After studying the material in this chapter, you should be able to

• Describe the longevity gender gap and possible contributing factors.
• List the benefits that older Americans can gain from physical activity.
• Discuss the hormonal changes that occur in men and women at midlife.
• Name two challenges of aging and discuss their risk factors and possible ways of preventing them.
• Describe the purposes and types of advanced directives.
• Define death and explain the stages of emotional reaction experienced in facing death.
• Identify an elderly family member or friend that has excellent health and determine their beneficial behaviors that may have contributed to their health status.
Frank didn’t feel old until he enrolled in a college personal health course. Formal at first, the other students—young enough to be his children—started calling him “Pop.” When the professor announced that the next week’s topic would be aging, Frank beamed, “I’ll be the expert!”

A Lifetime of Health

More of us can expect to say the same. In the United States, the number of people over age 65 is expected to increase from 12 to nearly 20 percent of the population—an estimated 71.5 million in 2030.

Although aging—the characteristic pattern of normal life changes that occurs as humans, plants, and animals grow older—remains inevitable, you can do a great deal to influence the impact that the passage of time has on you. Whether you’re in your teens, 20s, 30s, or older, now is the time to take the steps that will add healthy, active, productive years to your life.

This chapter provides a preview of the changes age brings, the steps you can take to age healthfully, and the ways you can make the most of all the years of your life.

Invariably, though, no one gets out of this life alive. Death is the natural completion of things, as much a part of the real world as life itself. In time we all lose people we cherish: grandparents, aunts and uncles, parents, friends, neighbors, coworkers, siblings. With each loss, part of us may seem to die, yet each loss also reaffirms how precious life is.

This chapter explores the meaning of death, describes the process of dying, provides information on end-of-life issues, and offers advice on comforting the dying and helping their survivors.

The Aging of America

About one in eight Americans—approximately 12 percent of the population—is over age 65. With millions of baby boomers reaching retirement age, one in every five Americans will be older than 65 by the year 2030. (See Figure 20.1.)

Older Americans are as diverse as other segments of our population. About one in five (19 percent) comes from a minority group. The largest percentage of these are African American (9 percent) or Hispanic (6 percent). Asians or Pacific Islanders make up about 3 percent of older Americans.

About three in four older Americans describe their health as good or better. Older African Americans, American Indians/Alaska Natives, and Hispanics are less likely to say they are in top health than are whites. Most older people have at least one chronic condition; many have several health problems. Women report more arthritis; men, more heart disease and cancer.
How Long Can You Expect to Live?

The answer depends on you. Statistically, you’re likely to live longer than your parents or grandparents. Life expectancy has been increasing steadily over the last century and now is 78.2 years. According to the National Center for Health Statistics, life expectancy for American women now stands at 80.6 years; for men, it is a record high of 75.7 years.¹

Medical advances, including new medications, are driving down the rates of major killers such as heart disease, cancer, and stroke and are contributing to longer life expectancies. Death rates have fallen for men, women, whites, blacks, and Hispanics.² However, behavioral or lifestyle choices also make a big difference.

According to a recent study, Americans who smoke, have high blood pressure, have high blood sugar, and are overweight may be shortening their life expectancy by an average of four years. The patterns of smoking, high blood pressure, high blood glucose, and overweight/obesity account for almost 75 percent of differences in cardiovascular deaths and up to 50 percent of differences in cancer deaths in various areas of the United States.

Here is the difference in life expectancy each of these health hazards can make:

- **High blood pressure**: 1.5 years for men, 1.6 years for women.
- **Obesity**: 1.3 years for men, 1.3 years for women.
- **High blood sugar**: .5 years for men, .3 years for women.
- **Smoking**: 2.5 years for men, 1.8 years for women.³

The causes of death vary with age (see “How Do You Compare?”). In the teen and young adult years, males are more likely to die than females, typically from accidents, suicides, and homicides, and older teens are more likely to die than younger ones.⁴ Teenage black males are 20 times more likely to die from homicide than are white males. Teenage black and Hispanic females are also more likely to die from homicide than are American Indian, white, and Asian teen girls.⁵ As a person reaches 45, the top risk of death is...
from cancer, followed by heart disease. At around age 65, the risks swap: a person is most likely to die from heart disease, followed by cancer.6

**The Longevity Gender Gap**

Women’s lifespans average 5 to 10 percent longer than men’s. No one knows exactly why. This longevity gender gap has been shrinking since 1990 and now stands at 4.9 years.7 Women in other developed nations—Australia, Canada, France, Greece, Italy, Japan, the Netherlands, Norway, Spain, Sweden, Switzerland—live up to two years longer than those in the United States and about seven years longer than men. In the former Soviet Union, life expectancy for females is 13 years longer than for males.

Why do men die sooner? The female edge may begin at conception with the extra X chromosome, which provides a backup for defects on the X gene and a double dose of the genetic factors that regulate the immune system. In addition, the female hormone estrogen bolsters immunity and protects heart, bone, brain, and blood vessels.

In some cancers, estrogen may somehow protect against distant metastases. In contrast, testosterone may dampen the immune response in males—possibly to prevent attacks on sperm cells that might otherwise be mistaken as alien invaders. When the testes are removed from mice and guinea pigs, their immune systems become more active. In men, lessened immunity may lower resistance to cancer as well as infectious disease.

Testosterone also has been implicated in men’s risk of heart disease and stroke. Originally designed to equip men with an instantaneously burst of power—essential for survival in Stone Age times—this potent male hormone may surge so intensely that it wrecks havoc throughout the cardiovascular system.

Males also die more often as a result of intentional and nonintentional injury. Overall, men are three times more likely than women to die in accidents, mainly in cars and on the job. Men also are four times more likely to die violently. Nine in ten murderers and eight in ten murder victims are men.

**Successful Aging**

Although Americans are living longer than ever, many may not reach old age in prime condition. According to a recent survey, physical disabilities that limit mobility are increasing among middle-aged Americans. In a recent survey, more than 40 percent of those between ages 50 and 64 reported problems such as difficulty standing for two hours, stooping, walking a quarter mile, or climbing ten steps without resting.8 Middle-aged women who are not fit show increasing rates of physical frailty throughout life.9

According to research on “exceptional longevity” (survival to at least age 90), the key factors
HOW DO YOU COMPARE?

WHAT KILLS YOUNG AMERICANS?

Top Causes of Death for Young Adults

1. Unintentional injuries, both motor vehicle and other accidents
2. Homicide
3. Suicide

HOW DO YOU COMPARE?

If you’re a traditional-age college student, you may never think of the prospect of dying—certainly not in the near future. Even if you’re older, you probably are too caught up in the busyness of living to consider the prospect of dying. Most of the young adults who died this year were the same way. Then something they’d never anticipated happened. What are your thoughts as you reflect on this possibility? Record them in your online journal.

Source: www.cdc.gov

to living long and well are maintaining a healthy lifestyle (including regular exercise, weight management, and no smoking) and avoiding or delaying chronic illnesses. Among the growing number of “centenarians” who live past their hundredth birthday, two-thirds did not develop age-related conditions such as diabetes, dementia, heart disease, osteoporosis, Parkinson’s disease, or stroke until age 85 or older. Men who make it to the century mark have significantly better mental and physical functioning than women their age.

When surveyed, about half of Americans ages 65 to 69 say, “These are the best years of my life.” Many people in their 70s and 80s agree. When asked about the keys to a meaningful and vital life, older adults rate having family and friends and taking care of their health as most important, followed by spiritual life.

Physical Activity: It’s Never Too Late

The effects of ongoing activity are so profound that gerontologists sometimes refer to exercise as “the closest thing to an antiaging pill.” Exercise slows many changes associated with advancing age, such as loss of lean muscle tissue, increase in body fat, and decreased work capacity. Consistent lifelong exercise preserves heart muscle in the elderly to levels that match or even exceed those of healthy young sedentary individuals.10

The benefits of exercise extend to both men and women. In one study of healthy older men, regular exercise was associated with a nearly 30 percent lower mortality rate. In a study of overweight, postmenopausal women, exercise improved physical and mental well-being—and the more the women exercised, the greater the improvements in their quality of life. In other research on Canadian women older than 65, those who took part in regular aerobic activity had higher scores of cognitive function than their sedentary peers. The bottom line: What you don’t do may matter more than what you do.

No one is ever too old to get in shape. The American College of Sports Medicine encourages seniors to engage in the full range of physical activities, including aerobic conditioning. With regular conditioning, 60-year-olds can regain the fitness they had at age 40 to 45. Adults over the age of 72 who exercise more and smoke less than their peers are most likely to enjoy long, healthy, and happy lives, according to a study that followed 1,000 seniors for nine years.

Exercise lowers the risk of diabetes, heart disease, and stroke in the elderly—and greatly improves general health. Male and female runners over age 50 have much lower rates of
disability and much lower health-care expenses than less active seniors. Even less-intense activities, such as gardening, dancing, and brisk walking, can delay chronic physical disability and cognitive decline.

According to the U.S. surgeon general, physical activity offers older Americans additional benefits, including the following:

- Greater ability to live independently.
- Reduced risk of falling and fracturing bones.
- Lower risk of dying from coronary heart disease and of developing high blood pressure, colon cancer, and diabetes.
- Reduced blood pressure in some people with hypertension.
- Fewer symptoms of anxiety and depression.
- Improvements in mood and feelings of well-being.

