

and social changes of middle adulthood in this chapter and the next, we see that the news isn't all bad. This is also a period when many individuals are at the height of their capabilities, when they are engaged in the process of shaping their lives as never before.

We begin the chapter by considering physical development. We consider changes in height, weight, and strength, and discuss the subtle declines in various senses. We also look at the role of sexuality in middle adulthood.

We examine both health and illness during middle age and pay particular attention to two of the major health problems of the period, heart disease and cancer.

The second part of the chapter focuses on cognitive development in middle age. We look at the tricky question of whether or what kind of intelligence declines during the period, and we consider the difficulty of answering the question fully. We also look at memory, examining the ways in which memory capabilities change during middle adulthood.

Physical Development

LO 15-1 What sorts of physical changes affect people in middle adulthood?

LO 15-2 What changes in sexuality do middle-aged men and women experience?

It crept up gradually on Sharon Boker-Tov. Soon after reaching the age of 40, she noticed that it took her a bit longer to bounce back from minor illnesses such as colds and the flu. Then she became conscious of changes in her eyesight: She needed more light to read fine print, and she had to adjust how far she held newspapers from her face in order to read them easily. Finally, she couldn't help but notice that the strands of gray hair on her head, which had begun to appear gradually in her late 20s, were becoming a virtual forest.

Physical Transitions: The Gradual Change in the Body's Capabilities

Middle adulthood is the time when most people become increasingly aware of the gradual changes in their bodies that mark the aging process. As we saw in Chapter 13, some of the aging that people experience is the result of senescence, or naturally occurring declines related to age. Other changes, however, are the result of lifestyle choices, such as diet, exercise, smoking, and alcohol or drug use. As we'll see throughout this chapter, people's lifestyle choices can have a major impact on their physical, and even cognitive, fitness during middle age.

Of course, physical changes occur throughout the entire life span. Yet these changes take on new significance during middle adulthood, particularly in Western cultures that place a high value on youthful appearance. For many people, the psychological significance of such changes far exceeds the relatively minor and gradual changes that they are experiencing. Sharon Boker-Tov had found gray hairs even in her 20s, but in her 40s they multiplied in a way that she could not ignore. She was no longer young.

People's emotional reactions to the physical changes of middle adulthood depend in part on their self-concepts. For those whose self-image is tied closely to their physical attributes—such as highly athletic men and women or those who are physically quite attractive—middle adulthood can be particularly difficult. The signs of aging they see in the mirror signal not just a reduction in their physical attractiveness, but also aging and mortality. Those middle-aged adults, however, whose views of themselves are not so closely tied to physical attributes generally report no less satisfaction with their body images than younger adults (Berscheid, Walster, & Bohrnstedt, 1973; Eitel, 2003; Hillman, 2012).

Physical appearance often plays an especially important role in determining how women see themselves. This is particularly true in Western cultures, where women face strong societal pressures to retain a youthful appearance. Society applies a double standard to men and women in terms of appearance: Whereas older women tend to be viewed in unflattering terms, aging men are more frequently perceived as displaying a maturity that enhances their stature (Harris, 1994).

Height, Weight, and Strength: The Benchmarks of Change

Most people reach their maximum height during their 20s and remain relatively close to that height until around age 55. At that point, people begin a “settling” process in which the bones attached to the spinal column become less dense. Although the loss of height is very slow, ultimately women average a 2-inch decline and men a 1-inch decline over the rest of the life span (Rossman, 1977; Bennani et al., 2009).

Women are more prone to a decline in height because they are at greater risk of osteoporosis, a condition in which the bones become brittle, fragile, and thin, is often brought about by a lack of calcium in the diet. As we discuss further in Chapter 17, although osteoporosis has a genetic component, it is one of the aspects of aging that can be affected by a person's lifestyle choices. Women—and men, for that matter—can reduce the risk of osteoporosis by maintaining a diet high in calcium (which is found in milk, yogurt, cheese, and other dairy products) and by exercising regularly (Alvarez-Leon, Roman-Vinas, & Serra-Majem, 2006; Prentice et al., 2006; Swain, Barner, & Brown, 2008).

During middle adulthood the amount of body fat also tends to grow in the average person. “Middle-age spread” is a visible symptom of this problem. Even those who have been relatively slim all their lives may begin to put on weight. Because height is not increasing, and actually may be declining, these weight and body fat gains lead to an increase in the number of people who become obese.

This weight gain usually doesn't have to happen. Lifestyle choices play a major role. People who maintain an exercise program during middle age tend to avoid obesity, as do individuals living in cultures where the typical life is more active and less sedentary than that of many Western cultures.

Changes in height and weight are also accompanied by declines in strength. Through-out middle adulthood, strength gradually decreases, particularly in the back and leg muscles. By the time they are 60, people have lost, on average, about 10 percent of their maximum strength. Still, such a loss in strength is relatively minor, and most people are easily able to compensate for it (Troll, 1985; Spence, 1989). Again, lifestyle choices can make a difference. People who exercise regularly are likely to feel stronger and to have an easier time compensating for any losses than those who are sedentary.

The Senses: The Sights and Sounds of Middle Age

Sharon Boker-Tov's experiences with needing extra light to read and holding the newspaper a little farther away are so common that reading glasses and bifocals have become almost a stereotypical emblem of middle age. Like Sharon, most people notice unmistakable changes in the sensitivity not only of their eyes, but also of other sense organs. Although all the organs seem to shift at roughly the same rate, the changes are particularly noticeable in vision and hearing.

VISION. Starting at around age 40, *visual acuity*—the ability to discern fine spatial detail in both close and distant objects—begins to decline (see Figure 15-1 on page 482). The shape of the eye's lens changes, and its elasticity deteriorates, which makes it harder to focus images sharply onto the retina. The lens becomes less transparent, so less light passes through the eye (DiGiovanna, 1994).



osteoporosis a condition in which the bones become brittle, fragile, and thin, often brought about by a lack of calcium in the diet

Beginning at or around the age of 40, visual acuity, the ability to discern fine spatial detail, begins to drop. Most people begin to suffer from presbyopia, a decline in near vision.

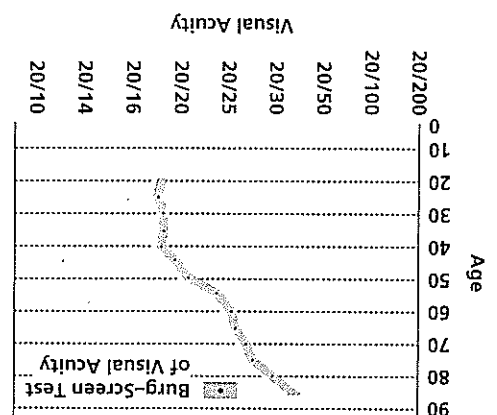


FIGURE 15-1 The Decline of Visual Acuity
Beginning around the age of 40, the ability to discern fine detail begins to drop.
(Source: Based on Fitts, 1982.)

A nearly universal change in eyesight during middle adulthood is the loss of near vision, called **presbyopia**. Even people who have never needed glasses or contact lenses find themselves holding reading matter at an increasing distance from their eyes in order to bring it into focus. Eventually, they need reading glasses. For those who were previously near-sighted, presbyopia may require bifocals or two sets of glasses (Kalsi, Heron, & Charman, 2001; Koopmans & Kooijman, 2006; Kemper, 2012).

Other changes in vision also begin in middle adulthood. There are declines in depth perception, distance perception, and the ability to view the world in three dimensions. The loss of elasticity in the lens also means that people's ability to adapt to darkness is impaired, and they are less able to see in dimly lit environments. Such visual reductions may make it more difficult to climb stairs or to navigate around a dark room (Artal et al., 1993; Spear, 1993). Although changes in vision are most often brought about by the gradual processes of normal aging, in some cases disease is involved. One of the most frequent causes of eye problems is glaucoma, which may, if left untreated, ultimately produce blindness. Glaucoma occurs when pressure in the fluid of the eye increases, either because the fluid cannot drain properly or because too much is produced. Around 1 to 2 percent of people over the age of 40 are afflicted by the disorder, and African Americans are particularly susceptible (Wilson, 1989).

Initially, the increased pressure in the eye may constrict the neurons involved in peripheral vision and lead to tunnel vision. Ultimately, the pressure can become so great that all nerve cells are constricted, which causes complete blindness. Fortunately, glaucoma can be treated if it is detected early enough. Medication can reduce the pressure in the eye, as can surgery to restore normal drainage of eye fluid (Plosker & Kearn, 2006; Lambiase et al., 2009).

HEARING. Like vision, hearing undergoes a gradual decline in acuity starting in middle adulthood. For the most part, however, the changes are less evident than those involving eyesight.

Some of the hearing losses of middle adulthood result from environmental factors. For instance, people whose professions keep them near loud noises—such as airplane mechanics and construction workers—are more apt to suffer debilitating and permanent hearing loss. Many changes, however, are simply related to aging. For instance, age brings a loss of cilia or *hair cells* in the inner ear, which transmit neural messages to the brain when vibrations bend them. Like the lens of the eye, the eardrum also becomes less elastic with age, reducing sensitivity to sound (Wiley et al., 2005).

The ability to hear high-pitched, high-frequency sounds usually degrades first, a problem called **presbycusis**. About 12 percent of people between ages 45 and 65 suffer from presbycusis. There is also a gender difference: Men are more prone to hearing loss than women, starting at around age 55. People who have hearing difficulties may also have problems identifying the direction and origin of a sound, a process called *sound localization*. Sound localization can deteriorate because it depends on comparing the discrepancy in sound perceived by the two ears. For example, a sound on the right will stimulate the right ear first and then, a tiny time later, register in the left ear. Because hearing loss may not affect both ears equally, sound localization can suffer (Willott, Chisolin, & Lister, 2001; Veras & Matos, 2007; Gopinath et al., 2012). Declines in sensitivity to sounds do not markedly affect most people in middle adulthood. Most people are able to compensate for the losses that do occur relatively easily—by asking people to speak up, turning up the volume of a television set, or paying greater attention to what others are saying.

Reaction Time: Not-So-Slowing Down

One common concern about aging is the notion that people begin to slow down once they reach middle adulthood. How valid is such a worry? In most cases, not very. There is an increase in reaction time (meaning that it takes longer to react to a stimulus), but usually the increase is fairly mild and hardly noticeable.

presbyopia a nearly universal change in eyesight during middle adulthood that results in some loss of near vision
glaucoma a condition in which pressure in the fluid of the eye increases, either because the fluid cannot drain properly or because too much fluid is produced
presbycusis loss of the ability to hear sounds of high frequency



Slowing down can be slowed down. In many cases, it's "use it or lose it."

For instance, reaction time on simple tasks such as reacting to a loud noise increases by around 20 percent from age 20 to 60. More complex tasks, which require the coordination of various skills—such as driving a car—show less of an increase. Still, it takes a bit more time for drivers to move the foot from the gas pedal to the brake when they are faced with an emergency situation. Increases in reaction time are largely produced by changes in the speed with which the nervous system processes nerve impulses (Nobuyuki, 1997; Roggeveen, Prime, & Ward, 2007).

Despite the increase in reaction time, middle-aged drivers have fewer accidents than younger ones. Why would this be? Part of the reason is that older drivers tend to be more careful and to take fewer risks than younger ones. Much of the cause for their better performance, however, is older drivers' greater amount of practice in the skill. The minor slowing of reaction time is made up for by their expertise. In the case of reaction time, then, practice may indeed make perfect (Makishita & Matsumaga, 2008; Cantin et al., 2009; Endrass, Schreiber, & Kathmann, 2012).

Can slowing down be slowed down? In many cases, the answer is yes. Lifestyle choices once more come into play. Specifically, involvement in an active exercise program retards the effects of aging, producing several important outcomes, such as better health and improved muscle strength and endurance (see Figure 15-2). "Use it or lose it" is an aphorism with which developmentalists would agree (Conn, 2003).

