
Population with access to	safe water	99.0%	51.0%
	sanitation	97.0%	34.0%
Annual health spending per person		\$2,331	\$23
Population per doctor		365:1	6,903:1
Percent of children dying before age 5		0.6%	12.0%

* Australia, Belgium, Denmark, Finland, France, Germany, Holland, Sweden, Switzerland, USA
 † Cameroon, Haiti, India, Laos, Mali, Nicaragua, Nigeria, Pakistan, Yemen, Zimbabwe

Check back and highlight the meaning of it.



DEATH'S DISPENSARY.

OPEN TO THE POOR, GRATIS, BY PERMISSION OF THE PARISH.

This sketch records the 1866 cholera epidemic in London. Today, water-borne diseases are still a serious problem in many developing countries (see Table 1.1 on page 45).

poorest nations, children under five die at a rate that is twenty times greater than in the world's wealthiest countries. The diseases that kill them include malaria, which is controllable and treatable if it is diagnosed early. Among the other killer diseases are the so-called vaccine-preventable diseases (measles, whooping cough, diphtheria, tetanus, polio, and tuberculosis), which killed 2.1 million children in 1990. They also include simple diarrhea, which kills enormous numbers of young children and which is caused by contaminated water and food.

Although these killer diseases are no longer real problems for the wealthier countries, they were a major cause of death in the nineteenth and early twentieth centuries. Ultimately they were brought under control not by crisis care, but by prevention; in other words, when safe water, adequate sanitation, and mass immunization programs became available.

Check back for the names of these killer diseases. Highlight them.

There is, however, a **second reason** why infectious diseases remain 18
such an enormous problem in poorer countries. Effective public
health programs are often far too expensive for these countries – even
with some international assistance. As evidence of this, consider
Table 1.1, which shows that the world's poorest countries cannot
afford to meet even the basic health needs of their people.

Check back to refresh your
memory of the first reason.
Mark it *Reason 1*. Then
come back and continue
reading to identify the
second reason.

To solve the most urgent health problems of developing countries, 19
experts have recommended that priority should be given to primary
health care. **This approach to health care**, as we have seen, emphasizes
health maintenance through disease prevention and control. Many of
the developing world's deadliest diseases, the experts point out, can
be prevented if clean water and adequate sanitation are provided.
Other diseases can be prevented by mass vaccination programs. Still
others can be controlled by effective health education that gives people
information about ways to avoid malaria-carrying mosquitoes or
about the importance of nutrition, especially for pregnant women
and young children.

Check back for the
meaning of *This approach*
to health care. Highlight it.

Primary health care, as we have seen, does not merely focus on 20
prevention and ignore the treatment of disease. Another priority for
poorer nations is to provide timely diagnoses and basic treatment for
the general populations instead of technologically advanced and
expensive treatment for a few wealthy people. Under international
programs, the governments of developing countries are given incen-
tives to build community health centers and train health workers.
Patients receive immediate attention from doctors, nurses, and
health workers who have the necessary diagnostic training and
equipment and have an adequate supply of drugs. These local health
centers are much more accessible to people who need treatment than
a few hospitals in the larger cities.

If poorer countries can offer **this type of health care**, the health of 21
their general populations will improve rapidly. A number of developing
countries have already shown that primary health care programs can
be successful. Cuba eliminated polio in 1972, even before the disease
was eliminated in the United States. In 1974, the World Health Organi-
zation began a program to immunize the world's children against six
vaccine-preventable diseases during their first year of life. By 1994,
the vaccinations were protecting 80 percent of children and the
annual number of child deaths had fallen by 3 million. Another WHO
program, whose goal was to wipe out polio in the Americas, began in
1985. The goal was achieved in 1991. In that year, nearly 2 million
children in Peru were vaccinated in one week after polio had been
diagnosed in a two-year-old boy. The boy, Luis Fermin, recovered and
proved to be the last case of polio in the Americas.

Check back for the
meaning of *this type of*
health care. Highlight it.

Similar successes have been achieved in the fight against diseases
for which no effective vaccines are available. In one area of Nigeria,
deaths from diarrhea fell by 82 percent after local health workers
learned to use oral rehydration therapy (ORT), a simple treatment
that does not depend on complex hospital equipment or expensive
drugs. By 1990, according to United Nations estimates, ORT was sav-
ing the lives of 1 million children annually. In 1992, Brazil conducted
a program of malaria control that emphasized early diagnosis and

The phrase *Similar*
successes looks back and
points forward. Highlight
an example of a success in
paragraph 21. Then
continue reading paragraph
22 and highlight another
example of a success.

treatment as well as preventing the transmission of the disease – for example, by the use of bed nets that were treated with insecticide. By 1996, malaria-related fatalities had fallen by 21 percent; in addition, an estimated 1.8 million infections and over 100,000 deaths had been prevented.