Despite these potential benefits, many seniors are not active. By age 75, about one in three men and one in two women engage in no physical activity. Yet even sedentary individuals in their 80s and 90s can participate in an exercise program—and gain significant benefits.

At any age, staying fit doesn’t have to be expensive. (See Health on a Budget, p. 650.) Older adults who take part in low-cost fitness programs offered by YMCAs or senior centers have shown significant improvement in their daily functioning and lower risk of becoming disabled.

The American College of Sports Medicine and American Heart Association recommend developing a fitness plan with a health professional to manage risks and take health conditions into account. Its basics should consist of:

- Moderately intense aerobic exercise 30 minutes a day, five days a week
  or
- Vigorously intense aerobic exercise 20 minutes a day, three days a week
  and
- 8 to 10 strength-training exercises, with 10 to 15 repetitions of each exercise, two or three times a week
  and
- balance exercises.

**Nutrition and Obesity**

The most common nutritional disorder in older persons is obesity. Overweight men and women over age 65 face higher risk of diabetes, heart disease, stroke, and other health problems, including arthritis.

Many elderly people who live independently do not get adequate amounts of one or more essential nutrients. The reasons are many: limited income, difficulty getting to stores, chronic illness, medications that interfere with the metabolism of nutrients, problems chewing or digesting, poor appetite, inactivity, illness, depression. Nutritionists urge the elderly, like other Americans, to concentrate on eating healthful foods; many also recommend daily nutritional supplements, which may provide the added benefit of improving cognitive function in healthy people over 65.

**The Aging Brain**

Scientists used to think that the aging brain, once worn out, could never be fixed. Now they know that the brain can and does repair itself. When neurons (brain cells) die, the surrounding cells develop “fingers” to fill the gaps and establish new connections, or synapses, between surviving neurons. Although self-repair occurs more quickly in young brains, the process continues in older brains. Even victims of Alzheimer’s disease, the most devastating form of senility,
Health on a Budget

“Buy” Yourself a Longer Life

You don’t need money for the only anti-aging program that has been proven to add years to life expectancy. All you have to do is follow four basic steps:

- **Keep your arteries young.** If your arteries are clear and healthy, you’re more likely to have a healthy heart and a sharper brain and less likely to develop high blood pressure, high cholesterol, kidney problems, and memory impairment. For your arteries’ sake, exercise regularly, avoid high-fat foods, watch your weight, and find ways to manage daily stress (see Chapter 4).

- **Avoid illness.** Most individuals who live to celebrate their hundredth birthday don’t suffer from chronic diseases. Defend yourself by eating a healthy diet, not smoking, avoiding weight gain in middle age, recognizing and treating conditions like high blood pressure and elevated cholesterol, and keeping up with immunizations.

- **Stay strong.** As landmark studies with frail nursing home residents in their 80s and 90s have shown, strength training at any age builds muscle and bone, speeds up metabolic rate, improves sleep and mobility, boosts the spirit, and enhances self-confidence.

- **Maintain your zest for living.** Just as with muscles, the best advice to keep your brain strong is “use it or lose it.” Keep challenging yourself, asking questions, and pursuing new passions. Individuals who are optimistic, sociable, and happy generally outlive their more pessimistic, grumpier peers.

Aspirin, even at low doses, appears to prevent declines in key areas of the brain, according to brain-imaging studies. However, long-term use of low-dose aspirin did not lead to improved thinking, memory, and other cognitive skills in women over age 65 participating in the landmark Women’s Health Study. In other research, nonsteroidal anti-inflammatory drugs (NSAIDs) failed to prevent Alzheimer’s disease in older men and women with a family history of the disorder. The herbal supplement ginkgo biloba also has no clear-cut benefit in preventing memory problems.

**Memory** According to data from a National Institute of Aging survey, memory loss and cognitive problems are becoming less common among older Americans. The reasons may be that today’s seniors have more formal education, higher economic status, and better health care for problems such as high blood pressure and high cholesterol that can jeopardize brain function.

Higher education does not prevent cognitive decline over time, according to recent research, but schooling does yield an advantage. Individuals with more education continue to have a higher level of cognitive functioning into old age so they remain independent for a longer period. There is growing evidence that using your brain as you age—by reading, playing games, solving crossword puzzles, and doing crafts such as pottery or quilting—greatly decreases the risk of memory loss.

**Women at Midlife**

In the next two decades some 40 million American women will end their reproductive years. “The primary misconception is that this is a terrible time when all women suffer horrible symptoms,” says Sherry Sherman, M.D., project officer for the National Institute of Aging’s Study of Women Across the Nation, which has followed 3,300 women through midlife since 1996. “When you look at healthy women in the community in terms of what actually affects their lives, their periods stop. That’s it.”

**Perimenopause** While the average age of menopause—defined as the complete cessation of menstrual periods for 12 consecutive months—is 51.5, a woman’s reproductive system begins changing more than a decade earlier.
“The change of life starts in our thirties with irregular menstrual cycles and then heats up in our forties with hot flashes and night sweats,” says psychiatrist Marsha Speller, M.D., author of The Menopause Answer Book.\(^\text{13}\)

For many women, perimenopause—the four-to-ten-year span before a woman’s last period—is more baffling and bothersome than the years after. During this time the egg cells, or oocytes, in a woman’s ovaries start to senesce, or die off, at a faster rate. Eventually, the number of egg cells drops to a tiny fraction of the estimated 2 million packed into her ovaries at birth. Trying to coax some of the remaining oocytes to ripen, the pituitary gland churns out extra follicle-stimulating hormone (FSH). This surge is the earliest harbinger of menopause, occurring six to ten years before a woman’s final periods. Eventually, the other menstrual messenger, lutetinizing hormone (LH), also increases, but at a slower rate.

These hormonal shifts can trigger an array of symptoms. The most common is night sweats (a subdromal hot flash, in medical terms), which can be intense enough to disrupt sleep. The drop in estrogen levels also may cause hot flashes (bursts of perspiration that last from a few seconds to 15 minutes). Women who have night sweats and hot flashes at the start of menopause may be less likely to have a heart attack. Those who develop these symptoms later in menopause may have higher heart disease risks.\(^\text{14}\)

A woman’s habits and health history also have an impact. Women with a lifelong history of depression are more likely to experience early perimenopause. The fluctuating hormones of perimenopause may increase depressive symptoms even in women who have never had previous depressions. Smokers experience more symptoms at an earlier age than nonsmokers. Heavier women also have more severe symptoms.

**Menopause** About 10 to 15 percent of women breeze through this transition with only trivial symptoms. Another 10 to 15 percent are virtually disabled. The majority fall somewhere in between these extremes. Women who undergo surgical or medical menopause (the result of removal of their ovaries or chemotherapy) often experience abrupt symptoms, including flushing, sweating, sleeplessness, early morning awakenings, involuntary urination, changes in libido, mood swings, perception of memory loss, and changes in cognitive function.

Race and ethnicity profoundly affect women’s experience. African American women report more hot flashes and night sweats but have more positive attitudes toward menopause. Japanese and Chinese women experience more muscle stiffness and fewer hot flashes but view menopause more negatively. Hispanic women reach menopause a year or two earlier than Caucasian women; Asian women, a year or two later.

Dwindling levels of estrogen subtly affect many aspects of a woman’s health, from her mouth (where dryness, unusual tastes, burning, and gum problems can develop) to her skin (which may become drier, itchy, and overly sensitive to touch). With less estrogen to block them, a woman’s androgens, or male hormones, may have a greater impact, causing acne, hair loss, and according to some anecdotal reports, surges in sexual appetite. (Other women, however, report a drop in sexual desire.)

At the same time, a woman’s clitoris, vulva, and vaginal lining begin to shrivel, sometimes resulting in pain or bleeding during intercourse. Since the thinner genital tissues are less effective in keeping out bacteria and other pathogens, urinary tract infections may become more common. Some women develop breast or ovarian cysts, which usually go away on their own. Eventually, a woman’s ovaries don’t respond at all to her pituitary hormones. After the last ovulatory cycle, progesterone is no longer secreted, and estrogen levels decrease rapidly. A woman’s testosterone level also falls.

In the United States, the average woman who reaches menopause has a life expectancy of about 30 more years. However, she faces risks of various diseases, including an increased risk of obesity, metabolic syndrome, heart disease, stroke, and breast cancer. Women can reduce these risks by exercise, good nutrition, and weight control both before and after menopause.

“Exercise is the best thing a woman can do for herself at midlife,” says JoAnn Pinkerton, M.D., of the National Women’s Health Resource Center. “It improves your heart function so you have less chance of heart disease. It improves your cognition so you think better. It decreases your risk of breast cancer. It helps your mood. It

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**Menopause** The period from a woman’s first irregular cycles to her last menstruation.

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**Image:** In these PET scans, the red and yellow show greater neuron activity in the young adult. The brain of the older person shows less activity and more dark areas, indicating that the fluid-filled ventricles have grown larger. Recent research shows, however, that older brains do repair themselves.
lessens the likelihood of depression. It increases energy and protects your bones.” In a recent study, walking proved effective in easing anxiety, boosting mood, and improving the quality of life of women during menopause.

**Hormone Therapy** Hormone therapy (HT) was long believed to prevent heart disease and strokes and help women live longer. But medical thinking on HT, particularly a combination of estrogen and progestin, has changed completely in recent years. HT is no longer recommended for reasons other than short-term relief of symptoms such as hot flashes and night sweats.