The Advantages of Exercise

Muscle System
Slower decline in energy molecules, muscle cell thickness, number of muscle cells, muscle thickness, muscle mass, muscle strength, blood supply, speed of movement, stamina
Slower increase in fat and fibers, reaction time, recovery time, development of muscle soreness



Nervous System
Slower decline in processing impulses by the central nervous system
Slower increase in variations in speed of motor neuron impulses



Circulatory System
Maintenance of lower levels of LDLs and higher HDL/cholesterol and HDL/LDL ratios
Decreased risk of high blood pressure, atherosclerosis, heart attack, stroke



Skeletal System
Slower decline in bone minerals
Decreased risk of fractures and osteoporosis



Psychological Benefits
Enhanced mood
Feelings of well-being
Reduces stress



FIGURE 15-2 The Benefits of Exercise
Many benefits accrue from maintaining a high level of physical activity throughout life. (Source: DiGiovanna, 1994.)



Sexuality continues to be a vital part of most couples' lives in middle adulthood.

Sex in Middle Adulthood: The Ongoing Sexuality of Middle Age

Sexuality remains an important part of life for most middle-aged people. Although the frequency of sexual intercourse declines with age (see Figure 15-3), sexual pleasure remains a vital part of most middle-aged adults' lives. About half of men and women age 45 to 59 report having sexual intercourse about once a week or more. Close to three-quarters of men and more than half of women age 50 to 59 report masturbating. Half of men age 50 to 59 and a third of women in that age group have received oral sex from a different-sex partner in the last year. Similarly, sex remains an important activity for gay and lesbian couples during middle adulthood (Duplassie & Daniluk, 2007; Herbenick et al., 2010).

For many, middle adulthood brings a kind of sexual enjoyment and freedom that was missing during their earlier lives. With their children grown and away from home, middle-aged married couples have more time to engage in uninterrupted sexual activities. Women who have passed through menopause are liberated from the fear of pregnancy and no longer need to employ birth control techniques (Lamont, 1997; DeLamater, 2012).

Both men and women can face some challenges to their sexuality during middle adulthood. For instance, a man typically needs more time to achieve an erection, and it takes longer after an orgasm to have another. The volume of fluid that is ejaculated declines. Finally, the production of *testosterone*, the male sex hormone, declines with age (Hyde & DeLamater, 2003).

For women, the walls of the vagina become thinner and less elastic. The vagina begins to shrink and its entrance becomes compressed, which can make intercourse painful. For most women, though, the changes are not so great as to reduce sexual pleasure. Those women who do experience declines in enjoyment from sexual intercourse can find help

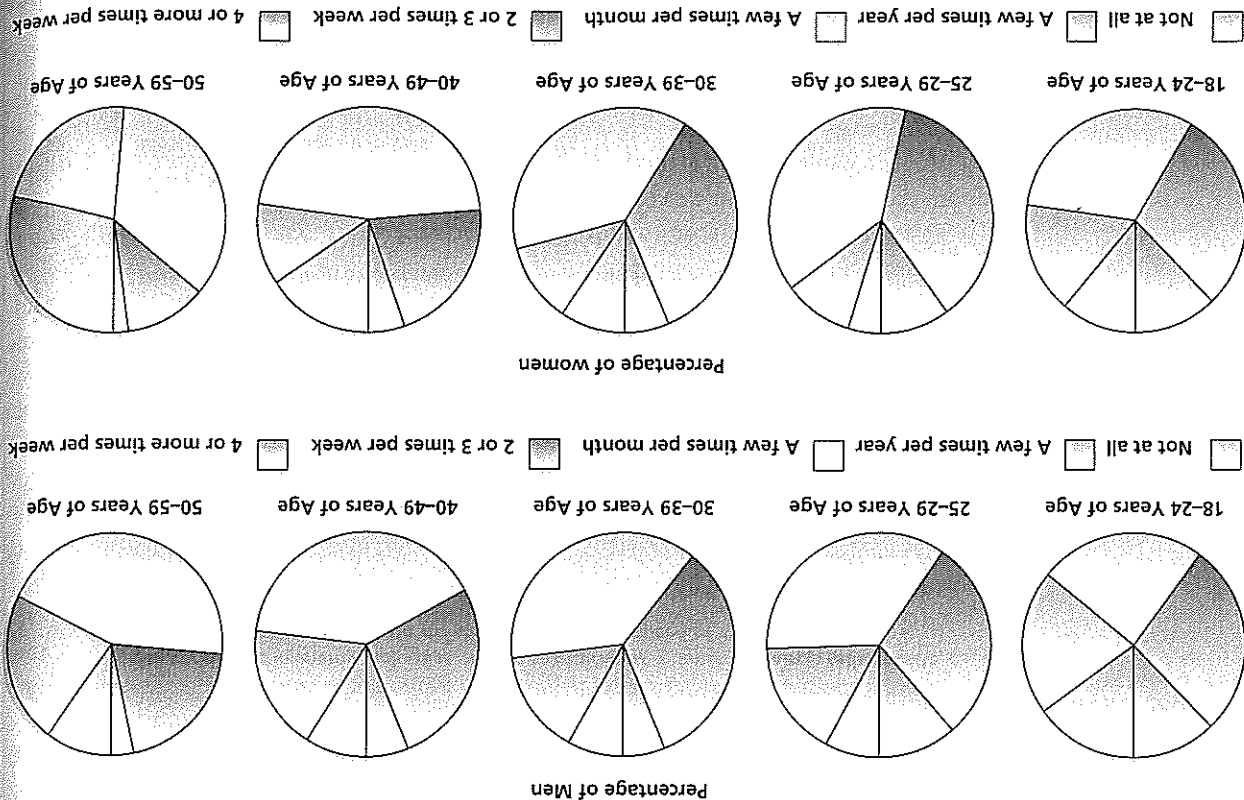


FIGURE 15-3 Frequency of Sexual Intercourse
As people age, the frequency of sexual intercourse declines.
(Source: Based on Michael et al., 1994.)

from an increasing array of drugs, such as topical creams and testosterone patches, being developed to increase sexual pleasure (Laumann, Paik, & Rosen, 1999; Freedman & Ellison, 2004; Nappi & Polatti, 2009).

THE FEMALE CLIMACTERIC AND MENOPAUSE. Starting at around age 45, women enter a period known as the climacteric that lasts for some 15 to 20 years. The female climacteric marks the transition from being able to bear children to being unable to do so.

The most notable sign of the female climacteric is menopause. Menopause is the cessation of menstruation. For most women, menstrual periods begin to occur irregularly and less frequently during a two-year period starting at around age 47 or 48, although this process may begin as early as age 40 or as late as age 60. After a year goes by without a menstrual period, menopause is said to have occurred.

Menopause is important for several reasons. For one thing, it marks the point at which a traditional pregnancy is no longer possible (although eggs implanted in a postmenopausal woman can produce a pregnancy). In addition, the production of estrogen and progesterone, the female sex hormones, begins to drop, producing a variety of hormone-related age changes (Schwenkhaugen, 2007).

The changes in hormone production may produce a variety of symptoms, although the degree to which a woman experiences them varies significantly. One of the best-known and most prevalent symptoms is "hot flashes," in which a woman senses an unexpected feeling of heat from the waist up. A woman may get red and begin to sweat when a hot flash occurs. Afterwards, she may feel chilled. Some women experience hot flashes several times a day; others never experience hot flashes.

During menopause, headaches, feelings of dizziness, heart palpitations, and aching joints are other relatively common symptoms, though far from universal. In one survey, for instance, only half of the women reported experiencing hot flashes. In general, only about one-tenth of all women experience severe distress during menopause. And many—perhaps as many as half—have no significant symptoms at all (Hyde & DeLamater, 2003; Grady, 2006; Ishizuka, Kudo, & Tango, 2008).

For many women, symptoms of menopause may begin a decade before menopause actually occurs. Perimenopause is the period beginning around 10 years prior to menopause when hormone production begins to change. Perimenopause is marked by sometimes radical fluctuations in hormone production, resulting in some of the same symptoms that are found in menopause.

Symptoms of menopause also differ by race. Compared with Caucasians, Japanese and Chinese women generally report fewer overall symptoms. African American women experience more hot flashes and night sweats, and Hispanic women report a higher level of several other symptoms, including heart pounding and vaginal dryness. Although the reason for these differences is unclear, it may be related to systematic racial differences in hormonal levels (Cain, Johannes, & Avis, 2003; Winterich, 2003; Shea, 2006).

For some women, the symptoms of perimenopause and menopause can be considerable. Treating those problems, though, has proven to be no easy task, as we consider next.



MyDevelopmentLab

Watch a middle-aged woman describe the symptoms of menopause in

Forty-six-year-old Sara Kendrick was certain she was having a heart attack. She had been weeding her garden when suddenly she couldn't get enough air into her lungs. She felt as if she were on fire, becoming lightheaded and dizzy. A feeling of nausea came over her. She made it to the kitchen to call 911 and then fell to the floor. When the emergency team examined her, she was both relieved and embarrassed to learn that her symptoms indicated not a heart attack but her first hot flash.

THE DILEMMA OF HORMONE THERAPY: NO EASY ANSWER.

female climacteric the period that marks the transition from being able to bear children to being unable to do so

menopause the cessation of menstruation

A decade ago, physicians would have had a straightforward remedy for hot flashes and other uncomfortable symptoms caused by the onset of menopause: They would have prescribed regular doses of a hormone replacement drug.

For millions of women who experienced similar difficulties, it was a solution that worked. In *hormone therapy* (HT), estrogen and progesterone are administered to alleviate the worst of the symptoms experienced by menopausal women. HT clearly reduces a variety of problems, such as hot flashes and loss of skin elasticity. In addition, HT may reduce coronary heart disease by changing the ratio of "good" cholesterol to "bad" cholesterol. HT also decreases the thinning of the bones related to osteoporosis, which, as we discussed, becomes a problem for many people in late adulthood (McCauley, 2007; Alexandersen, Karstad, & Christiansen, 2009; Lisabeth & Bushnell, 2012).

Furthermore, some studies show that HT is associated with reduced risks of stroke and colon cancer. Estrogen may improve memory and cognitive performance in healthy women, and reduce depression. Finally, increased estrogen may lead to a greater sex drive (Schwenkhaugen, 2007; Cumming et al., 2009; Garcia-Portilla, 2009).

Although hormone therapy may sound like a cure-all, in fact since it became popular in the early 1990s, it has been well understood that there were risks involved. For instance, it seemed to increase the risk of breast cancer and blood clots. The thinking was, though, that the benefits of HT outweighed the risks. All that changed after 2002, when a large study conducted by the Women's Health Initiative determined that the long-term risks of HT outweighed the benefits. Women taking a combination of estrogen and progestin were found to be at higher risk for breast cancer, stroke, pulmonary embolism, and heart disease. Increased risk of stroke and pulmonary embolism were later found to be associated with estrogen-alone therapy (Lobo, 2009).

The results of the Women's Health Initiative study led to a profound rethinking of the benefits of HT, calling into question the wisdom that HT could protect postmenopausal women against chronic disease. Many women stopped taking hormone replacement drugs. Statistics tell the story: 40 percent of postmenopausal women in the U.S. were using hormone therapy in 2002; it was down to 20 percent a decade later (Newton et al., 2006; Chlebowski et al., 2009; Beck, 2012).

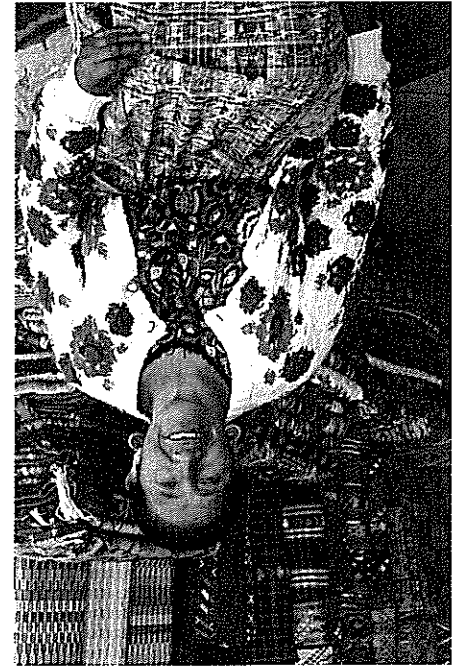
The sharp decline among menopausal women using HT is probably an overreaction, however. The most recent thinking among medical experts is that it's not a simple all-or-nothing proposition; some women are simply better candidates for HT than others. While HT seems to be less appropriate for older, postmenopausal women (such as those who participated in the Women's Health Initiative study) because of the increased risk of coronary heart disease and other health complications, younger women at the onset of menopause and who are experiencing severe symptoms might still benefit from the therapy, at least on a short-term basis (Rossouw et al., 2007; Lewis, 2009; Beck, 2012).