IV. A FOCUS ON THE BOTTOM LINE

Both wealthier and poorer nations would benefit if greater priority ²³ were given to providing primary health care. A number of nations have already had success in informing people about the risks of CVD and AIDS. More programs of this type should produce even better results, especially if they are developed for less educated and less affluent social groups. In the wealthier countries, better access to a primary care provider would help many people lead healthier lives. In the poorer nations, of course, primary health care must include attention to basic problems of public health. Here, there is still an urgent need for much wider access to clean water, to adequate sanitation, to vaccines, to health education, and to basic medical care before the killer diseases are finally under control.

Can the world develop the needed programs of primary health ²⁴ care? The success of WHO programs shows that we have the expertise to do so. **However, to give an honest answer**, we must not ignore the major obstacle to developing such programs – their enormous cost. In the poorer nations, providing the necessary water and sanitation demands equipment, materials, and expertise that these countries cannot afford. Primary health care programs require large numbers of trained medical workers as well as enormous supplies of vaccines, essential drugs, and basic medical equipment. Poorer countries simply do not have the resources that are necessary for **such programs**. They will therefore need massive economic and technical help from the wealthier countries.

The wealthier nations, however, have their own problems. Access ²⁵ to high-quality health care is being reduced; at the same time, health care costs are rising and there is considerable discussion about how to pay for health care and how much to pay. In these circumstances, two basic questions remain unanswered: What kind of health care systems are the wealthy nations able and willing to fund for themselves? And how much help are these countries, who are having problems meeting the rising health care expectations of their own populations, willing to provide to other nations?

The first answer to the question in sentence 1 is positive. Do you now expect to read (a) another positive answer or (b) a less positive answer?

Check back for the meaning of *such programs*. Highlight it.

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SECTION I: One Earth – Two Worlds of Health

MAIN IDEA CHECK

Here are the main ideas of each paragraph in this section of the article. Match each paragraph to its main idea. Write the number of the paragraph in the blank.

Paragraphs 1–2

- _____ A In examining health care problems and solutions, the article will show both similarities and differences between the poorer and the wealthier nations.
- _____ B In the wealthier countries, providing the best health care seems to be a very different task than in the poorer nations.

SECTION II: Health Care Costs and Access in the Wealthier Countries

MAIN IDEA CHECK

Here are the main ideas of each paragraph in this section of the article. Match each paragraph to its main idea. Write the number of the paragraph in the blank.

Paragraphs 3–8

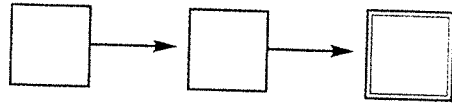
- _____ A In a system of publicly funded health care, responses to increasing costs have reduced people's access to health care.
- _____ B In a system of employer-provided health insurance, responses to increasing costs have reduced people's access to health care.
- _____ C The high cost of health care is a major problem for the industrial countries.
- _____ D The public demands the best possible health care; this is another reason why health care costs continue to rise.
- _____ E Health care costs are high partly because an increasing number of people are living longer.
- _____ F In the health care systems of industrial countries, an emphasis on crisis care is one reason why the costs are high and continue to increase.

Paragraphs 9–12

- _____ G A greater emphasis on primary health care, which is part of the solution to high costs, is already having a positive effect on people's attitudes and behavior.
- _____ H We need to accept the fact that medical costs will continue to increase because of an aging population and our demand for high-quality health care.
- _____ I Solutions to the problem of increasing health care costs depend on whether we can change any of the factors that are driving the increase.
- _____ J There is evidence that many people need better access to important services in primary health care.

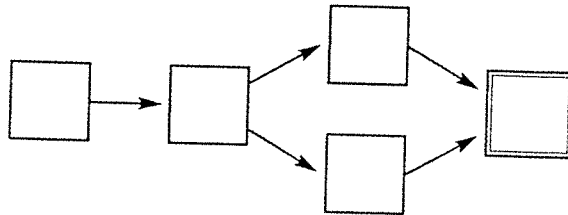
Look back at Section II of the article to answer the following questions.

- 1 Reread paragraphs 3–5. Then complete the diagram with sentences A–C. Write the correct letter in each box.



- A Good health care becomes less accessible.
- B Health care costs are high and rising fast.
- C The providers of health insurance try to cut their expenses.

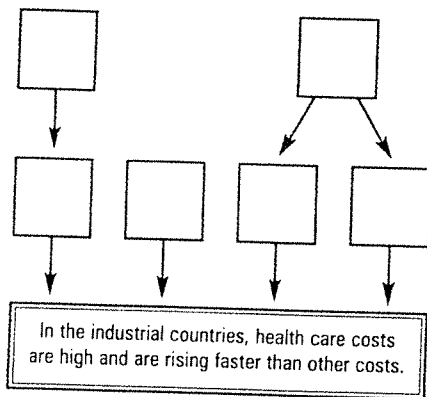
- 2 Reread paragraph 5. Then complete the diagram with sentences A–E. Write the correct letter in each box.