The Women’s Health Initiative (WHI)—a series of clinical trials begun in 1991 on postmenopausal women—halted its study of combination estrogen/progestin therapy in July 2002 and its study of estrogen-only therapy in 2004 because of safety concerns. As various studies have confirmed, combination therapy increases the risk of breast cancer, heart disease, blood clots, and stroke. In the latest analysis of the WHI data, the risks to women who took estrogen-only therapy faded after they stopped their treatment. Thus, women and their doctors are opting for treatments that are safer, can be taken at lower doses, can be administered via different routes (such as sprays), and do not include progesterone.

Hormonal therapy does reduce the risk of postmenopausal osteoporosis, but its risks and benefits need to be weighed against those of other available treatments. Women who stop hormonal therapy have about a 50 percent chance that their menopausal symptoms will recur, regardless of their age or how long they used HT. In controlled trials, black cohosh, the most popular herbal treatment, either alone or with other herbs, proved no more effective than placebo in relieving hot flashes and other menopause symptoms. In a controlled trial, acupuncture also failed to provide reliable relief of menopausal hot flashes. Among other promising approaches are soy (although it is less effective than hormone therapy) and classes in mindfulness (discussed in Chapter 4) and stretching.

**Men at Midlife**

Although men don’t experience the dramatic hormonal upheaval that women do, they do experience a decline by as much as 30 to 40 percent in their primary sex hormone, testosterone, between the ages of 48 and 70. This change, sometimes called andropause, may cause a range of symptoms, including decreased muscle mass, greater body fat, loss of bone density, flagging energy, lowered fertility, and impaired virility. Some researchers are experimenting with testosterone supplements now available in various forms, including under-the-skin implants, transdermal patches, and gel. In tests with young men, testosterone has increased lean body mass and decreased body fat—at least temporarily. However, other researchers warn that, particularly in older men, excess testosterone might raise the risk of prostate cancer and heart disease.

After age 40, the prostate gland, which surrounds the urethra at the base of the bladder, enlarges. This condition, called benign prostate hypertrophy, occurs in every man. By age 50, half of all men have some enlargement of the gland; after 70, three-quarters do. As it expands, the prostate tends to pinch the urethra, decreasing urinary flow and creating a sense of urinary urgency, particularly at night. Other warning signs of prostate problems include difficult urination, blood in the urine, painful ejaculation, or constant lower-back pain.

Medical treatments for benign prostate hypertrophy include drugs that improve urine flow and reduce obstruction of the bladder outlet as well as medications that partially shrink the enlarged prostate by lowering the level of the major male hormone inside the prostate. In some cases, surgical treatment is necessary.

**Sexuality and Aging**

Health and sexuality interact in various ways as we age. When they are healthy and have a willing partner, a substantial number of older men remain sexually active. The fittest men and women report more frequent sexual activity. Better health translates into a better sex life. Healthy people are more likely to express an interest in sex, engage in sex, and enjoy sex.

In a recent analysis, researchers calculated the “sexual life expectancy” of men and women. According to their data, on average 55-year-old men can expect to remain sexually active for another 15 years while women the same
age could expect about 11 more sexually active years. Women with partners remain sexually active longer. Men in good health gain an additional five to seven years of sexual life expectancy.19

Other research has found a relationship between sex and longevity. A Swedish study found that men, but not women, who had discontinued intercourse had higher death rates. A study of the entire male population of a small Welsh town found that the sexually active men had half the mortality of the inactive group. In a Duke University study, longevity in women correlated with enjoyment of sexual intercourse, rather than with its frequency.

Aging does cause some changes in sexual response: Women produce less vaginal lubrication. An older man needs more time to achieve an erection or orgasm and to attain another erection after ejaculating. Both men and women experience fewer contractions during orgasm. However, none of these changes reduces sexual pleasure or desire.

The Challenges of Age

No matter how well we eat, exercise, and take care of ourselves, some physical changes are inevitable as we age. (See Consumer Alert, p. 656.) Figure 20.2 shows some of these changes, but most of them are not debilitating, and people can remain active and vital into extreme old age. Aging brains and bodies do become vulnerable to diseases like Alzheimer’s and osteoporosis. Other common life problems, such as depression, substance misuse, and safe driving, become more challenging as we age.
Alzheimer’s Disease

About 15 percent of older Americans lose previous mental capabilities, a brain disorder called dementia. Sixty percent of these—an estimated 2.4 to 4.5 million—suffer from the type of dementia called Alzheimer’s disease, a progressive deterioration of brain cells and mental capacity.

Age is the top risk factor for Alzheimer’s, but cognitive decline may begin up to six years before it is evident. Someone in America develops Alzheimer’s every 72 seconds; by 2050 the rate will increase to every 33 seconds. The percentage of people with Alzheimer’s doubles for every five-year age group beyond 65. By age 85, nearly half of men and women have Alzheimer’s. A person with the disease typically lives eight years after the onset of symptoms, but some live as long as 20 years. Some 7.7 million older Americans will develop Alzheimer’s by 2030. The greatest increase will be among people age 85 and older.

People whose parents have been diagnosed with Alzheimer’s disease or dementia may be more likely to experience memory loss themselves in middle age. Scientists have identified multiple genes that make people more likely to develop Alzheimer’s.

Women are more likely to develop Alzheimer’s than men, and women with Alzheimer’s perform significantly worse than men in various visual, spatial, and memory tests. Black Americans are about two times more likely to develop Alzheimer’s than whites; Hispanics face about 1.5 times the risk.
Various factors, such as regular exercise and weight management, may lower the likelihood of Alzheimer’s. A healthful diet—rich in nuts, fish, tomatoes, poultry, and dark and green leafy vegetables and low in high-fat foods, red meat, and butter—may help protect the brain. Individuals who say their lives have a purpose also are less likely to develop Alzheimer’s or other forms of cognitive impairment than those who scored lower on “purpose in life” evaluations.

However, an independent NIH-sponsored panel has determined that there is still not sufficient evidence to prove that any preventive strategy—from dietary supplements to mental stimulation or exercise—can prevent Alzheimer’s.

The early signs of dementia—insomnia, irritability, increased sensitivity to alcohol and other drugs, and decreased energy and tolerance of frustration—are usually subtle and insidious. Diagnosis requires a comprehensive assessment of an individual’s medical history, physical health, and mental status, often involving brain scans and a variety of other tests.

Cholesterol-lowering statin drugs, discussed in Chapter 15, may reduce the risk of Alzheimer’s, regardless of the medication used or the person’s genetic risk for the disease. Vitamin C or vitamin E, once touted as possible memory preservers, have not proven to lower the risk of dementia or Alzheimer’s in older adults.

Even though medical science cannot restore a brain that is in the process of being destroyed by an organic brain disease like Alzheimer’s, medications can control difficult behavioral symptoms and enhance or partially restore cognitive ability. Often physicians find other medical or psychiatric problems, such as depression, in these patients; recognizing and treating these conditions can have a dramatic impact.

The FDA has approved several prescription drugs for people with mild to moderate dementia, including Aricept, Exelon, Reminyl, and Mamenda. None has proven superior to the others.

**Osteoporosis**

Another age-related disease is osteoporosis, a condition in which losses in bone density become so severe that a bone will break with even slight trauma or injury. A chronic disease, osteoporosis is silent for years or decades before a fracture occurs. Each year more than a third of Americans ages 65 and older experience a fall, and nearly 16,000 die as a result of their injuries. Even a low-trauma fracture increases the risk of dying during the subsequent five years, while a hip fracture heightens this risk for ten years.

Women, who have smaller skeletons, are more vulnerable than men; in extreme cases, their spines may become so fragile that just bending causes severe pain. But although commonly seen as an illness of women, osteoporosis occurs frequently in men. One in every two women and one in four men over 50 will have an osteoporosis-related fracture in their lifetimes.

Regardless of your age and gender, you can prevent future bone problems by taking some protective steps now. The most important guidelines are as follows:

- **Get adequate calcium.** Increased calcium intake, particularly during childhood and the growth spurt of adolescence, can produce a heavier, denser skeleton and reduce the risk of the complications of bone loss later in life. College-age women also can strengthen their bones and reduce their risk of osteoporosis by increasing their calcium intake and physical activity.
- If you do not get enough calcium in your diet, **take daily supplements.**
- **Drink alcohol only moderately.** More than two or three alcoholic beverages a day impairs intestinal calcium absorption.
CONSUMER ALERT

Can You Really Turn Back Time?

Americans spend billions of dollars on products that promise to make them look or feel younger. Are they getting their money’s worth?

Facts to Know

- Over-the-counter skin products have little effect because fine lines, pigmentation, and other age-related changes occur in the skin’s deeper layers.
- Herbs like gingko biloba do not improve memory or slow the onset of Alzheimer’s.
- “Antiaging” vitamins and supplements do not protect the aging brain and heart and may contain preservatives and other chemicals that can trigger allergic reactions.

Steps to Take

- Read the claims carefully. Watch out for qualifying words like “aim to” and “designed to.”
- Watch out for pseudoscientific language, such as “clinically shown to.” Where? By whom? Remember that the gold standard of science is a randomized, double-blind clinical trial, performed by qualified researchers (usually affiliated with a university or teaching hospital) who have no financial stake in the outcome.
- Don’t believe testimonials. The model in the “after” photograph may indeed look younger, thinner, and better than in the “before” shot, but that may be the result of airbrushing or professional lighting.