Ultimately, HT presents a risk, although one that most physicians believe is worth taking. Women nearing menopause need to read literature on the topic, consult their physicians, and ultimately come to an informed decision about how to proceed.

THE PSYCHOLOGICAL CONSEQUENCES OF MENOPAUSE

Traditionally, experts, as well as the general population, believed that menopause was linked directly to depression, anxiety, crying spells, lack of concentration, and irritability. Some researchers estimated that as many as 10 percent of menopausal women suffered severe depression. It was assumed that physiological changes in menopausal women's bodies brought about such disagreeable outcomes (Ayers, Forshaw, & Hunter, 2010; DeAngelis, 2010).

Today, however, most researchers view menopause from a different perspective. It now seems more reasonable to regard menopause as a normal part of aging that does not, by itself, produce psychological symptoms. Certainly, some women experience psychological difficulties, but they do at other points in life as well (Matthews et al., 2000; Freeman, Sammel, & Liu, 2004; Somerset et al., 2006).



While women in some cultures anticipate menopause with dread, Mayan women have no notion of hot flashes, and they generally look forward to the end of their childbearing years.

A woman's expectations about menopause can make a significant difference in her experience of it, according to research. On one hand, women who expect to have difficulties during menopause are more likely to attribute every physical symptom and emotional swing to it. On the other hand, those with more positive attitudes toward menopause may be less apt to attribute physical sensations to menopausal physiological changes. A woman's attribution of physical symptoms, then, may affect her perception of the rigors of menopause—and ultimately her actual experience of the period (Breheny & Stephens, 2003; Bauld & Brown, 2009; Strauss, 2011).

The nature and extent of menopausal symptoms also differ according to a woman's ethnic and cultural background. Women in non-Western cultures often have vastly different menopausal experiences from those in Western cultures. For instance, women of high castes in India report few symptoms of menopause. In fact, they look forward to menopause because being postmenopausal produces several social advantages, such as an end to taboos associated with menstruation and a perception of increased wisdom due to age. Similarly, Mayan women have no notion of hot flashes, and they generally look forward to the end of their childbearing years (Robinson, 2002; Dillaway et al., 2008).

THE MALE CLIMACTERIC. Do men experience the equivalent of menopause? Not really. Because they have never weathered anything akin to menstruation, they would have difficulty experiencing its discontinuation. At the same time, men do experience some changes during middle age that are collectively referred to as the male climacteric. The male climacteric is the period of physical and psychological change in the reproductive system that occurs during late middle age, typically in a man's 50s.

Because the changes happen gradually, it is hard to pinpoint the exact period of the male climacteric. For instance, despite progressive declines in the production of testosterone and sperm, men continue to be able to father children throughout middle age. On the other hand, about 10 percent of men have atypically low levels of testosterone by the age of 50. For these men, testosterone replacement therapy is sometimes used (Fennell et al., 2009).

One physical change that does occur quite frequently is enlargement of the prostate gland. By the age of 40, around 10 percent of men have enlarged prostates, and the percentage increases to half of all men by the age of 80. Enlargement of the prostate produces problems with urination, including difficulty starting urination or a need to urinate frequently at night. Furthermore, sexual problems increase as men age. In particular, *erectile dysfunction*, in which men are unable to achieve or maintain an erection, becomes more common. Drugs such as Viagra, Levitra, and Cialis, as well as patches that deliver doses of the hormone testosterone, often are effective in treating the problem (Hitt, 2000; Kim & Park, 2006; Abdo et al., 2008). Although the physical changes associated with middle age are unequivocal, it's not clear whether they are the direct cause of any particular psychological symptoms or changes. Men, like women, clearly undergo psychological development during middle adulthood, but the extent to which psychological changes—which we discuss more in the next chapter—are associated with changes in reproductive or other physical capabilities remains an open question.

Review

- People in middle adulthood experience gradual changes in physical characteristics and appearance.
- The acuity of the senses, particularly vision and hearing, and speed of reaction decline slightly during middle age.

male climacteric the period of physical and psychological change relating to the male reproductive system that occurs during late middle age

From a health-care professional's perspective: What cultural factors in the United States might contribute to a woman's negative experience of menopause? How?

Applying Lifespan Development

- Sexuality in middle adulthood changes slightly, but middle-aged couples, freed from concerns about children, can often progress to a new level of intimacy and enjoyment.
- Physiological changes relating to sexuality occur in both men and women. Both the female climacteric, which includes menopause, and the male climacteric seem to have physical and perhaps psychological symptoms.

- Would you rather fly on an airplane with a middle-aged pilot or a young one? Why?

Health

LO 15-3 Is middle adulthood a time of health or disease for men and women?

LO 15-4 What sorts of people are likely to get coronary heart disease?

LO 15-5 What causes cancer, and what tools are available to diagnose and treat it?

It was an average exercise session for Jerome Yanger. After the alarm went off at 5:30 A.M., he climbed onto his exercise bike and began vigorously peddling, trying to maintain, and exceed, his average speed of 14 miles per hour. Stationed in front of the television set, he used the remote control to tune to the morning business news. Occasionally glancing up at the television, he began reading a report he had not finished the night before, swearing under his breath at some of the poor sales figures he was seeing. By the time he had completed exercising a half-hour later, he had gotten through the report, had managed to sign a few letters his administrative assistant had typed for him, and had even left two voice-mail messages for some colleagues.

Most of us would be ready to head back to bed after such a packed half-hour. For Jerome Yanger, however, it was routine: He consistently tried to accomplish several activities at the same time. Jerome thought of such behavior as efficient. Developmentalists might view it in another light, however: as symptomatic of a style of behavior that makes Jerome a likely candidate for coronary heart disease. Although most people are relatively healthy in middle adulthood, they also become increasingly susceptible to a variety of health-related concerns. We will consider some of the typical health problems of middle age, focusing in particular on coronary heart disease and cancer.

Wellness and Illness: The Ups and Downs of Middle Adulthood

Health concerns become increasingly important to people during middle adulthood. Surveys asking adults what they worry about show that health—as well as safety and money—is an issue of concern. For instance, more than half of adults surveyed say they are either “afraid” or “very afraid” of having cancer (see Figure 15-4). For most people, however, middle age is a period of health. According to census figures, the vast majority of middle-aged adults report no chronic health difficulties and face no limitations on their activities.

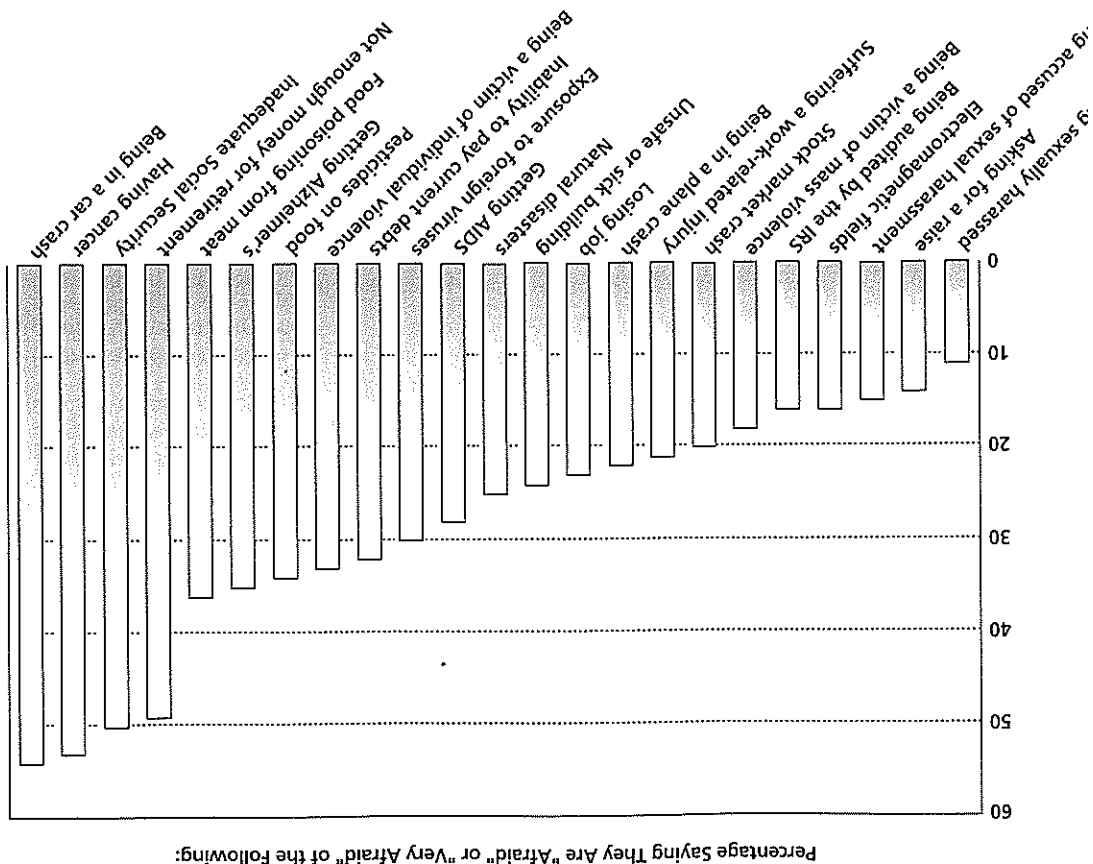
Actually, in some ways people are better off, healthwise, in middle adulthood than in earlier periods of life. People between the ages of 45 and 65 are less likely than younger adults to experience infections, allergies, respiratory diseases, and digestive problems. They may



Health becomes increasingly of concern during middle adulthood.

FIGURE 15-4 Worries of Adulthood

As people enter middle adulthood, health and safety concerns become increasingly important, followed by financial worries.
(Source: USA Weekend, 1997)



tract fewer of these diseases now because they may have already experienced them and it up immunities during younger adulthood (Sterns, Barrett, & Alexander, 1985). Certain chronic diseases do begin to appear during middle adulthood. Arthritis typically ins after the age of 40, and diabetes is most likely to occur in people between the ages of 50 and 60, particularly if they are overweight. Hypertension (high blood pressure) is one of the most frequent chronic disorders found in middle age. Sometimes called the "silent killer" because it is symptomless, hypertension, if left untreated, greatly increases the risk of strokes and heart disease. For such reasons, a variety of preventive and diagnostic medical tests are routinely recommended for adults during middle adulthood (Walters & Rye, 2009; see Table 15-1).

Watch Erica, 36, and Jeff, 45, describe their health conditions in MyDevelopmentLab.

TABLE 15-1 Adult Preventive Health-Care Screening Recommendations

These are general guidelines for healthy adults who have no symptoms of disease.

Screening	Description	Ages 40–49	Ages 50–59	Age 60+
BLOOD PRESSURE	Used to detect hypertension, which can lead to heart attack, stroke, or kidney disease.	Every 2 years.	Every 2 years.	Every 2 years; Every year if family history of hypertension.
CHOLESTEROL—Total/HDL	Used to detect high cholesterol levels, which increase risk of heart disease.	Every 2 years.	Every 2 years.	Every 2 years; Every year if family history of hypertension.