- A Many employers reduce health benefits for their employees.
- B Health care costs increase.
- C Some employers can no longer provide health insurance for their workers.
- D More patients are unable to get quality health care when they need it.
- E The costs of medical insurance increase.

- 3 Why does the writer use the examples of Britain and the United States in paragraphs 4 and 5?
- a To show that the British health service is not as good as the U.S. health care system
 - b To show that great advances have been made in health care in the industrial countries
 - c To show that rising costs ultimately cause health care to become less accessible to patients
 - d To show that a system of public health insurance is better than a system of employer-provided health insurance

4 Reread paragraphs 6–8. Then complete the cause and effect diagram with sentences A–F. Write the correct letter in each box.



- A Health care tends to emphasize crisis care, the treatment of disease after it becomes serious.
- B Life expectancy continues to increase.
- C Research continues and provides new, often expensive, drugs, medical procedures, and technology.
- D To recover their costs, health care providers need to increase charges for patients.
- E Larger numbers of older people create an increased demand for health care.
- F The public demands the very best health care.

5 What two responses does the writer suggest for dealing with the increase in health care costs in wealthy countries?

SECTION III: Costs and Priorities: Meeting Health Care Needs in Poorer Nations

MAIN IDEA CHECK

Here are the main ideas of each paragraph in this section of the article. Match each paragraph to its main idea. Write the number of the paragraph in the blank.

Paragraphs 13–17

- _____ A Cardiovascular disease, which is usually associated with the industrial countries, is becoming a problem in developing nations.
- _____ B An emphasis on crisis care cannot solve the most urgent health problems of developing countries.
- _____ C HIV/AIDS is one problem that wealthy and poor countries have in common.
- _____ D The diseases that face developing countries today were once problems in the wealthier countries but were finally controlled by prevention.
- _____ E The health care systems of the developing world, like those of wealthier countries, tend to emphasize crisis care.

Paragraphs 18–22

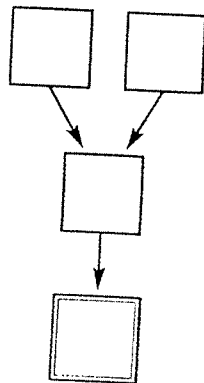
- _____ F Primary health care also provides better access to early diagnosis and treatment of common diseases.
- _____ G Diarrhea, malaria, and infectious diseases remain a major problem because developing nations cannot afford to fund effective programs of basic health care.
- _____ H Primary health care programs can be successful in fighting diseases like malaria and diarrhea, for which no vaccines exist.

- I As a solution to their most urgent needs, developing countries need to focus on providing primary health care.
- J Experience shows that primary health care can have a major impact on the problem of vaccine-preventable diseases.

A CLOSER LOOK

Look back at Section III of the article to answer the following questions.

- 1 Why does the writer mention Singapore in the third sentence of paragraph 14?
 - a To show that life can improve for developing countries
 - b To show that we can expect CVD to increase as countries develop
 - c To show that Singapore is no longer a developing country
 - d To show that infectious diseases are no longer a major problem in Singapore
- 2 In which way(s) are the health problems of developing countries and those of the industrial nations similar? Circle all that apply.
 - a HIV/AIDS is a threat in both groups of nations.
 - b Vaccine-preventable diseases are no longer a problem in either type of country.
 - c Some problems in both groups are associated with the emphasis on crisis care.
 - d The answer to many of the problems in both types of countries is greater access to safe water and better sanitation.
- 3 Reread paragraphs 16–19 to identify the main cause and effect connections that explain the massive health problems in developing countries. Then complete the cause and effect diagram with sentences A–D. Write the correct letter in each box.



- A Funding for public health programs and primary health care is inadequate.
- B Death rates for children under five are extremely high.
- C Resources are very limited in poor developing countries.
- D Health care systems in poor developing countries have tended to focus on crisis care.

- 4 Why does the writer mention Cuban and World Health Organization programs in paragraph 21?
 - a To show that primary health care programs can be successful against vaccine-preventable diseases
 - b To show that primary health care could also help people in the United States
 - c To show that polio is no longer a problem in some parts of the developing world
 - d To show how close the world was to eliminating polio in 1991

SECTION IV: A Focus on the Bottom Line

MAIN IDEA CHECK

Here are the main ideas of each paragraph in this section of the article. Match each paragraph to its main idea. Write the number of the paragraph in the blank.