- Don’t smoke. Smokers tend to be thin and enter menopause earlier, thus extending the period of jeopardy from estrogen loss.
- Let the sunshine in (but don’t forget your sunscreen), Vitamin D, a vitamin produced in the skin in reaction to sunlight, boosts calcium absorption.
- Exercise regularly. Both aerobic exercise and weight training can help preserve bone density.

Preparing for Medical Crises and the End of Life

Throughout this book, we have stressed the ways in which you can determine how well and how long you live. You can also make decisions about the end of your life. When facing a serious, potentially life-threatening illness, people typically have practical, realistic goals, such as maintaining their quality of life, remaining independent, being comfortable, and providing for their families. (See “Health in Action.”)

Various racial and ethnic groups have different preferences for their end-of-life wishes. Many Arab Americans prefer not to go to nursing homes as they near the end of their lives, while many African Americans are comfortable with nursing homes and hospitals. Hispanic individuals express strong concerns about dying with dignity. Many white people don’t want their families to take care of them, although they—like members of most other racial and ethnic groups—want their families nearby as they live out their last days.

Advance Directives

All states and the District of Columbia have laws authorizing the use of advance directives to specify the kind of medical treatment individuals want in case of a medical crisis. These documents are important because, without clear indications of a person’s preferences, hospitals and other institutions often make decisions on an individual’s behalf, particularly if family members are not available or disagree among themselves.

The two most common advance directives are health-care proxies and living wills. Each state has different legal requirements for these forms. You can find state-specific forms at www.caringinfo.org. Once the forms are completed, make copies of your advance directives and give them to anyone who might have input in decisions on your behalf. Also give copies to your physician.
Health in Action

Preparing for a Medical Crisis in an Aging Relative

“Medical crises are more common and more likely to lead to serious complications after age 60,” says Kenneth Brummel-Smith, M.D., former president of the American Geriatrics Society. As your parents, grandparents, and other relatives get older, here is what you can do in advance:

- **Watch for warning signals.** If your relative begins stumbling or having near-misses on the highway, make sure he or she sees a doctor before a serious fall or accident occurs. There may be a cure or, if not a cure, a way to improve functioning.
- **Suggest a surrogate.** Even if a couple has been married for 40 years, neither has the legal right to make medical decisions for a spouse. The same is true for children and other relatives. The only way to get that right is to fill out a form, usually called an advance directive or medical power of attorney.
- **Talk to loved ones.** “Waiting for something bad to happen doesn’t make it any easier to talk about,” says Dr. Brummel-Smith, who suggests sitting down for a formal discussion at some point after a relative reaches age 65 “but definitely before age 75.”
- **Focus on values.** “You don’t have to discuss every possible drug or surgery or intervention,” says Dr. Brummel-Smith. “What’s important is that you understand the older person’s values. What are fates worse than death? Independence may be more important then living a longer life.” Many families use the “Five Wishes” form (available online at www.agingwithdignity.org) to discuss preferences for medical, personal, emotional, and spiritual care.
- **Involve the person’s primary physician.** Often it’s not a question of what doctors can do medically in a crisis, but of what they should do, which is the patient’s decision. Encourage loved ones to discuss “what ifs” with their doctors and make their desires clear. For instance, a primary physician should know which treatments patients want (such as resuscitation during surgery) as well as those they don’t want (such as remaining on a ventilator if unable to breathe on their own).
- **Investigate alternative living options.** Aging parents should visit retirement communities or nursing homes while they’re still healthy, not with the idea of moving into them, but of knowing what’s available. They also should find out if their health plan provides services for seniors after a medical crisis.
- **Make sure you know where to find key documents.** An easily accessible folder with copies of the latest lab reports, consultations, and advance directives helps to avoid unnecessary tests and get faster treatment when a crisis does occur.

The Five Wishes

An innovative document called “Five Wishes” helps the aged, the seriously ill, their loved ones, and caregivers prepare for medical crises. Written with the help of the American Bar Association’s Commission on the Legal Problems of the Elderly, the Five Wishes document has a health-care proxy, a health-care directive, and three other “wishes.” Persons using this document can specify:

- Which person they want to make health-care decisions for them when they are no longer able to do so.
- Which kinds of medical treatments they do or don’t want.
- How comfortable they want to be made.
- How they want people to treat them.
- What they want loved ones to know.

The Five Wishes document (at www.agingwithdignity.org) is legally valid in 38 states. Churches, synagogues, hospices, hospitals, physicians, social service agencies, and employers also are distributing the document to help people plan for their own care or that of aging parents.

**DNR Order** You can also sign an advance directive specifying that you want to be allowed to die naturally—you do not want to be resuscitated in case your heart stops beating. Do-not-resuscitate (DNR) orders apply mainly to hospitalized, terminally ill patients and must be signed by a physician. However, in some states, it is possible to complete a nonhospital DNR form that specifies an individual’s wish not to be

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Health-Care Proxy A health-care proxy is an advance directive that gives someone else the power to make health decisions on your behalf. This advance directive is also called Medical Power of Attorney or Health-Care Power of Attorney. People typically name a relative or close friend as their agent. Let family and friends know that you have completed a health-care proxy. Tell your primary physician, but you should not designate your doctor as your agent. Many states prohibit this. Even when allowed, it is not a good idea because your doctor’s primary responsibility is to administer care.

Living Will Individuals can use a living will (also called health-care directive or physician’s directive) to indicate whether they want or don’t want all possible medical treatments and technology used to prolong their lives. Living wills are most effective when they focus on priorities and goals, not so much on how to achieve them. Most states recognize living wills as legally binding, and a growing number of health-care professionals and facilities offer patients help in drafting living wills. Figure 20.3 shows a physician’s directive for Texas and notes where state laws may differ.

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Figure 20.3  Preparing a Physician’s Directive


**DIRECTIVE TO PHYSICIANS**

For Persons 18 Years of Age and Over

I __ recognize that the best health care is based upon a partnership of trust and communication with my physician. My physician and I will make health care decisions together as long as I am of sound mind and able to make my wishes known. If there comes a time that I am unable to make medical decisions about myself because of illness or injury, I direct that the following treatment preferences be honored:

If, in the judgment of my physician, I am suffering with a terminal condition from which I am expected to die within six months, even with available life-sustaining treatment provided in accordance with prevailing standards of medical care:

____ I request that all treatments other than those needed to keep me comfortable be discontinued or withheld and my physician allow me to die as gently as possible; OR,

____ I request that I be kept alive in this terminal condition using available life-sustaining treatment (THIS SELECTION DOES NOT APPLY TO HOSPICE CARE).

If, in the judgment of my physician, I am suffering with an irreversible condition so that I cannot care for myself or make decisions for myself and am expected to die without life-sustaining treatment provided in accordance with prevailing standards of care:

____ I request that all treatments other than those needed to keep me comfortable be discontinued or withheld and my physician allow me to die as gently as possible; OR,

____ I request that I be kept alive in this irreversible condition using available life-sustaining treatment (THIS SELECTION DOES NOT APPLY TO HOSPICE CARE).

Additional requests: (After discussion with your physician, you may wish to consider listing particular treatments in this space that you do or do not want in specific circumstances, such as artificial nutrition and fluids, intravenous antibiotics, etc. Be sure to state whether you do or do not want the particular treatment).

After signing this DIRECTIVE, if my representative or I elect hospice care, I understand and agree that only those treatments needed to keep me comfortable would be provided and I would not be given available life-sustaining treatments.

If I do not have a Medical Power of Attorney and I am unable to make my wishes known, I designate the following person(s) to make treatment decisions with my physician compatible with my personal values.

Name ___________________________
Address ___________________________
Name ___________________________
Address ___________________________

(If a Medical Power of Attorney has been executed, then an agent already has been named and you should not list additional names in this document.)

If the above persons are not available, or if I have not designated a spokesperson, I understand that a spokesperson will be chosen for me following standards specified in the laws of Texas. If, in the judgment of my physician, my death is imminent within minutes to hours, even with the use of all available medical treatment provided within the prevailing standard of care, I acknowledge that all treatments may be withheld or removed except those needed to maintain my comfort.

I understand that under Texas law this Directive has no effect if I have been diagnosed as pregnant. This DIRECTIVE will remain in effect until I revoke it. No other person may do so. I understand that I may revoke this DIRECTIVE at any time.

I understand the full import of this DIRECTIVE and I am emotionally and mentally competent to make this DIRECTIVE.

Signed ____________________________________________

City, County, and State of Residence ___________________________

Date ____________________________________________

Two competent witnesses must sign below, acknowledging your signature. The witness designated as "Witness 1" may not be a person designated to make a treatment decision for the patient and may not be related to the patient by blood or marriage. The witness may not be entitled to any part of the estate and may not have a claim against the estate of the patient. The witness may not be the attending physician or an employee of the attending physician. If this witness is an employee of the health care facility in which the patient is being cared for, this witness may not be involved in providing direct patient care to the patient. This witness may not be an officer, director, partner, or business office employee of the health care facility in which the patient is being cared for or of any parent organization of the health care facility.

Witness 1 ____________________________________________
Witness 2 ____________________________________________

**In most states, directives will have a space to specify treatment you do or don’t want. Ask your physician what to include here. You can:**

- Ask for or prohibit use of artificial feeding tubes, cardiopulmonary resuscitation, antibiotics, dialysis, and respirators.
- Ask for pain medication to keep you comfortable.
- State whether you would prefer to die in the hospital or at home.
- Designate a proxy—someone to make decisions about your treatment when you’re unable.
- Donate organs or other body parts.