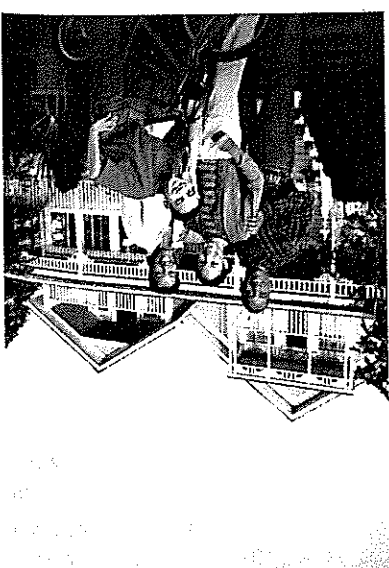
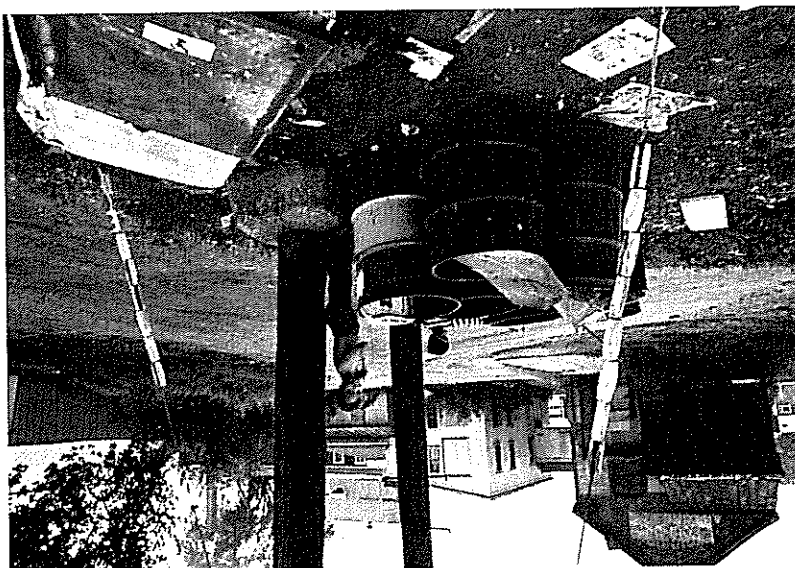
(Continued)

Screening	Description	Ages 40-49	Ages 50-59	Age 60+
EYE EXAMINATION	Used to determine if glasses required and check for eye disease.	Every 2-4 years; Diabetics—Every year.	Every 2-4 years; Diabetics—Every year.	Every 2-4 years; At age 65 and over, every 1-2 years; Diabetics—Every year.
FLEXIBLE SIGMOIDOSCOPY OR DOUBLE CONTRAST BARIUM ENEMA OR COLONOSCOPY	A procedure using a scope or x-ray to detect cancer of the colon and rectum.		Baseline at age 50; Every 3-5 years after initial test.	Every 3-5 years. Age to stop depends on health; Follow up normal colonoscopy in 8-10 yrs.
FECAL OCCULT BLOOD SCREENING	Detects unseen blood in stool, which is early warning sign for colon cancer.		Every year.	Every year.
RECTAL EXAM (DIGITAL)	Examination of prostate or ovaries to detect cancer.	Every 5 years.	Every year.	Every year.
URINALYSIS SCREENING	Examination to detect presence of excess protein in urine.	Every 5 years.	Every 5 years.	Every 3-5 years.
IMMUNIZATIONS (SHOTS): TETANUS	Protection against infection after injury.	Every 10 years.	Every 10 years.	Every 10 years.
INFLUENZA (FLU)	Protection against the influenza virus.	Any person with chronic medical conditions, such as heart, lung, kidney disease, diabetes.	Annually, age 50 and over.	Annually, age 65 and over.
PNEUMOCOCCAL	Protection against pneumonia.			At age 65; Then every 6 years.
BREAST SELF-EXAM/BREAST EXAM BY PROVIDER	Examination to detect changes in breast that may indicate cancer.	Every month/Every year.	Every month/Every year.	Every month/Every year.
MAMMOGRAM	Low-dose x-ray used to locate tumors for early detection of breast cancer.	Every year.	Every year.	Every year.
PAP SMEAR	Test that takes small sample of cells to detect cervical cancer or precancer cells.	After 3 normal tests in a row, screen every 2-3 years unless at special risk:	After 3 normal tests in a row, screen every 2-3 years unless at special risk.	Women 70 and older with 3 normal tests in a row and no abnormal tests in the 10 years prior to age 70 may cease having Pap test.
PELVIC EXAM	Examination to detect pelvic abnormality.	Every year (if ovaries remain after hysterectomy).	Every year (if ovaries remain after hysterectomy).	Every year (if ovaries remain after hysterectomy).
PROSTATE SPECIFIC ANTIGEN	Blood test used to detect cancer of the prostate gland.	Positive family history of cancer—every year; (African Americans—every year).	Every year upon doctor's advice.	Until age 75, every year upon doctor's advice.
TESTICULAR SELF-EXAM	Examination to detect changes in testicles that may indicate cancer.	Every month.	Every month.	Every month.

ADDITIONAL GUIDELINES FOR MEN

ADDITIONAL GUIDELINES FOR WOMEN

The discrepancies in the lives of people of higher and lower socioeconomic status are associated with differences in death rates between the two groups.

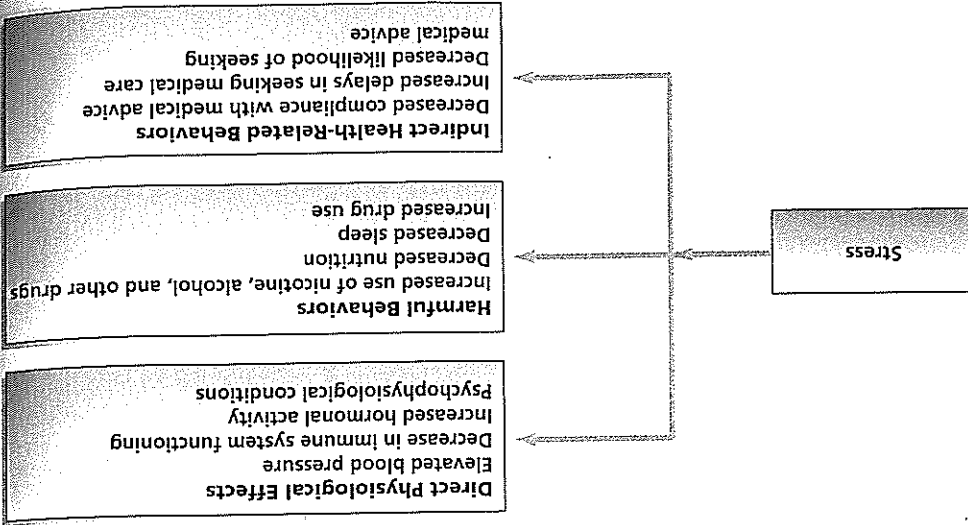


disability and suffering, but not necessarily death. Typically, when research is carried out on diseases that strike both men and women, much of it has focused on men as subjects rather than on women. Although this bias is now being addressed in initiatives announced by the U.S. National Institutes of Health, the historical pattern has been one of gender discrimination by the traditionally male-dominated research community (Vidaver, 2000).

Stress in Middle Adulthood

Stress continues to have a significant impact on health during middle adulthood, as it did in young adulthood, although the nature of what is stressful may have changed. For example, parents may experience stress over their adolescent children's potential drug use rather than worry about whether their toddler is ready to give up his pacifier. No matter what events trigger stress, the results are similar. As we first discussed in Chapter 13, *psychoneuroimmunologists*, who study the relationship among the brain, the immune system, and psychological factors, note that stress produces three main consequences, summarized in Figure 15-6. First, stress has direct physiological outcomes, ranging from increased blood pressure and hormonal activity to decreased immune system response. Second, stress also leads people to engage in unhealthy behaviors, such as cutting back on sleep,

FIGURE 15-6 The Consequences of Stress
Stress produces three major consequences: direct physiological effects, harmful behaviors, and indirect health-related behaviors.
(Source: Adapted from Baum, 1994.)



smoking, drinking, or taking other drugs. Finally, stress has indirect effects on health-related behavior. People under a lot of stress may be less likely to seek out good medical care, exercise, or comply with medical advice (Suls & Wallston, 2003; Zellner et al., 2006; Dagher et al., 2009; Ihle et al., 2012). All of these can lead to or affect serious health conditions, including such major problems as heart disease.



Watch "In the Real World: Reducing Stress, Improving Health" in MyDevelopmentLab.

The A's and B's of Coronary Heart Disease: Linking Health and Personality

More men die in middle age from diseases relating to the heart and circulatory system than from any other cause. Women are less vulnerable, as we'll see, but they are not immune. Each year such diseases kill around 151,000 people under the age of 65, and they are responsible for more loss of work and disability days due to hospitalization than any other cause (American Heart Association, 2010).

RISK FACTORS FOR HEART DISEASE. Although heart and circulatory diseases are a major problem, they are not an equal threat for all people—some people have a much lower risk than others. For instance, the death rate in some countries, such as Japan, is only a quarter of the rate in the United States. A few other countries have a considerably higher death rate (see Figure 15-7). Why should this be true?

The answer is that both genetic and experiential characteristics are involved. Some people seem genetically predisposed to develop heart disease. If a person's parents suffered from it, the likelihood is greater that she or he will too. Similarly, sex and age are risk factors. Men are more likely to suffer from heart disease than women, and the risk rises as people age.

However, environment and lifestyle choices are also important. Cigarette smoking, a diet high in fats and cholesterol, and a relative lack of physical exercise all increase the likelihood of heart disease. Such factors may explain country-to-country variations in the incidence of heart

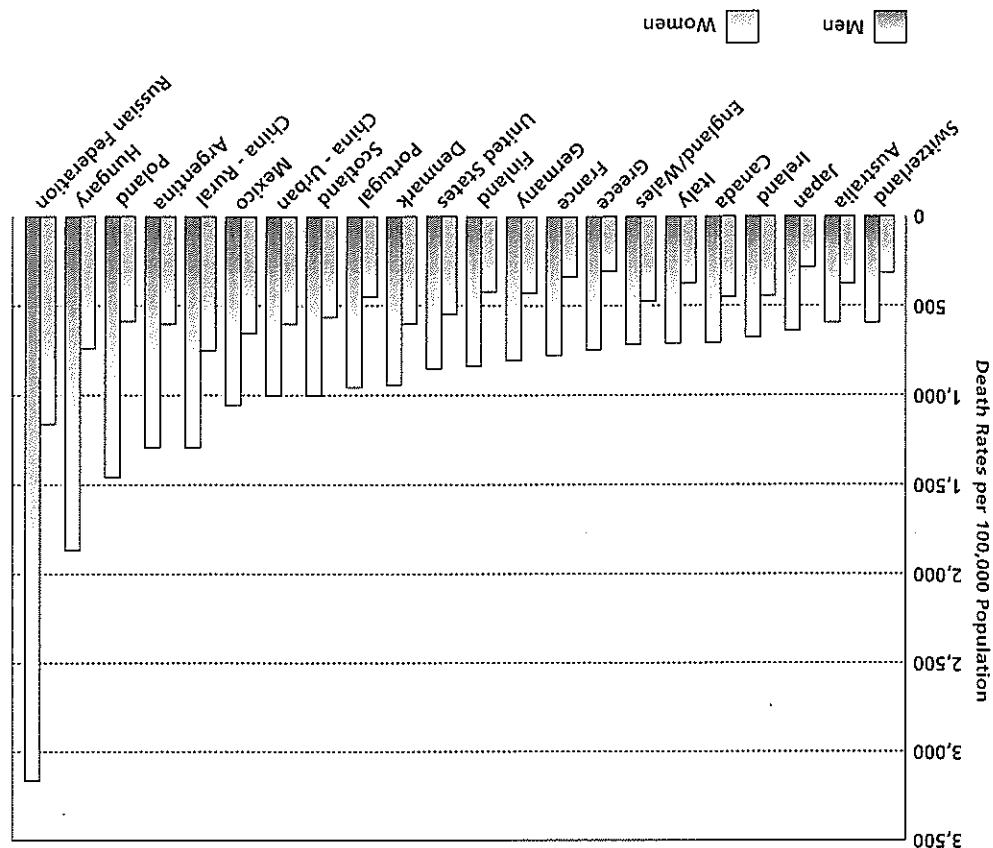


FIGURE 15-7 Death from Heart Disease Worldwide

The risk of dying from cardiovascular disease differs significantly depending on the country in which one lives. What cultural or environmental factors might help to explain this fact? (Source: Lloyd-Jones et al., 2009.)