Paragraphs 23–25

- _____ A Because wealthier countries have difficulty funding the health care their people demand, it is not clear how much financial assistance they can afford to give for health care in poorer countries.
- _____ B Providing greater access to primary health care would improve people's health in both poorer and wealthier countries.
- _____ C The task of developing effective programs of primary health care is made very difficult, especially in poorer countries, by the enormous cost of such programs.

A CLOSER LOOK

Look back at Section IV of the article to answer the following questions.

- 1 According to the conclusion (paragraphs 23–25) of the article, what do the health care systems of industrial countries and developing nations have in common? Circle all that apply.
 - a They are facing the same threats to the health of their populations.
 - b They would benefit from greater attention to primary health care.
 - c Their most urgent need is to improve the quality of their water.
 - d They are having problems funding adequate health care.
- 2 Is the writer sure that the health care problems of the world will be solved? Give evidence from the article's conclusion to support your answer.

Research

Do Internet or library research to find additional, up-to-date information on a topic in health care that interests you. Here are two suggestions.

- A health problem in the news at present
- Recent advances in medical treatment or research

Discussion

Discuss the following with a partner.

- The health care system in your country – its strengths and weaknesses

Writing

Write a short report on the results of your research or your discussion.

MAKING CONNECTIONS

The vocabulary in these two exercises comes from all the readings in Unit 1. The exercises will help you see how writers make connections across sentences in a text.

EXERCISE 1: CONNECTIONS BETWEEN SENTENCES

Read the numbered sentence. Then choose and circle the sentence, a or b, that logically follows. Then, from the box, decide how the sentence you chose connects to the first. Write A, B, or C to identify the connection.

- A It describes a result of what is reported in the first sentence.
- B It describes a better response to a problem than the response in the first sentence.
- C It adds specific details to support the more general information in the first sentence.

- _____ 1 Heart disease is often associated with a person's lifestyle.
 - a Smoking, a nutritionally poor diet, stress, and insufficient exercise are all factors that contribute to the development of the disease.
 - b Modern technology allows doctors to perform surgery on patients who are suffering from heart disease.

- _____ 2 Experience has shown conclusively that we cannot afford to wait until heart disease and cancer are established and then rely exclusively on drugs and surgery to fight them.
 - a Surgeons, for example, can perform complex operations on many seriously ill patients.
 - b We need to provide access to procedures for early diagnosis and to information on prevention.

- _____ 3 Historically, mass immunization has made it possible to control, and sometimes even eliminate, some infectious diseases.
 - a Influenza, for example, is still common and is estimated to cause ten thousand deaths annually in the United States.
 - b In countries where an effective vaccine has been available since the late 1950s, for example, there have been few or no cases of polio.

- _____ 4 In the 1990s, governments, research institutions, biotechnology companies, and investors became aware of the huge potential – economic, scientific, and commercial – of genetic research.
 - a This realization led to an enormous growth of interest in, and financial support for, the research.
 - b This pessimism prevented researchers from making the advances they had thought possible in genetic medicine.

- 5 A 2002 United Nations study on AIDS awareness and behavior provided evidence that the existing AIDS education programs were often ineffective.
- a The study showed that such programs had reduced ignorance about the disease and about ways to prevent its transmission.
 - b In six African nations with such programs, about 50 percent of women respondents still did not know that HIV/AIDS can be transmitted through sexual contact.

EXERCISE 2: CONNECTIONS WITHIN PARAGRAPHS

Make a clear paragraph by putting sentences A, B, and C into the best order after the numbered sentence. Write the letters in the correct order. The boldface words help you identify continuing ideas.

- 1 The death rate from cardiovascular disease (CVD), which includes heart disease, high blood pressure, and strokes, has been falling since the 1960s, with a decrease of 35% in the last twenty years. — — —

A A second factor is the recent advances that have considerably improved the diagnosis and treatment of CVD.

B To what can we attribute this encouraging development?

C One factor is people's willingness to make lifestyle changes in order to reduce their risk of CVD.

- 2 Although many patients benefit from advances in heart surgery, critics have concluded that an overemphasis on the surgical treatment of cardiovascular disease has at least two considerable disadvantages. — — —

A It attracts financial resources away from the prevention programs that, according to experts, are urgently needed.

B To recover the enormous costs of the necessary expertise and equipment, hospitals raise their charges for all patients.

C It is also a factor in the increasing costs of health care.

- 3 In a number of cases, early experimental treatments achieved results that justified cautious optimism about the potential of gene therapy. — — —

A In the same year, other teams of researchers reported the encouraging results of gene therapy in patients who were suffering from hemophilia and skin cancer.

B In 2000, for example, French doctors reported success with a procedure in which they introduced a normally functioning gene into three babies who suffered from a fatal immune deficiency.

C Ten months later, the children's immune systems appeared to be functioning normally, evidence that the normal gene had taken over the work of the defective one.