**In some states your signature must be notarized.** Elsewhere, the signature of the witnesses is adequate, although if you’re in a hospital or nursing home, in some states you may need as an additional witness the chief of staff or medical director.
resuscitated at home. Patients in the final stages of advanced cancer or AIDS may choose to use such forms to protect their rights in case paramedics are called to their home.

**Holographic Wills** Perhaps you think that only wealthy or older people need to write wills. However, if you’re married, have children, or own property, you should either hire a lawyer to draw up a will or at least write a **holographic will** yourself, specifying who should inherit your possessions. If you die **intestate** (without a will), the state will make these decisions for you. Even a modest estate can be tied up in court for a long period of time, depriving family members of money when they need it most.

A holographic will is a handwritten (not typed) statement that some states will recognize. You can:

- **Name a family member or friend** as the executor, the person who sees that your wishes are carried out.
- **List the things you own** and to whom you want them to go; include addresses and telephone numbers, if possible.
- **Select a guardian for your children** (if any), presumably someone whose ideas about raising children are similar to your own. Be sure that any named guardians are willing and able to accept this responsibility before writing them into your will.
- **Specify any funeral arrangements.** Be sure to keep the will in a safe place, where your executor, family members, or closest beneficiary can find it quickly and easily; tell them where it is.

**Ethical Dilemmas**

Modern medicine can do more to delay or defy death than was once thought possible. However, the ability to sustain life in patients with no hope of recovery has created wrenching medical and moral dilemmas. Increasingly, lawyers, ethicists, and consumer advocates are arguing that health-care providers must recognize a fundamental right of patients: the right to die.

Health economists, noting that more than half of U.S. health-care dollars are spent in the last year of life, have questioned “heroic” measures to prolong the life of chronically ill elderly patients or those with fatal diseases. Policies on such aggressive measures vary from hospital to hospital and state to state; often medical staff are not aware of patients’ wishes.

Some health-care facilities require that staff members try to resuscitate any patient whose heart stops unless a do-not-resuscitate (DNR) order has been written, usually with the family’s permission.

Families may demand aggressive medical care near the end of life on the basis of religious grounds, such as a conviction that every moment of life is a gift from God worth preserving at any cost. However, doctors are not obliged to provide a treatment they consider medically inappropriate or inhumane simply because of the family’s religious beliefs. Ideally, doctors and family members, perhaps with the aid of a chaplain, work together to reach a consensus on the appropriate limits to life-sustaining treatment.

Another major ethical concern is the fate of an estimated 5,000 to 10,000 unconscious Americans who are being kept alive by artificial means. Some are in a **coma**, a state of total unconsciousness. They may have no sense of where they are, no memory, and no experience of pain. Others are in a **persistent vegetative state**, in which they’re awake and yet unaware. They open their eyes; their brain waves show the characteristic patterns of waking and sleep. They can usually breathe on their own after a few weeks on artificial respiration; they can cough; the pupils of their eyes respond to light; but they do not respond to pain.

**The Gift of Life**

If you’re at least 18 years old, you can fill out a donor card (Figure 20.4), agreeing to designate, in the event of your death, any organs or tissues needed for transplantation. Corneas may help a blind person see, for example. Kidneys, or even a heart, may be transplanted. The donation takes effect upon your death and is a generous way of giving others the possibilities for life that you have had yourself. The card should be filled out and signed; some must be signed in the presence of two witnesses. Attach the donor card to the back of your driver’s license or I.D. card. (Whole-body donations may require other arrangements.)

**holographic will** A will wholly in the handwriting of its author.

**coma** A state of total unconsciousness.

**persistent vegetative state** A state of being awake and capable of reacting to physical stimuli, such as light, while being unaware of pain or other environmental stimuli.
The reasons for becoming an organ donor or agreeing to donate a loved one’s organs are complex. Older men and women generally have higher donation rates. Families often base their decision on a loved one’s explicit desire either to donate organs or not. Concerns about disfigurement and feelings of emotional exhaustion also play a role.

Death and Dying

Some 2.4 million people die in the United States each year. Although most are older, death occurs in all age groups. The causes of death vary with both age and gender. Among those under age 35, intentional and nonintentional injury are the primary causes of death. Among older Americans, cancer and heart disease are the top killers. In fact, cancer, heart disease, and stroke continue to claim the most lives around the world. Men typically die at a younger age than women. College-age individuals are most likely to die as a result of accidents or assaults.

Defining Death

In our society, death isn’t a part of everyday life, as it once was. Because machines can now keep alive people who, in the past, would have died, the definition of death has become more complex. Death has been broken down into the following categories:

• **Functional death.** The end of all vital functions, such as heartbeat and respiration.

• **Cellular death.** The gradual death of body cells after the heart stops beating. If placed in a tissue culture or, as is the case with various organs, transplanted to another body, some cells can remain alive indefinitely.

• **Death.** The moment when the heart stops beating.

• **Brain death.** The end of all brain activity, indicated by an absence of electrical activity (confirmed by an electroencephalogram, or EEG) and a lack of reflexes. The notion of brain death is bound up with what we consider to be the actual person, or self. The destruction of a person’s brain means that his or her personality no longer exists; the lower brain centers controlling respiration and circulation no longer function.

• **Spiritual death.** The moment when the soul, as defined by many religions, leaves the body.

When does a person actually die? The traditional legal definition of death is failure of the lungs or heart to function. However, because respiration and circulation can be maintained by artificial means, most states have declared that an individual is considered dead only when the brain, including the brain stem, completely stops functioning. Brain-death laws prohibit a medical staff from “pulling the plug” if there is any hope of sustaining life.

Denying Death

Most of us don’t quite believe that we’re going to die. A reasonable amount of denial helps us focus on the day-to-day realities of living. However, excessive denial can be life-threatening. Some drivers, for instance, refuse to buckle their seat belts because they refuse to acknowledge that a drunk driver might collide with them. Similarly, cigarette smokers deny that lung cancer will ever strike them, and people who eat high-fat meals deny that they’ll ever suffer a heart attack.

One important factor in denial is the nature of the threat. It’s easy to believe that death is at hand when someone’s pointing a gun at you; it’s much harder to think that cigarette smoking might cause your death 20 or 30 years down the road. The late Elisabeth Kübler-Ross, a psychiatrist who extensively studied the process of dying, described the downside of denying death in *Death: The Final Stage of Growth*.
It is the denial of death that is partially responsible for people living empty, purposeless lives; for when you live as if you’ll live forever, it becomes too easy to postpone the things you know that you must do. You live your life in preparation for tomorrow or in the remembrance of yesterday—and meanwhile, each today is lost. In contrast, when you fully understand that each day you awaken could be the last you have, you take the time that day to grow, to become more of who you really are, to reach out to other human beings.\(^{23}\)

**Emotional Responses to Dying**

Kübler-Ross identified five typical stages of reaction that a person goes through when facing death (Figure 20.5).

1. **Denial (“No, not me”).** At first knowledge that death is coming, a terminally ill patient rejects the news. The denial overcomes the initial shock and allows the person to begin to gather together his or her resources. Denial, at this point, is a healthy defense mechanism. It can become distressful, however, if it’s reinforced by the relatives and friends of the dying patient.

2. **Anger (“Why me?”).** In the second stage, the dying person begins to feel resentment and rage regarding imminent death. The anger may be directed at God or at the patient’s family and caregivers, who can do little but try to endure any expressions of anger, provide comfort, and help the patient on to the next stage.

3. **Bargaining (“Yes, me, but . . .!”).** In this stage, a patient may try to bargain, usually with God, for a way to reverse or at least postpone dying. The patient may promise, in exchange for recovery, to do good works or to see family members more often. Alternatively, the patient may say, “Let me live long enough to see my grandchild born” or “to see the spring again.”

4. **Depression (“Yes, it’s me”).** In the fourth stage, the patient gradually realizes the full consequences of his or her condition. This may begin as grieving for health that has been lost and then become anticipatory grieving for the loss that is to come of friends, loved ones, and life itself. This stage is perhaps the most difficult: The dying person should not be left alone during this period. Neither should loved ones try to cheer up the patient, who must be allowed to grieve.

5. **Acceptance (“Yes, me; and I’m ready”).** In this last stage, the person has accepted the reality of death: The moment looms as neither frightening nor painful, neither sad nor happy—only inevitable. The person who waits for the end of life may ask to see fewer visitors, to separate from other people, or perhaps to turn to just one person for support.

Several stages may occur at the same time and some may happen out of sequence. Each stage may take days or only hours or minutes. Throughout, denial may come back to assert itself unexpectedly, and hope for a medical breakthrough or a miraculous recovery is forever present.

Some experts dispute Kübler-Ross’s basic five-stage theory as too simplistic and argue that not all people go through such well-defined stages in the dying process. The way a person faces death is often a mirror of the way he or she has faced other major stresses in life: Those who have had the most trouble adjusting to other crises will have the most trouble adjusting to the news of their impending death.

An individual’s will to live can postpone death for a while. In a study of elderly Chinese women, researchers found that their death rate decreased before and during a holiday during which the senior women in a household play a central role; it increased after the celebration. A similar temporary drop occurs among Jews at
the time of Passover. However, different events may have different effects. The prospect of an upcoming birthday postpones death in women but hastens it in men. The will to live typically fluctuates in terminal patients, varying along with depression, anxiety, shortness of breath, and a sense of well-being.