In addition to being characterized as competitive, people with Type A personalities also tend to engage in polyphasic activities, or doing a number of things at once. Does a Type A personality deal with stress differently than a Type B personality?

For example, the death rate attributable to heart disease in Japan is much lower in fat than the typical diet in the United States (Wilcox et al., 2006; De Meersman & Stein, 2007; Scarborough et al., 2012). But diet is not the only factor. Psychological factors, particularly those related to the perception and experience of stress, appear to be associated with heart disease. In particular, a set of personality characteristics appears to be related to the development of middle-aged adults' coronary heart disease—the Type A behavior pattern.

TYPE A'S AND TYPE B'S. For a certain proportion of adults, waiting patiently in a long line at the grocery store is a near impossibility. Sitting in their cars at a long red light makes them seethe. And an encounter with a slow, inept clerk at a retail store turns them furious. People like this—and those similar to Jerome Xanger, who uses his exercise program as an opportunity to accomplish more work—have a set of characteristics known as the Type A behavior pattern. The Type A behavior pattern is characterized by competitiveness, impatience, and a tendency toward frustration and hostility. Type A people are driven to accomplish more than others, and they engage in *polyphasic activities*—multiple activities carried out simultaneously. They are the true multitaskers whom you might see talking on their phones while working on their laptop computers while riding the commuter train—and eating breakfast. They are easily angered and become both verbally and nonverbally hostile if they are prevented from reaching a goal they seek to accomplish. In contrast to the Type A behavior pattern, many people have virtually the opposite characteristics in a pattern known as the Type B behavior pattern. The Type B behavior pattern is characterized by noncompetitiveness, patience, and a lack of aggression. In contrast to Type A's, Type B's experience little sense of time urgency, and they are rarely hostile.

Most people are not purely Type A's or Type B's. In fact, Type A and Type B represent the ends of a continuum, with most people falling somewhere in between the two endpoints. Still, most people come closer to one or the other of the two categories. Which category a person falls into is of some importance, particularly by middle adulthood, because a great deal of research suggests that the distinction is related to the incidence of coronary heart disease. For example, Type A men have twice the rate of coronary heart disease, a greater number of fatal heart attacks, and five times as many heart problems overall as Type B men (Roseman, 1990; Wiegelosz & Nolan, 2000). Although it is not certain why Type A behavior increases the risk of heart problems, the most likely explanation is that when Type A's are in stressful situations, they become excessively aroused physiologically. Heart rate and blood pressure rise, and production of the hormones epinephrine and norepinephrine increases. The wear and tear on the body's circulatory system is what seems to ultimately produce coronary heart disease (Sundin et al., 1995; Williams, Barefoot, & Schneiderman, 2003).

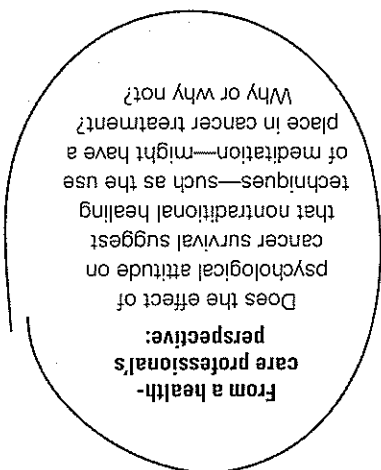
It's important to note that not every component of the Type A behavior pattern is harmful. The key component that links Type A behavior and heart disease is *hostility*. Furthermore, the links between Type A behavior and coronary heart disease are correlational. No definitive evidence has been found that Type A behavior *causes* coronary heart disease. In fact, some evidence suggests that only certain components of Type A behavior are most involved in producing disease, and not the entire constellation of behaviors associated with the pattern. For instance, there is a growing consensus that the hostility and anger related to the Type A behavior pattern may be the central link to coronary heart disease (Kahn, 2004; Ficker et al., 2004; Demaree & Everhart, 2004; Myrtek, 2007). Although the relationship between at least some Type A behaviors and heart disease is clear, this does not mean that all middle-aged adults who can be characterized as Type A's are destined to suffer from coronary heart disease. For one thing, almost all the research conducted to date has focused on men, primarily because the incidence of coronary heart disease is much

Type A behavior pattern behavior characterized by competitiveness, impatience, and a tendency toward frustration and hostility

Type B behavior pattern behavior characterized by noncompetitiveness, patience, and a lack of aggression



Women should routinely examine their breasts for signs of breast cancer.



From a health-care professional's perspective:
Does the effect of psychological attitude on cancer survival suggest that nontraditional healing techniques—such as the use of meditation—might have a place in cancer treatment? Why or why not?

gher for males than for females. In addition, other types of negative emotions besides the stillity found in Type A behavior have been linked to heart disease. For example, psycholo- t Johan Denollet has identified behavior he calls *Type D*—for “distressed”—that is linked to ronary heart disease. He believes that insecurity, anxiety, and having a negative outlook put ople at risk for heart attacks (Denollet, 2005; Schiffer et al., 2008; Pedersen et al., 2009).

he Threat of Cancer

Brenda surveyed the crowd as she stood in line to start the annual “Race for the Cure,” a running and walking event that raised funds to fight breast cancer. It was a sobering sight. She spotted a group of five women, all wearing the bright pink shirts that marked them as cancer survivors. Several other racers had photos of loved ones who had lost their battles with the disease pinned to their jerseys.

w diseases are as frightening as cancer, and many middle-aged individuals view a cancer di- nosis as a death sentence. Although the reality is different—many forms of cancer respond ite well to medical treatment, and 40 percent of people diagnosed with the disease are still ve 5 years later—the disease raises many fears. And there is no denying that cancer is the onnd-leading cause of death in the United States (Smedley & Syme, 2000).

The precise trigger for cancer is still not known, but the process by which cancer spreads ;traiightforward. For some reason, particular cells in the body begin to multiply uncontrol- ly and rapidly. As they increase in number, these cells form tumors. If left unimpeded, they w nutrients from healthy cells and body tissue. Eventually, they destroy the body’s ability function properly.

Like heart disease, cancer is associated with a variety of risk factors, some genetic and iers environmental. Some kinds of cancer have clear genetic components. For example, a illy history of breast cancer—which is the most common cause of cancer death among men—raises the risk for a woman.

Several environmental and behavioral factors are also related to the risk of cancer. For tance, poor nutrition, smoking, alcohol use, exposure to sunlight, exposure to radiation, d particular occupational hazards (such as exposure to certain chemicals or asbestos) are all own to increase the chances of developing cancer.

After a diagnosis of cancer, several forms of treatment are possible, depending on the re of cancer. One treatment is *radiation therapy*, in which the tumor is the target of radia- n designed to destroy it. Patients undergoing *chemotherapy* ingest controlled doses of toxic stances meant, in essence, to poison the tumor. Finally, surgery may be used to remove the nor (and often the surrounding tissue). The exact form of treatment is a result of how far cancer has spread throughout a patient’s body when it is first identified.

Because early cancer detection improves a patient’s chances, diagnostic techniques that p identify the first signs of cancer are of great importance. This is particularly true during ddle adulthood, when the risk of contracting certain kinds of cancer increases.

Consequently, physicians urge that women routinely examine their breasts and men reg- uly check their testicles for signs of cancer. In addition, cancer of the prostate gland, which he most frequent type of cancer in men, can be detected by routine rectal exams and by a od test to identify the presence of prostate-specific antigen (PSA).

Mammograms, which provide internal scans of women’s breasts, also help identify early- ge cancer. However, the question of when women should begin to routinely have the pro- lure has been controversial. As shown in Figure 15-8 on page 496, the risk of breast cancer ins to grow at around the age of 30 and then becomes increasingly more likely. Ninety-five cent of new cases occur in women aged 40 and above (SEER, 2005).

Determining the age to begin routine screening mammograms is complicated by two siderations. First, there is the problem of *false positives*, instances in which the test suggests nothing is wrong when in fact there is no problem. Because the breast tissue of younger

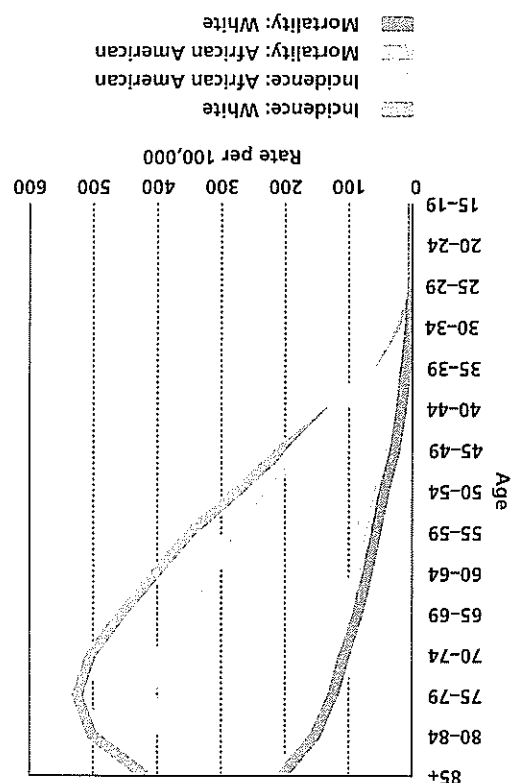
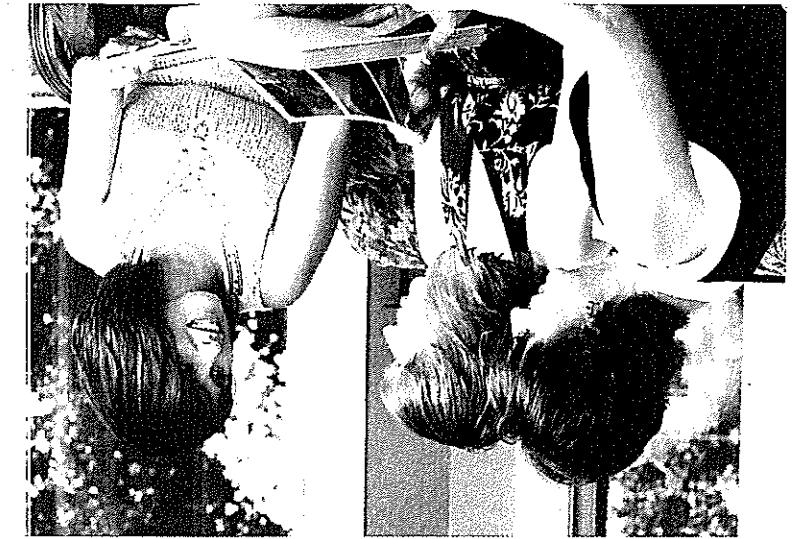


FIGURE 15-8 Age and the Risk of Breast Cancer
Starting around the age of 30, the risk of breast cancer becomes increasingly likely, as these annual incidence figures show.
(Source: Based on data from the American Cancer Society, 2003.)

Although some studies suggest that the degree of social support in a person's life may be related to a decreased risk of cancer, the link between attitudes, emotions, and cancer is far from proven.



women is denser than that of older women, younger women are more likely to have false positives. Some estimates suggest that as many as a third of all younger women who have repeated mammograms are likely to have a false positive that necessitates further testing or a biopsy. Furthermore, the opposite problem also may occur: *false negatives*, in which a mammogram does not detect indications of cancer (Wei et al., 2007; Destounis et al., 2009; Elmore et al., 2009).

In what proved to be a controversial proposal, the U.S. Preventive Services Task Force, a panel appointed by the government, recommended in 2009 that women in their 40s should *not* routinely have mammograms, and that women between the ages of 50 and 74 should have mammograms every two years, rather than annually. Their recommendation was based on a cost-benefit analysis showing that the risks of mammograms could be cut in half while still offering 80 percent of the benefits of annual mammograms (Nelson et al., 2009).

Their recommendation was immediately criticized by several major women's groups, along with the American Cancer Society and American College of Radiology. They argued that women aged 40 and above should receive annual screenings (Grady, 2009).

Ultimately, the determination of the timing of screenings is a highly personal one. Women should consult their health-care providers and discuss the latest research regarding the frequency of mammograms. And for certain women, who have a history of breast cancer in their families or a mutation in a gene called BRCA, the evidence is clear that mammograms starting at age 40 are beneficial (Grady, 2009; Alonso et al., 2012; Smith, Duffy, & Tabar, 2012).

PSYCHOLOGICAL FACTORS RELATING TO CANCER: MIND OVER TUMOR? Increasing evidence suggests that cancer is related not only to physiological causes, but to psychological factors as well. In particular, some research indicates that the emotional responses of people with cancer can influence their recovery. In one study, for instance, women who showed a "fighting spirit" coped with their cancer. On the other hand, long-term survival rates do not seem better for patients who have a positive attitude compared with those with a less positive attitude (Watson et al., 1999; Rom, Miller, & Peluso, 2009).

Personality factors may also play a role in cancer. For example, cancer patients who are habitually optimistic report less physical and psychological distress than those who are less optimistic (Bolger et al., 1996; Gerend, Aiken, & West, 2004; Shelby et al., 2008).

Related to the idea that psychological factors can help prevent or improve cancer treatment success is evidence that participation in psychological therapy may give cancer patients an edge in treatment. For example, one study found that women in the advanced stages of breast cancer who participated in group therapy lived at least 18 months longer than those who did not participate in therapy. Furthermore, the women who participated also experienced less anxiety and pain (Spiegel & Giese-Davis, 2003; Spiegel, 1996, 2011).

How, exactly, might a person's psychological state be linked to his or her prognosis with cancer? Cancer treatment is intricate, complex, and often unpleasant. It may be that patients who have the most positive attitudes and are involved in therapy might be more likely to adhere to

treatments. Consequently, such patients are more likely to experience treatment suc-

es another possibility: It may be that a positive psychological outlook bolsters the immune system, the natural line of defense against disease. A positive outlook may the immune system to produce "killer" cells that fight the cancerous cells. In con- native emotions and attitudes may impair the ability of the body's natural killer cells to the cancer (Ironson & Schneiderman, 2002; Gidron et al., 2006). important to keep in mind that the link between attitudes, emotions, and cancer is far even. Furthermore, it is unjustified and unfair to assume that a cancer patient would better if only he or she had a more positive attitude. What the data do suggest is that gical therapy might be warranted as a routine component of cancer treatment, even if tthing more than improve the patient's psychological state and raise his or her morale & Li, 2008; Coyne et al., 2009; Hart et al., 2012).

Now and Apply

teral, middle adulthood is a period of good health, although susceptibility to chronic ses, such as arthritis, diabetes, and hypertension, increases. disease is a risk for middle-aged adults. Both genetic and environmental factors bute to heart disease, including the Type A behavior pattern. incidence of cancer begins to be significant in middle adulthood. iples such as radiation therapy, chemotherapy, and surgery can successfully treat ir, and psychological factors, such as a fighting attitude and a refusal to accept the y of cancer, can influence survival rates.

Young Lifespan Development

social policies might be developed to lower the incidence of disabling illness among bers of lower-socioeconomic groups?

Intuitive Development

- 6 What happens to a person's intelligence in middle adulthood?
- 7 How does aging affect memory, and how can memory

an innocently enough. Forty-five-year-old Bina Clingman couldn't remember whether ad mailed the letter that her husband had given her, and she wondered, in passing, ver this was a sign of aging. The very next day, her feelings were reinforced when she o spend 20 minutes looking for a phone number that she knew she had written down piece of paper—somewhere. By the time she had found it, she was surprised and even a anxious. "Am I losing my memory?" she asked herself, with both annoyance and some e of concern.

people in their 40s will tell you that they feel more absentminded than they did 20 years and that they harbor at least some concern about becoming less mentally able than ey were younger. Common wisdom suggests that people lose some mental sharpness age. But how accurate is this notion?

Does Intelligence Decline in Adulthood?

For years, experts provided a clear, unwavering response when asked whether intelligence declined during adulthood. It was a response that most adults were not happy to hear: Intelligence peaks at age 18, stays fairly steady until the mid-twenties, and then begins a gradual decline that continues until the end of life.

Today, however, developmentalists have come to see that the answers to questions about changes in intelligence across the life span are more complicated—and they have come to different, and more complex, conclusions.

THE DIFFICULTIES IN ANSWERING THE QUESTION. The conclusion that intelligence starts to diminish in the mid-twenties was based on extensive research. In particular, cross-sectional studies—which test people of different ages at the same point in time—clearly showed that older subjects were more likely to score less well than younger subjects on traditional intelligence tests, of the sort we first discussed in Chapter 9.

But consider the drawbacks of cross-sectional research—in particular the possibility that it may suffer from *cohort effects*. Recall from Chapter 1 that cohort effects are influences associated with growing up at a particular historical time that affect persons of a particular age. For instance, suppose that compared to the younger people, the older people in a cross-sectional study had had less adequate educations, were exposed to less stimulation in their jobs, or were relatively less healthy. In that case, the lower IQ scores of the older group could hardly be attributed solely, or perhaps even partially, to differences in intelligence between younger and older individuals. In sum, because they do not control for cohort effects, cross-sectional studies may well underestimate intelligence in older subjects.

In an effort to overcome the cohort problems of cross-sectional studies, developmentalists began to turn to *longitudinal studies*, in which the same people are studied periodically over a span of time. These studies began to reveal a different developmental pattern for intelligence: Adults tended to show fairly stable and even increasing intelligence test scores until they reached their mid-thirties, and in some cases up to their fifties. At that point, though, scores began to decline (Bayley & Oden, 1955).

But let's step back a moment and consider the drawbacks of longitudinal studies. For instance, people who take the same intelligence test repeatedly may perform better simply because they become more familiar—and comfortable—with the testing situation. Similarly, because they have been exposed to the same test regularly over the years, they may even begin to remember some of the test items. Consequently, practice effects may account for the relatively superior performance of people on longitudinal measures of intelligence as opposed to cross-sectional measures (Salthouse, 2009).

Furthermore, it is difficult for researchers using longitudinal studies to keep their samples intact. Participants in a study may move away, decide they no longer want to participate, or become ill and die. As time goes on, the participants who remain in the study may represent a healthier, more stable, and more psychologically positive group of people than those who are no longer part of the sample. If this is the case, then longitudinal studies may mistakenly overestimate intelligence in older subjects.

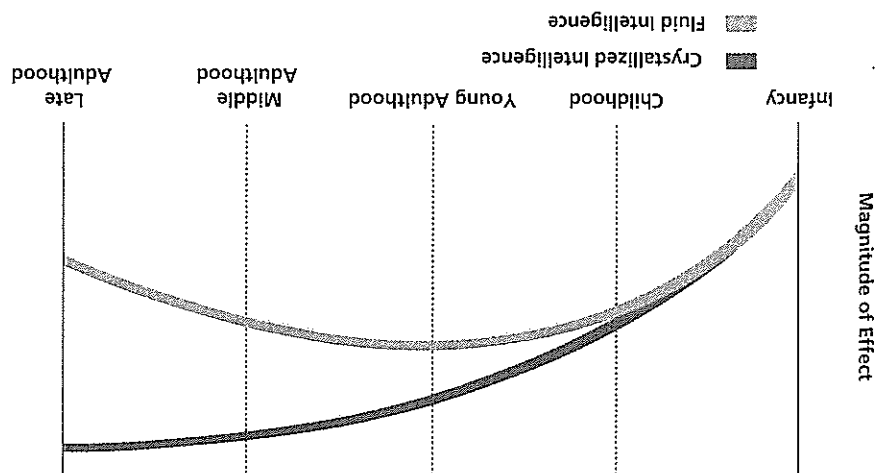
CRYSTALLIZED AND FLUID INTELLIGENCE. The ability of developmentalists to draw conclusions about age-related changes in intelligence faces still more hurdles. For instance, many IQ tests include sections based on physical performance, such as arranging a group of blocks. These sections are timed and scored on the basis of how quickly a question is completed. If older people take longer on physical tasks—and remember that reaction time slows with age, as we discussed earlier in the chapter—then their poorer performance on IQ tests may be a result of physical rather than cognitive changes.

To complicate the picture even further, many researchers believe that there are two kinds of intelligence: fluid intelligence and crystallized intelligence. As we first noted in Chapter 9,

it is difficult to evaluate cognitive abilities in middle adulthood. While some types of mental abilities may begin to decline, crystallized intelligence holds steady and actually may increase.



FIGURE 15-9 Changes in Crystallized and Fluid Intelligence
Although crystallized intelligence increases with age, fluid intelligence begins to decline in middle age. What are the implications for general competence in middle adulthood? (Source: Schaie, 1985.)



d intelligence reflects information processing capabilities, reasoning, and memory. For instance, a person who is asked to arrange a series of letters according to some rule or to memorize a set of numbers uses fluid intelligence. In contrast, crystallized intelligence is the information, skills, and strategies that people have learned and accumulated through experience and that they can apply in problem-solving situations. Someone who is solving a crossword puzzle or attempting to identify the murderer in a mystery story is using crystallized intelligence, relying on his or her past experience as a resource.

Initially, researchers believed that fluid intelligence was largely determined by genetic factors, and crystallized intelligence primarily by experiential, environmental factors. However, later abandoned this distinction, largely because they found that crystallized intelligence determined in part by fluid intelligence. For instance, a person's ability to solve a crossword puzzle (which involves crystallized intelligence) is a result of that person's proficiency with letter and patterns (a manifestation of fluid intelligence).

When developmentalists looked at the two kinds of intelligence separately, they arrived at two answers: yes and no. Yes, because in general, fluid intelligence does decline with age; because crystallized intelligence holds steady and in some cases actually improves (Bugli, 2006; Saltzman, Pink, & Tucker-Drob, 2008; Ghisletta et al., 2012; see Figure 15-9). If we look at more specific types of intelligence, true age-related differences and developments in intelligence begin to show up. According to developmental psychologist K. Warner Schaie (1994), who has conducted extensive longitudinal research on the course of adult intellectual development, we should consider many particular types of ability, such as spatial rotation, numeric ability, verbal ability, and so on rather than the broad divisions of crystallized and fluid intelligence.

When looked at in this way, the question of how intelligence changes in adulthood yields another answer, a more specific one. Schaie has found that certain abilities, such as inductive reasoning, spatial orientation, perceptual speed, and verbal memory, begin to decline gradually at around age 25 and continue to decline through old age. Numeric and verbal abilities show a quite different pattern. Numeric ability tends to increase until the mid-forties, then stays steady throughout the rest of life. Verbal ability rises until the start of middle adulthood, around age 40, and stays fairly steady throughout the rest of life span (Schaie, 1994).

Why do these changes occur? One reason is that brain functioning begins to change in the adulthood. For example, researchers have found that 20 genes that are vital to learning memory, and mental flexibility begin to function less efficiently as early as age 40. Furthermore, as people age, the specific areas of their brains used to accomplish particular tasks, for instance, older adults use both brain hemispheres for tasks that in younger people live just one hemisphere (Lu et al., 2004; Fling et al., 2011; Phillips, 2011).

fluid intelligence reflects information processing capabilities, reasoning, and memory
crystallized intelligence the accumulation of information, skills, and strategies that people have learned through experience and that they can apply in problem-solving situations



e development during middle and adulthood is a mixture of growth and decline. As people begin to lose certain skills due to biological deterioration, they compensate in other areas by strengthening their skills.