The family of a dying person experiences a spectrum of often wrenching emotions. Family members, too, may deny the verdict of death, rage at the doctors and nurses who can’t do more to save their loved one, bargain with God to give up their own health if necessary, sink into helplessness and depression, and finally accept the reality of their anticipated loss. Dying can be seen from different perspectives. The Renz model, for example, views it as a process of maturation consisting of pretransition, transition, and posttransition. The initial response is an outpouring of emotions, including anger, grief, feelings of personal emptiness, and despair. These may emerge again and again.

However, as patients confront reality, they eventually can “let go and let be.” As one researcher observed, “There is happiness and well-being in the midst of illness. In the course of the dying process spiritual experiences of such intensity often happen more than just once. After a shorter or longer struggle, patients reach a new mental state, a gift of grace beyond human endeavor and power.”

**How We Die**

Life can end in very different ways. Sudden death, by accident or murder, for instance, brings an abrupt end to life in individuals who may have been in optimal health. A terminal illness, such as an aggressive and fatal cancer, can lead to a steep drop in functioning prior to death. When organs such as the kidneys fail, a patient’s well-being tends to plummet and then recover but in a downward pattern. The frailty of old age leads to a gradual decline to ever lower levels of functioning and eventual death.

Most people who have a fatal or terminal illness prefer to know the truth about their health and chances for recovery. Even when they’re not officially informed by a doctor or relative, most fatally ill people know or strongly suspect that they’re dying. Dying people usually make it clear whether they want to talk about death and to what extent. The most frequent concern is how much time is left. Usually physicians can give only a rough estimate, such as “several weeks or months.”

**A “Good” Death**

As life expectancy has increased and high-technology interventions have multiplied, many health-care professionals as well as citizens and social organizations have begun to demand a better way of caring for those who are dying. The Center to Improve Care of the Dying, in Washington, D.C., has set goals for reintegrating dying within living, thus enhancing the prospect for growth at the end of life. These experts talk of “dying well,” “living while dying,” and “physician-assisted living.” They aim to change our way of thinking about dying so that we view the end of life as a time of love and reconciliation, and transcendence of suffering.

Physicians who care for the dying are being urged to do all that they can to eliminate pain. They are encouraged not to withhold opioid drugs, such as morphine, simply out of fear of addiction. More efforts are being made for patients to be taken care of at home, with appropriate support and well-informed guidance.

Various psychological factors can affect those at risk of dying. Elderly people who lack hope in the future are much more likely to die within the next few years. Researchers speculate that hopelessness may lead to biochemical and nervous system abnormalities or that hopeless individuals may not eat well, take medications as prescribed, or follow a doctor’s recommendations.

Spirituality plays a major role. In various surveys, many patients say they want their doctors and nurses to address their spiritual concerns. In one survey, even 45 percent of nonreligious patients thought physicians should inquire politely about patients’ spiritual needs. However, some worry that such queries may be inappropriate or detract from a doctor’s primary mission.

**Caregiving**

When someone becomes terminally ill, a woman—usually the patient’s wife, daughter, or sister—is most likely to provide day-to-day care,
often for periods longer than a year. Caregiving takes a different toll on men and women. In one study of adult daughters and husbands caring for terminally ill breast cancer patients, the daughters experienced more symptoms of anxiety and depression and greater family strain.

The impact of caregiving continues even after the death of an ill spouse. In one study, the health of older caregivers who had experienced strain prior to a spouse’s death did not deteriorate. They showed no increase in depressive symptoms or use of antidepressant drugs and did not lose weight. Those who had not been caregivers were more likely to experience depression and weight loss.

Hospice: Caring When Curing Isn’t Possible

A hospice is a homelike health-care facility or program that helps dying men and women who can afford such care to live their final days to the fullest, as free as possible from disabling pain and mental anguish.

Race and ethnicity affect the use of hospice. In a study of patients over age 65 (and all covered by Medicare) with terminal cancer, Asian American and black patients were less likely to enroll in a hospice program than whites and Hispanics. They also were more likely to be hospitalized in an intensive care unit at least twice during their last month of life.24

Hospice workers generally work in teams, usually consisting of a nurse, physician, social worker, chaplain, and trained volunteers. Other professionals, such as a physical therapist, may join the team when needed. These workers provide the comfort, support, and care dying patients need until they do die.

Hospice programs offer a combination of medical and emotional care that involves not only the patient but also the family members or others concerned with caring for the patient. Most hospice patients have life expectancies of six months or less and are no longer receiving treatments aimed at curing their diseases. When someone is available to provide care, patients remain in their own homes. Hospice nurses regularly visit all home patients and are available around the clock.

For patients requiring care that the family cannot provide, round-the-clock care is available at the hospice facility. Unlike a traditional hospital, where the focus is on diagnosis, cure, and treatment, a hospice works to make what is left of life pain-free and comfortable. Visiting hours for relatives and friends are flexible, with no restrictions on visits by children and grandchildren. Hospice services are covered, in full or in part, by most major insurance companies.

Near-Death Experiences

Reports of near-death experiences have grown, thanks largely to advances in emergency medical care. Most are remarkably similar, whether they occur in children or adults, whether they’re the result of accidents or illnesses, even whether the individuals actually are near death or only think they are. Some individuals who have survived a close brush with death report autoscopy (watching, from several feet in the air, resuscitation attempts on their own bodies) or transcendence (the sense of passing into a foreign region or dimension). Some see light, often at the end of a tunnel. Their vision seems clearer; their hearing, sharper. Some recall scenes from their lives or feel the presence of loved ones who have died. Many report profound feelings of joy, calm, and peace. Fewer than 1 percent of those who’ve reported near-death experiences described them as frightening or distressing, although a larger number recall transitory feelings of fear or confusion.

Many near-death experiences occur in individuals who’ve been sedated or given other medications; however, many others do not. Several studies have shown that individuals who received medication or anesthesia were actually less likely to remember near-death experiences than those who hadn’t had any drugs. Some scientists have speculated that lack of oxygen, changes in blood gases, altered brain functioning, or the release of neurotransmitters (messenger chemicals in the brain) may play a role in near-death experiences. However, there’s little solid evidence that physiological events are responsible. There’s also no proof that wishful thinking, cultural conditioning, posttraumatic stress, or other psychological mechanisms may be at work. For now, the most that scientists can say for sure about this medical mystery is that it needs further study.
Suicide

Suicide increases with age and is most common in persons age 65 and older. This age group accounts for 18 percent of all suicides in the United States. For every completed suicide, there are 10 to 40 unsuccessful attempts. (Chapter 5 presents a detailed discussion of the risk factors and warning signs of suicide.)

One of the main factors leading to suicide is illness, especially terminal illness. A great deal of debate centers on quality of life, yet there is no reliable or consistent way to measure this. Patients who are dying may feel some quality of life, even when others do not recognize it, or their evaluations of the quality of their lives may fluctuate. Dying patients who say their lives are not worth living may be suffering from depression; hopelessness is one of its characteristic symptoms.

"Rational" Suicide

An elderly widow suffering from advanced cancer takes a lethal overdose of sleeping pills. A young man with several AIDS-related illnesses shoots himself. A woman in her 50s, diagnosed as having Alzheimer’s disease, asks a doctor to help her end her life. Are these suicides “rational” because these individuals used logical reasoning in deciding to end their lives?

The question is intensely controversial. Advocates of the right to “self-deliverance” argue that individuals in great pain or faced with the prospect of a debilitating, hopeless battle against an incurable disease can and should be able to decide to end their lives. As legislatures and the legal system tackle the thorny questions of an individual’s right to die, mental health professionals worry that, even in those with fatal diseases, suicidal wishes often stem from undiagnosed depression.

Because depression may indeed warp the ability to make a rational decision about suicide, mental health professionals urge physicians and family members to make sure individuals with chronic or fatal illnesses are evaluated for depression and given medication, psychotherapy, or both. It is also important for everyone to allow enough time—an average of three to eight weeks—to see if treatment for depression will make a difference in their desire to keep living.

Physician-Assisted Suicide

According to U.S. surveys, there is greater support for physician-assisted suicide and euthanasia among patients and the general public than among physicians. More Caucasians support these practices than members of ethnic minority groups.

Oregon is the first state to legalize physician-assisted suicide for terminally ill patients. The Supreme Court has upheld the state’s Death with Dignity Act, which bars suicide assistance for anyone whose judgment may be impaired by a mental disorder.

If patients have a right to die, should doctors help them end their lives? Physicians could stop any extraordinary efforts to sustain life (for example, by withholding oxygen or ending intravenous feedings); such actions are referred to as passive euthanasia, or dyathanasia. Euthanasia, the active form of so-called mercy killing, has generally been viewed as illegal and unethical. Euthanasia is tolerated and legally pardoned in the Netherlands but remains illegal in all European countries. The demand for physician-assisted death in the Netherlands has not risen; and patients and physicians have become more reluctant to ask for or offer this option over the past few years.

Some medical groups, such as the American Medical Association, oppose as unethical any physician’s involvement in euthanasia. Others argue that individuals have the right to end their own lives and that physicians who provide prescriptions for lethal doses of certain drugs are acting out of compassion and respect for patients’ wishes.

The Practicalities of Death

At a time of great emotional pain, grieving family members must cope with medical, legal, and practical concerns, including obtaining a medical certificate of the cause of death, registering the death, and making funeral arrangements.
They also may want to arrange for organ donations and, in some circumstances, an autopsy.