REFRAMING THE ISSUE: WHAT IS THE SOURCE OF COMPETENCE DURING MIDDLE ADULTHOOD? Despite the gradual declines in particular cognitive abilities during middle adulthood, it is during this part of the life span that people come to hold some of the most important and powerful positions in society. How can we explain such continuing, and even growing, competence in the face of apparently ongoing declines in certain cognitive skills?

One answer comes from psychologist Timothy Salthouse (1990, 1994a), who suggests that there are four reasons why this discrepancy exists. For one thing, it is possible that typical measures of cognitive skills tap a different type of cognition than what is required to be successful in particular occupations. Recall the discussion of practical intelligence in Chapter 13, in which we found that traditional IQ tests fail to measure cognitive abilities that are related to occupational success. Perhaps we would find no discrepancy between intelligence and cognitive abilities in middle adulthood if we used measures of practical intelligence rather than traditional IQ tests to assess intelligence.

A second factor also relates to the measurement of IQ and occupational success. It is possible that the most successful middle-aged adults are not representative of middle-aged adults in general. It may be that only a small proportion of people are highly successful, and the rest, who experience only moderate or little success, may have changed occupations, retired, or become sick and died. If we look at highly successful people, then, we are examining an unrepresentative sample of individuals.

It is also conceivable that the degree of cognitive ability required for professional success is simply not that high. According to this argument, people can be quite successful professionally and still be on the decline in certain kinds of cognitive abilities. In other words, their cognitive declines are not all that important; they have brains to spare.

Finally, it may be that older people are successful because they have developed specific kinds of expertise and particular competencies. Whereas IQ tests measure reactions to novel situations, occupational success may be influenced by very specific sorts of well-practiced abilities. Consequently, although their overall intellectual skills may show a decline, middle-aged individuals may maintain and even expand the distinctive talents they need for professional accomplishment. This explanation has generated a whole area of research on expertise, as we'll see later in the chapter.

For example, developmental psychologists Paul Baltes and Margaret Baltes have studied a strategy called **selective optimization**, the process by which people concentrate on particular skill areas to compensate for losses in other areas. Baltes suggests that cognitive development during middle and later adulthood is a mixture of growth and decline. As people begin to lose certain abilities due to biological deterioration, they advance in other areas by strengthening their skills. Because they are able to compensate for their losses, they avoid showing any practical deterioration. Overall cognitive competence, then, ultimately remains stable and may even improve (Baltes & Freund, 2003; Ebner, Freund, & Baltes, 2006; Deary, 2012). For instance, recall that reaction time lengthens as people get older. Because reaction time is a component of typing skill, we would expect that older typists would be slower than younger ones. However, this is not the case. Why? The answer is that while their reaction time is increasing, older typists look further ahead in the material they are to type. This allows them to compensate for their lengthier reaction time. Similarly, although a business executive may be less quick in recalling names, he may have a mental file of deals he has completed in the past and be able to forge new agreements easily because of it. (Also see the *From Research to Practice* box.)

Selective optimization is only one of the strategies adults with expertise in various fields use to maintain high performance. What are some other characteristics of experts?

The Development of Expertise: Separating Experts from Novices

If you were ill and needed a diagnosis, would you prefer to visit a newly minted young physician who had just graduated from medical school or a more experienced, middle-aged physician?

What Is Multitasking Doing to Our Brains?

Victor Norris's home office looks like a lot like his teenage son's room. He has three computer monitors on his desk—one for email, instant messaging, one for news and video streaming, and one for productivity software. Then there's the television, the smart phone, and video game console for relaxing. Victor switches from task to task all day long, often letting simple tasks such as writing an email drag on for hours because they keep getting interrupted. He's so used to working this way that he doesn't even realize he's doing it.

Victor Norris isn't alone. The digital age has brought a wealth of gadgets providing instant access to information and is changing the way people work and socialize. Obsessive checking of email, text messages, and social networking sites is the new norm. But might all this multitasking be changing the way people think? Research suggests that it does, and not necessarily in a good way.

One researcher compared the performance of heavy multitaskers on a perceptual task. While seated at a computer, participants were flashed an image of red rectangles and then were asked to ignore and continue performing the task exactly as before. In the heavy multitaskers just couldn't ignore them, and their performance on the task worsened. Multitaskers also had significantly more

difficulty switching from task to task when performing tasks in a series, and were less likely to use old but useful information to solve a new problem. The conclusion: multitaskers may be oversensitive to incoming information (Ophir, Nass, & Wagner, 2009).

But it's far from conclusive that multitasking technology usage is harmful. Other research shows that middle-aged adults who have previous internet searching experience show higher levels of brain activation while engaging in that task compared to merely reading pages of text, suggesting that new neural pathways are developed that are involved in decision-making and reasoning. Furthermore, other studies show that people with considerable experience playing video games actually become better at reacting to stimuli, singling out important information, and switching between tasks (Small et al., 2009; Green et al., 2012).

In short, we don't know for sure whether multitasking is helpful or a hindrance in terms of quality of thinking. What is clear is that certain kinds of tasks are inherently difficult to carry out simultaneously, such as driving and texting: A considerable body of research shows that it can't be done safely (Cook & Jones, 2011; Long, Gillespie, & Tanaka, 2012).

- **Could it be the case that people who are prone to distraction are more likely to become multitaskers in the first place? Explain.**
- **Are there any possible benefits to having difficulty tuning out irrelevant information?**

If you chose the older physician, it's probably because you assumed that he or she would have a higher level of expertise. **Expertise** is the acquisition of skill or knowledge in a particular area. More focused than broader intelligence, expertise develops as people devote attention and practice to particular domains and, in so doing, gain experience, either because of their obsession or because they simply enjoy a given area. For example, physicians become better at diagnosing the symptoms of a medical problem in their patients as they gain experience. Similarly, a person who enjoys cooking and does a lot of it begins to know beforehand how to prepare a dish if certain modifications are made (Morita et al., 2008; Reuter et al., 2012).

What separates experts from those who are less skilled in a given area? While beginners use formal procedures and rules, often following them very strictly, experts rely on experience and intuition, and they often bend the rules. Because experts have so much experience, their processing information is often automatic, performed without the need for much thought. Experts often do not very articulate at explaining how they draw conclusions; their solutions often just seem to come to them—and are more likely to be right. Brain imaging studies show that experts, compared to novices, use different neural pathways to solve problems (Grabner, Neubauer, & Stern, 2006).

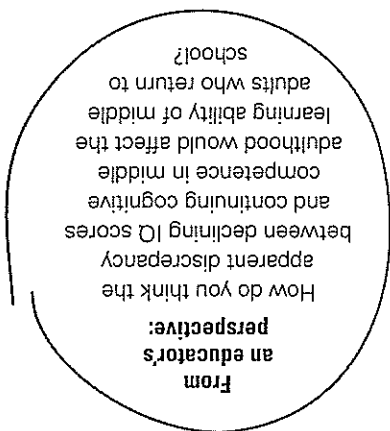
Finally, when difficulties arise, experts develop better strategies for solving them than novices, and they're more flexible in approaching problems. Their experience has provided them with alternative routes to the same problem, and this increases the probability of success (Willis, 1996; Clark, 1998; Arts, Gijssels, & Boshuizen, 2006).

Of course, not everyone develops expertise in some particular area during middle adulthood. Professional responsibilities, amount of leisure time, educational level, income, and vital status all affect the development of expertise.

Memory: You Must Remember This

Whenever Mary Donovan can't find her car keys, she mutters to herself that she is "losing her memory." Like Bina Clingman, who was worried about forgetting things like letters and phone numbers, Mary probably believes that memory loss is pretty common in middle age.

expertise the acquisition of skill or knowledge in a particular area



However, if she fits the pattern of most people in middle adulthood, her assessment is not necessarily accurate. According to research on memory changes in adulthood, most people show only minimal memory losses, and many exhibit none at all, during middle adulthood. Furthermore, because of societal stereotypes about aging, people in middle adulthood may be prone to attribute their absentmindedness to aging, even though they have been absent-minded throughout their lives. Consequently, it is the *meaning* they give to their forgetfulness that changes, rather than their actual ability to remember (Chasteen et al., 2005; Hoessler & Chasteen, 2008; Hess, Hinson, & Hodges, 2009).

TYPES OF MEMORY. To understand the nature of memory changes, it is necessary to consider the different types of memory. Memory is traditionally viewed in terms of three sequential components: sensory memory, short-term memory (also called working memory), and long-term memory. *Sensory memory* is an initial, momentary storage of information that lasts only an instant. Information is recorded by an individual's sensory system as a raw, meaningless stimulus. Next, information moves into *short-term memory*, which holds it for 15 to 25 seconds. Finally, if the information is rehearsed, it is moved into *long-term memory*, where it is stored on a relatively permanent basis.

Both sensory memory and short-term memory show virtually no weakening during middle adulthood. The story is a bit different for long-term memory, which declines with age for some people. It appears, however, that the reason for the decline is not a fading or complete loss of memory, but rather that with age, people register and store information less efficiently. In addition, age makes people less efficient in retrieving information that is stored in memory. In other words, even if the information was adequately stored in long-term memory, it may become more difficult to locate or isolate it (Schieber et al., 1992; Salthouse, 1994b).

It is important to keep in mind that memory declines in middle age are relatively minor, and most can be compensated for by various cognitive strategies. As mentioned earlier, paying greater attention to material when it is first encountered can aid in its later recall. Your lost car keys may have relatively little to do with memory declines, instead reflecting your inattentiveness when you put them down.

Many middle-aged adults find it hard to pay attention to particular things for some of the same reasons expertise develops. They are used to using memory shortcuts, *schemas*, to ease the burden of remembering all the many things that each of us experiences every day.

MEMORY SCHEMAS. One of the ways that people recall information is through the use of *schemas*, organized bodies of information stored in memory. Schemas help people represent the way the world is organized and allow them to categorize and interpret new information (Fiske & Taylor, 1991). For example, we may have a schema for eating out in a restaurant. We don't need to treat a meal in a new restaurant as a completely new experience. We know that when we go there, we will be seated at a table or counter and offered a menu from which to select food. Our schema for eating out tells us how to relate to the server, what sorts of food to eat first, and that we should leave a tip at the end of the meal.

People hold schemas for particular individuals (such as the particular behavior patterns of one's mother, wife, or child) as well as for categories of people (mail carriers, lawyers, or professors) and behaviors or events (dining in a restaurant or visiting the dentist). People's schemas serve to organize their behavior into coherent wholes and help them to interpret social events. For example, a person who knows the schema for a visit to the doctor is not likely to be surprised when he is asked to remove his clothes.

Schemas also convey cultural information. Psychologists Susan Fiske and Shelley Taylor (1991) give an example of an old Native American folktale in which the hero participates with several companions in a battle and is shot by an arrow. However, he feels no pain from the arrow. When he returns to

standing a tale told by Native-American storytellers acquire familiarity with the particular schemas of Native



is organized bodies of information
memory

s.
able to be flexible with procedures
experienced in a particular domain
s develops as people become



YOU AN INFORMED CONSUMER OF DEVELOPMENT?

Effective Strategies for Remembering

of us are forgetful at one time or another. However, there are techniques that can help us remember more effectively and make it likely that we will forget things that we wish to remember. **mnemonics** (pronounced "nee-MON-iks") are formal strategies for organizing material in ways that make it more likely to be remembered. The mnemonics that work not only in middle adulthood, but at points of the life span, are the following (Bellezza, Six, & Phillips, Gutman, 1997; Bloom & Lamkin, 2006; Morris & Fritz, 2006):

- **not organized.** For people who have trouble keeping track of where they left their keys or remembering appointments, the simplest approach is for them to become more organized. Using an appointment book, hanging one's keys on a hook, or using Post-it notes can help jog one's memory.
- **pay attention.** You can improve your recall by initially paying attention when you are exposed to new information and by purposefully making that you wish to recall it in the future. If you are particularly concerned about remembering something, such as where you parked your car, pay particular attention at the moment you park the car, and remind yourself that you really want to remember.