Funeral Arrangements

A body can be either buried or cremated. Burial requires the purchase of a cemetery plot, which many families do decades before death. A burial is typically the third most expensive purchase of a lifetime, behind the cost of a house and car. The average national costs range as high as $6,000, although they vary considerably. Memorial societies are voluntary groups that help people plan in advance for death. They obtain services at moderate cost, keep the arrangements simple and dignified, and—most important, perhaps—ease the emotional and financial burden on the rest of the family when death finally does come.

If the body is to be cremated, you must comply with some additional formalities, with which the funeral director can help you. After a cremation (incineration of the remains), you can either collect the ashes to keep, bury, or scatter yourself, or ask the crematorium to dispose of them.

The tradition of a funeral may help survivors come to terms with the death, enabling them to mourn their loss and to celebrate the dead person’s life. Funerals are usually held two to four days after the death. Many have two parts: a religious ceremony at a church or funeral home, and a burial ceremony at the grave site.

Alternatively, the body may be disposed of immediately, through burial, cremation, or bequeathed to a medical school, and a memorial service held later. In a memorial service, the body is not present, which may change the focus of the service from the person’s death to his or her life.

Autopsies

An autopsy is a detailed examination of a body after death, also called a postmortem exam. There are two types:

- **Medicolegal.** This type of autopsy is performed to establish the cause of death and to gather information about the death for use as evidence in any legal proceedings. It is done to detect any crimes and to help identify the proper person for prosecution, to investigate possible industrial hazards or contagious diseases that may endanger the public health, or to establish the cause of death for insurance purposes.

- **Medical/educational.** This type of autopsy is performed, usually in the hospital where the person died, to increase medical knowledge and to determine a more exact cause of death. It may be requested by the attending physician or the family, but it cannot be performed without the family’s permission.

Autopsies can be extremely valuable in establishing an accurate cause of death, revealing a different diagnosis that might have led to a change in therapy and prolonged survival in about 10 percent of cases. Thirty years ago about 50 percent of patients who died in hospitals were autopsied. However, the autopsy rate in the United States has been steadily declining, and today about 10 to 20 percent of deaths in teaching hospitals are autopsied.

Grief

An estimated 8 million Americans lose a member of their immediate family each year. Each death leaves an average of five people bereaved. Such loss may be the single most upsetting and feared event in a person’s life. It produces a
wide range of reactions, including anxiety, guilt, anger, and financial concern. Many may see the death of an old person as less tragic than the death of a child or young person. A sudden death is more of a shock than one following a long illness. A suicide can be particularly devastating, because family members may wonder whether they could have done anything to prevent it. The cause of death also can affect the reactions of friends and acquaintances. Some people express less sympathy and support when individuals are murdered or take their own lives.

According to the stage theory of grief, individuals respond to the loss of a loved one by progressing through several steps, just like people facing death. These consist of shock-numbness, yearning-searching, disorganization-despair, and reorganization. All these reactions can occur simultaneously, although most peak within six months. Acceptance continues to increase over time. The most common and one of the most painful experiences is the death of a parent. When both parents die, even adult individuals may feel like orphaned children. They mourn not just for the father and mother who are gone, but also for their lost role of being someone’s child.

Bereavement is not a rare occurrence on college campuses, but it is largely an ignored problem. Counselors have called upon universities to help students who have lost a loved one through initiatives such as training nonbereaved students to provide peer support and raising consciousness about bereavement.

Your Strategies for Change

How to Cope with Grief

• Accept your feelings—sorrow, fear, emptiness, whatever—as normal. Don’t try to deny emotions such as anger, guilt, despair, or relief.

• Let others help you—by bringing you food, taking care of daily necessities, providing companionship and comfort. (It will make them feel better, too.)

• Face each day as it comes. Let yourself live in the here-and-now until you’re ready to face the future. Give yourself time—perhaps more than you ever imagined—for the pain to ebb, the scars to heal, and your life to move on.

• Don’t think there’s a right or wrong way to grieve. Mourning takes many forms, and there’s no set timetable for working through the various stages of grief.

• Seek professional counseling if you remain intensely distressed for more than six months or your grief does not ease over time. Therapy can help prevent potentially serious physical and psychological problems.

Grief’s Effects on Health

Men and women who lose partners, parents, or children endure so much stress that they’re at increased risk of serious physical and mental illness, and even of premature death. Studies of the health effects of grief have found the following:

• Grief produces changes in the respiratory, hormonal, and central nervous systems and may affect functions of the heart, blood, and immune systems.

• Grieving adults may experience mood swings between sadness and anger, guilt and anxiety.

• Grievers may feel physically sick, lose their appetite, sleep poorly, or fear that they’re going crazy because they “see” the deceased person in different places.

• Friendships and remarriage offer the greatest protection against health problems.

• Some widows may have increased rates of depression, suicide, and death from cirrhosis of the liver. The greatest risk factors are poor previous mental and physical health and a lack of social support.

• Grieving parents, partners, and adult children are at increased risk of serious physical and mental illness, suicide, and premature death.

Sometimes grief progresses from an emotionally painful but normal experience to a more persistent problem, called complicated grief. Individuals who experience very long-lasting or severe symptoms, including inability to accept a loved one’s death, persistent thoughts about the death, and preoccupation with the lost loved one, can benefit from professional treatment.
“Every man desires to live long,” wrote Jonathan Swift, “but no man would be old.” We all wish for long lives, yet we want to avoid the disease and disability that can tarnish our golden years. Which of the following steps will you take to ensure a lifetime of health?

___ Exercise regularly. By improving blood flow, staving off depression, warding off heart disease, and enhancing well-being, regular workouts help keep mind and body in top form.

___ Don’t smoke. Every cigarette you puff can snuff out seven minutes of your life, according to the Centers for Disease Control and Prevention.

___ Watch your weight and blood pressure. Increases in these vital statistics can increase your risk of hypertension, cardiovascular disease, and other health problems.

___ Eat more fruits and vegetables. These foods, rich in vitamins and protective antioxidants, can reduce your risk of cancer and damage from destructive free radicals.

___ Cut down on fat. Fatty foods can clog the arteries and contribute to various cancers.

___ Limit drinking. Alcohol can undermine physical health and sabotage mental acuity.

___ Cultivate stimulating interests. Elderly individuals with complex and interesting lifestyles are most likely to retain sharp minds and memories beyond age 70.

___ Don’t worry; be happy. At any age, emotional turmoil can undermine well-being. Relaxation techniques, such as meditation, help by reducing stress.

___ Reach out. Try to keep in contact with other people of all ages and experiences. Make the effort to invite them to your home or go out with them. On a regular basis, do something to help another person.

___ Make the most of your time. Greet each day with a specific goal—to take a walk, write letters, visit a friend.

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**What Is Your Aging IQ?**

**Answer True or False**

| T  | F  | 1. Everyone becomes “senile” sooner or later, if he or she lives long enough. |
| T  | F  | 2. American families have by and large abandoned their older members. |
| T  | F  | 3. Depression is a serious problem for older people. |
| T  | F  | 4. The numbers of older people are growing. |
| T  | F  | 5. The vast majority of older people are self-sufficient. |
| T  | F  | 6. Mental confusion is an inevitable, incurable consequence of old age. |
| T  | F  | 7. Intelligence declines with age. |
| T  | F  | 8. Sexual urges and activity normally cease around ages 55 to 60. |
| T  | F  | 9. If a person has been smoking for 30 or 40 years, it does no good to quit. |
| T  | F  | 10. Older people should stop exercising and rest. |
| T  | F  | 11. As you grow older, you need more vitamins and minerals to stay healthy. |
| T  | F  | 12. Only children need to be concerned about calcium for strong bones and teeth. |
| T  | F  | 13. Extremes of heat and cold can be particularly dangerous to old people. |
| T  | F  | 14. Many older people are hurt in accidents that could have been prevented. |
| T  | F  | 15. More men than women survive to old age. |
| T  | F  | 16. Deaths from stroke and heart disease are declining. |
| T  | F  | 17. Older people on the average take more medications than younger people. |
| T  | F  | 18. Snake oil salesmen are as common today as they were on the frontier. |
| T  | F  | 19. Personality changes with age, just like hair color and skin texture. |
| T  | F  | 20. Sight declines with age. |
Scoring

1. False. Even among those who live to be 80 or older, only 20 to 25 percent develop Alzheimer’s disease or some other incurable form of brain disease. “Senility” is a meaningless term that should be discarded.

2. False. The American family is still the number one caretaker of older Americans. Most older people live close to their children and see them often; many live with their spouses. In all, eight out of ten men and six out of ten women live in family settings.

3. True. Depression, loss of self-esteem, loneliness, and anxiety can become more common as older people face retirement, along with the deaths of relatives and friends, and other such crises—often at the same time. Fortunately, depression is treatable.

4. True. By the year 2030, one in four people will be over 65 years of age.

5. True. Only a small percentage of the older population live in nursing homes. The rest live independently or with relatives or caregivers.

6. False. Mental confusion and serious forgetfulness in old age can be caused by Alzheimer’s disease or other conditions that cause incurable damage to the brain, but some 100 other problems can cause the same symptoms. A minor head injury, a high fever, poor nutrition, adverse drug reactions, and depression can all be treated and the confusion will be cured.

7. False. Intelligence per se does not decline without reason. Most people maintain their intellect or improve as they grow older.

8. False. Most older people can lead an active, satisfying sex life.

9. False. Stopping smoking at any age not only reduces the risk of cancer and heart disease, it also leads to healthier lungs.

10. False. Many older people enjoy—and benefit from—exercises such as walking, swimming, and bicycle riding. Exercise at any age can help strengthen the heart and lungs, and lower blood pressure. See your physician before beginning a new exercise program.

11. False. Although certain requirements, such as that for “sunshine” vitamin D, may increase slightly with age, older people need the same amounts of most vitamins and minerals as younger people. Older people in particular should eat nutritious food and cut down on sweets, salty snack foods, high-calorie drinks, and alcohol.

12. False. Older people require fewer calories, but adequate intake of calcium for strong bones can become more important as you grow older. This is particularly true for women, whose risk of osteoporosis increases after menopause. Milk and cheese are rich in calcium as are cooked dried beans, collards, and broccoli. Some people need calcium supplements as well.

13. True. The body’s thermostat tends to function less efficiently with age, and the older person’s body may be less able to adapt to heat or cold.

14. True. Falls are the most common cause of injuries among the elderly. Good safety habits, including proper lighting, nonskid carpets, and keeping living areas free of obstacles, can help prevent serious accidents.

15. False. Women tend to live 5 to 10 percent longer than men.

16. True. Fewer men and women are dying of stroke or heart disease.

17. True. The elderly consume 25 percent of all medications and, as a result, have many more problems with adverse drug reactions.

18. True. Medical quackery is a $10 billion business in the United States. People of all ages are commonly duped into “quick cures” for aging, arthritis, and cancer.

19. False. Personality doesn’t change with age. Therefore, all old people can’t be described as rigid and cantankerous. You are what you are for as long as you live. But you can change what you do to help yourself to good health.

20. False. Although changes in vision become more common with age, any change in vision, regardless of age, is related to a specific disease. If you are having problems with your vision, see your doctor.

Making Change Happen

Finding Life’s Meaning

If you’re in your teens, 20s, or 30s, aging and death seem remote, even unimaginable. That’s normal. But whatever your age, coming to terms with the stark reality that life is not infinite—that it must end—can give greater meaning to your days.

The lab “Finity” in Labs for IPC, based on the Stages of Change discussed in Chapter 1 of this text and in IPC, celebrates living as fully, as richly, as joyfully as possible. By making smart choices every day, you can do a great deal to ensure that you live longer. By making conscious, creative choices, you also can ensure that your life is more enjoyable, meaningful, and fulfilling.

Get Real

In this section, you take a comprehensive inventory of your life so far. You begin with the Satisfaction with Life Scale, a reliable indicator of how individuals perceive their personal happiness. Using a scale of 7 (strongly agree) to 1 (strongly disagree), you respond to five statements, including:

• In most ways my life is close to my ideal.
• If I could live my life over, I would change almost nothing.

You also answer yes or no to 23 questions about the last 24 hours of your life, including:

• Did you look at the sky?
• Did you taste something absolutely yummy?
• Did you make someone smile?

Social psychology has identified the key components of a fulfilling, happy, high-quality life. You can see how yours compares by assessing:

• Your close relationships.
• Your sense of spirituality or a higher purpose.
• Your positive qualities.
• Your engagement with a passionate pursuit—for family, work, sport, or other experiences—that adds great satisfaction to your life.

Get Ready

In this section you block out time for the experiential exercises this lab requires in the action stage.

Get Going

You review a list of 25 adjectives, including descriptives such as:

• Cheerful
• Hard-working
• Mean-spirited
• Whiny

You pick one adjective that you want to describe you (or one that you want to erase from any description of you), and weave appropriate behaviors into your actions that day. You work with a “signature behavior” that you’d like to have associated with you.

• You make up a life list of the things you want to do before you die and do a series of imaginative and creative activities with goals you’d like to accomplish, experiences you’d like to have, things you don’t want to regret . . .
• In your IPC Journal you develop an outline for your life—past, present, and future—with . . .

Lock It In

Living a life fully requires paying attention each and every day. In this section, you develop and deepen simple practices to ensure that you do so, such as:

• Make your day. Record in your IPC Journal the nicest thing that happened. It might be as small as a bus driver’s hearty hello or a “Well done!” on an assignment, or as big as making a team, acing a final exam, or hearing a longed-for “I love you.”
Review Questions

1. Steps for protecting against bone loss include
   a. having at least two drinks per day.
   b. getting moderate exposure to sunlight.
   c. avoiding heavy exercise.
   d. having a diet low in calcium.

2. When should concern change to intervention?
   a. Uncle Charlie is 85 and continues to drive himself to the grocery store and to the senior center during the daytime.
   b. Nana takes pills at breakfast, lunch, and dinner but sometimes mixes them up.
   c. Mom’s hot flashes have become a family joke.
   d. Your older brother can never remember where he put his car keys.

3. You can best help a friend who is bereaved by
   a. encouraging him to have a few drinks to forget his pain.
   b. simply spending time with her.
   c. avoiding talking about his loss because it is awkward.
   d. reminding her about all she still has in her life.

4. Physically fit people over age 60
   a. have lower risk of dying from chronic heart disease.
   b. can regain the fitness level of a 25-year-old.
   c. show no difference in levels of anxiety and depression.
   d. have higher health-care expenses.

5. Which statement about aging is false?
   a. The most common nutritional disorder in the elderly is obesity.
   b. In men, sexual activity and longevity are linked.
   c. Hormone therapy reduces the risk of heart disease in menopausal women.
   d. Seniors who take up new hobbies late in life may slow aging within the brain.

6. The gender gap related to longevity
   a. is due to deficiencies in the Y chromosome.
   b. results from the presence of a mutant gene.
   c. may be due to the X chromosome and its hormonal influences on the immune system.
   d. is about 13 years in the United States.

7. Which of the following is a change associated with aging that is slowed by exercise?
   a. loss of connective tissue in skin
   b. decrease in certain hormone levels
   c. loss of lean muscle tissue
   d. decreased interest in food

8. Factors that contribute to staying healthy longer include all of the following except
   a. avoiding illness.
   b. moderate smoking.
   c. regular exercise.
   d. lifelong learning.

9. Which statement about the aging brain is false?
   a. When brain cells die, surrounding cells can fill the gaps to maintain cognitive function.
   b. Remembering names and recalling information may take longer.
   c. “Use it or lose it.”
   d. Mental ability and physical ability both decline with age.

10. An advance directive
    a. indicates who should have your property in the event you die.
    b. may authorize which individuals may not participate in your health care if you are unable to care for yourself.
    c. can specify your desires related to the use of medical treatments and technology to prolong your life.
    d. should specify which physician you designate to be your health-care proxy.

Answers to these questions can be found on page 672.

Critical Thinking

1. How are your parents or other mentors staying fit and alert as they age? Do you think you might use similar strategies?

2. Do you think that coming to terms with mortality allows an individual to live each day to its fullest, rather than putting off what he or she would like to do until tomorrow? How does this concept affect your own life? Explain. Do you believe in a next life? How does this affect your view of life and death?

3. Have your living parents and grandparents written advanced directives or a living will? Have you discussed with them their preferences regarding treatment in the event of a medical crisis? If you haven’t had this discussion with your family, how can you begin the process of helping your parents or grandparents communicate their wishes?

4. As many as 10,000 people in this country are chronically unconscious, kept alive by artificial respirators and...
feeding tubes. If you were in an accident that left you in a vegetative state, would you want doctors to do everything possible to fight for your life? Would you want to spend months or even years totally unaware of your surroundings? Should health-care professionals have the right to declare that anyone is too old, too ill, or too frail to try to save? Should they have the right to insist that someone live on even if that person isn’t experiencing much of a life?

Media Menu
Visit www.cengagebrain.com to access course materials and companion resources for this text that will:

• Help you evaluate your knowledge of the material.
• Allow you to prepare for exams with interactive quizzing.
• Use the CengageNOW product to develop a Personalized Learning Plan targeting resources that address areas you should study.

• Coach you through identifying target goals for behavioral change and creating and monitoring your personal change plan throughout the semester using the Behavior Change Planner available in the CengageNOW resource.

Internet Connections

www.nia.nih.gov
This government site features a comprehensive array of resources on aging, including publications on a variety of geriatric health topics, current news events, and a resource directory for older people.

www.realage.com
This site features diet and exercise assessment tools—such as a BMI calculator, exercise estimator, and RealAge assessment quizzes on a variety of health topics—to help you determine your risk of disease and what you can do to reduce this risk. The main feature is an interactive, online personal lifestyle assessment that also gives you options for “growing younger.”

http://aoa.gov
This site, part of the Department of Health and Human Services, has information for seniors and their families on promoting healthy lifestyles and general aging topics.

www.npr.org/programs/death/
This site, sponsored by National Public Radio, contains transcripts and resources from an All Things Considered series focusing on how Americans deal with death and dying. Features include personal stories, a place where you can tell your own story, and a comprehensive list of organizations that can help families who are coping with death, dying, and the diseases of old age.

Key Terms
The terms listed are used on the page indicated. Definitions of the terms are in the Glossary at the end of the book.

advance directives 656
aging 645
Alzheimer’s disease 654
autoscopy 663
coma 659
dementia 654
do-not-resuscitate (DNR) 657
holographic will 659
hormone therapy (HT) 652
hospice 663
living will 657
menopause 650
perimenopause 651
persistent vegetative state 659
terminal illness 662
transcendence 663
Making This Chapter Work for You

This page contains questions for this chapter only

Chapter 20
1. b; 2. b; 3. b; 4. a; 5. c; 6. c; 7. c; 8. b; 9. d; 10. c
This page contains references for this chapter only

Chapter 20

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