- **Use the encoding specificity phenomenon.** According to the encoding specificity phenomenon, people are most likely to recall information in environments that are similar to those in which they initially learned ("encoded") it (Tulving & Thompson, 1973). For instance, people are best able to recall information on a test if the test is held in the room in which they studied.
- **Visualize.** Making mental images of ideas can help you recall them later. For example, if you want to remember that global warming may lead to rising oceans, think of yourself on a beach on a hot day, with the waves coming closer and closer to where you've set out your beach blanket.
- **Rehearse.** In the realm of memory, practice makes perfect, or if not perfect, at least better. Adults of all ages can improve their memories if they expend more effort in rehearsing what they want to remember. By practicing what they wish to recall, people can substantially improve their recall of the material.



Simulate different types of mnemonics in MyDevelopmentLab.

name and tells the story, something black emerges from his mouth, and he dies the next

ing. his tale is puzzling to most Westerners because they are unschooled in the particular American culture to which the story belongs. However, to someone familiar with the American culture, the story makes perfect sense: The hero feels no pain because his ancestors are ghosts, and the "black thing" coming from his mouth is his departing soul. For a Native American, it may be relatively easy to later recall the story, because it makes sense that it doesn't to members of other cultures. Furthermore, material that is consistent with a schema is more likely to be recalled than material that is inconsistent (Van Manen & monaco, 1993). For example, a person who usually puts her keys in a certain spot may lose because she doesn't recall putting them down somewhere other than in the usual place.

Review and Apply

New

a question of whether intelligence declines in middle adulthood is complicated by limitations in cross-sectional studies and longitudinal studies. Intelligence appears to be divided into components, some of which decline while others hold steady or even improve. In general, cognitive competence in middle adulthood holds fairly steady despite declines in the areas of intellectual functioning. Memory may appear to decline in middle age, but in fact long-term memory deficits are probably due to ineffective strategies of storage and retrieval.

Aging Lifespan Development

How might crystallized and fluid intelligence work together to help middle-aged people deal with novel situations and problems?

mnemonics formal strategies for organizing material in ways that make it more likely to be remembered

Next we consider the relationships that evolve during middle adulthood, the various familial ties that bind people together (or come unglued) during this period, including marriage, divorce, the empty nest, and grandparenting. We also look at a bleaker side of family relations: family violence, which is surprisingly prevalent.

Finally, the chapter examines the role of work and leisure during middle adulthood. We will examine the changing role of work in people's lives and some of the difficulties associated with work, such as burnout and unemployment. The chapter concludes with a discussion of leisure time, which becomes more important during middle age.

10-10-1 In what ways does personality develop during middle adulthood?

10-10-2 Is there continuity in personality development during middle adulthood?

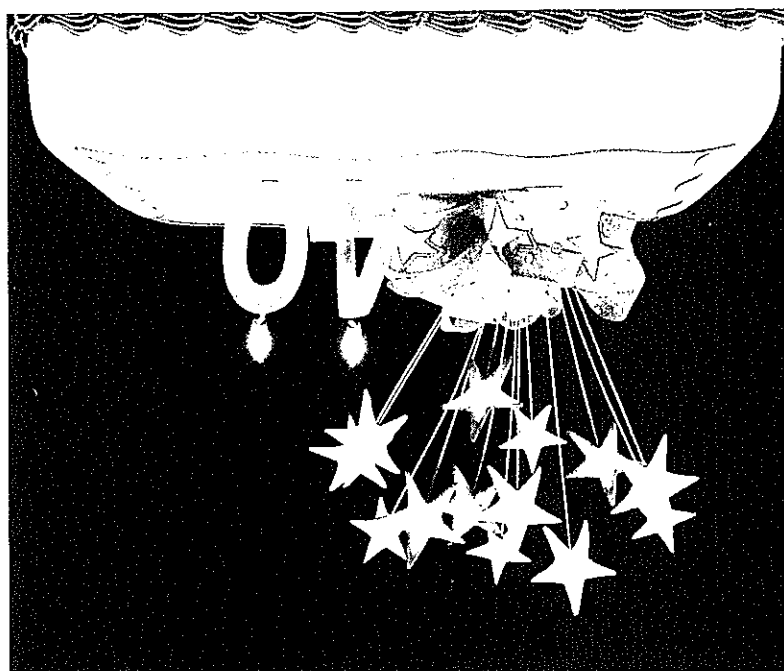
My fortieth birthday was not an easy one. It's not that I woke up one morning and felt different—that's never been the case. But what did happen during my fortieth year was that I came to the realization of the finiteness of life, and that the die was cast. I began to understand that I probably wasn't going to be president of the United States—a secret ambition—or a CEO of a major corporation. Time was no longer on my side, but something of an adversary. But it was curious: Rather than following my traditional pattern of focusing on the future, planning to do this or do that, I began to appreciate what I had. I looked around at my life, was pretty well satisfied with some of my accomplishments, and began to focus on the things that were going right, not the things that I was lacking. But this state of mind didn't happen in a day; it took several years after turning 40 before I felt this way. Even now, it is hard to fully accept that I am middle-aged.

As this forty-seven-year-old man suggests, the realization that one has entered middle adulthood does not always come easily, nor is it generally welcome. In many Western societies, the age of 40 has special meaning, bringing with it the inescapable fact that one is now middle-aged—at least in the view of others—and the suggestion, embodied in everyday common wisdom, that one is about to experience the throes of a “midlife crisis.” Is this view correct? As we'll see, it depends on your perspective.

Two Perspectives on Adult Personality Development: Normative-Crisis Versus Life Events

Traditional views of personality development during adulthood have suggested that people move through a fixed series of stages, each tied fairly closely to age. These stages are related to specific crises in which an individual goes through an intense period of questioning and even psychological turmoil. This traditional perspective is a feature of what are called normative-crisis models of personality development. Normative-crisis models see personality development in terms of fairly universal stages, tied to a sequence of age-related crises. For example, Erik Erikson's psychosocial theory predicts that people move through a series of stages and crises throughout the life span. In contrast, some critics suggest that normative-crisis approaches may be outmoded. They arose at a time when society had fairly rigid and uniform roles for people. Traditionally,

Western society, turning 40 represents an important milestone.



Normative-crisis models the approach to personality development that is based on fairly universal stages tied to a sequence of age-related crises

men were expected to work and support a family; women were expected to stay at home, be housewives, and take care of the children. And the roles of men and women played out at relatively uniform ages.

Today, however, there is considerable variety in both the roles and the timing. Some people marry and have children at 40. Others have children and marry later. Still others never marry, but live with a partner of the same or opposite sex and perhaps adopt a child or forego children altogether. In sum, changes in society have called into question normative crisis models that are tied closely to age (Fugate & Mitchell, 1997; Barnett & Hyde, 2001; Frankel, 2003).

Because of all this variation, some theorists, such as Ravenna Helson, focus on what may be called **life events models**, which suggest that it is the particular events in an adult's life, rather than age per se, that determines the course of personality development. For instance, a woman who has her first child at age 21 may experience psychological forces similar to those experienced by a woman who has her first child at age 39. The result is that the two women, despite their very different ages, share certain commonalities of personality development (Helson & Wink, 1992; Helson & Srivastava, 2001; Roberts, Helson, & Kohnen, 2002).

It is not clear whether the normative-crisis view or the life events perspective will ultimately paint the more accurate picture of personality development and change during the course of adulthood. What is clear is that developmental theorists from a range of perspectives all agree that middle adulthood is a time of continuing—and significant—psychological growth.

Erikson's Stage of Generativity-Versus-Stagnation

As we first discussed in Chapter 12, psychoanalyst Erik Erikson suggested that middle adulthood encompasses a period he characterized as the **generativity-versus-stagnation stage**. One's middle adulthood, according to Erikson, is spent either in what he called generativity, making a personal contribution to family, community, work, and society as a whole, or in stagnation. Generative people strive to play a role in guiding and encouraging future generations. Often, people find generativity through parenting, but other roles can fill this need too. People may work directly with younger individuals, acting as mentors, or they may satisfy their need for generativity through creative and artistic output, seeking to leave a lasting contribution. The focus of those who experience generativity, then, is beyond themselves, as they look toward the continuation of their own lives through others (Clark & Arnold, 2008; Penningroth & Scott, 2012; Scholitsch & Baumann, 2012).

On the other hand, a lack of psychological growth in this period means that people become stagnant. Focusing on the triviality of their own activity, people may come to feel that they have made only limited contributions to the world, that their presence has counted for little. Some individuals find themselves floundering, still seeking new and potentially more fulfilling careers. Others become frustrated and bored.

Although Erikson provides a broad overview of personality development, some psychologists have suggested that we need a more precise look at changes in personality during middle adulthood. We'll consider three alternative approaches.

BUILDING ON ERIKSON'S VIEWS: VALLANT, GOULD, AND LEVINSON. Developmentalist George Vaillant (1977) argues that an important period between about ages 45 and 55 is "keeping the meaning" versus rigidity. During that period, adults seek to extract the meaning from their lives, and to "keep the meaning" by developing an acceptance of the strengths and weaknesses of others. Although they recognize that the world is not perfect and has many shortcomings, they strive to safeguard their world, and they are relatively content. The man quoted at the beginning of this section, for example, seems to be content with the meaning he has found in his life. People who are not able to keep the meaning in their lives risk becoming rigid and increasingly isolated from others. Psychiatrist Roger Gould (1978,

life events models the approach to personality development that is based on the timing of particular events in an adult's life rather than on age per se

generativity-versus-stagnation stage according to Erikson, the stage during middle adulthood in which people consider their contributions to family and society

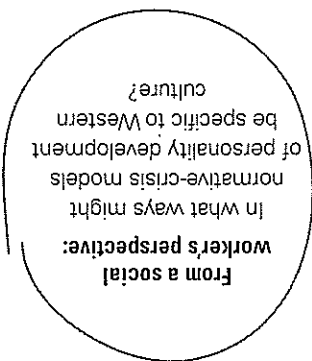


TABLE 16-1 Summary of Gould's Transformations in Adult Development

Stage	Approximate Age Range	At this stage, people typically:
1	16 to 18	plan to leave home and terminate parental control
2	18 to 22	leave the family and begin to reorient toward peers
3	22 to 28	become independent and commit to career and (often) spouse and children
4	29 to 34	question themselves and experience confusion; they may become dissatisfied with marriage and career
5	35 to 43	feel an urgent need to achieve life goals, becoming increasingly aware of the passage and limits of time; they often realign life goals
6	43 to 53	settle down at last, with acceptance of their lives
7	53 to 60	grow more tolerant, accepting their past; they become less negative and generally more mellow

(Source: Based on *Transformations*, by R. L. Gould & M. D. Gould, 1978, New York: Simon & Schuster.)

1980) offered an alternative to both Erikson's and Vaillant's views. While he agrees that people move through a series of stages and potential crises, he suggests that adults pass through a series of seven stages associated with specific age periods (see Table 16-1). According to Gould, people in their late 30s and early 40s begin to feel a sense of urgency in terms of attaining life goals as they realize that their time is limited. Coming to grips with the reality that life is finite can propel people toward adult maturity.

Gould based his model of adult development on a relatively small sample and relied heavily on his own clinical judgments. Little research has supported his description of the various stages, which was heavily influenced by the psychoanalytic perspective.

Another alternative to Erikson's work is psychologist Daniel Levinson's *seasons of life* theory. According to Levinson (1986, 1992), who intensively interviewed a group of men, the early 40s are a period of transition and crisis. Levinson suggests that adult men pass through a series of stages beginning with their entry into early adulthood at around age 20 and continuing into middle adulthood. The beginning stages have to do with leaving one's family and entering the adult world.

At around age 40 or 45, however, people move into a period that Levinson calls the middle transition. The *midlife transition* is a time of questioning. People begin to focus on the finite nature of life, and they begin to question some of their everyday, fundamental assumptions. They experience the first signs of aging, and they confront the knowledge that they will be unable to accomplish all their aims before they die.

In Levinson's view, this period of assessment may lead to a *midlife crisis*, a stage of uncertainty and indecision brought about by the realization that life is finite. Facing signs of physical aging, men may also discover that even the accomplishments of which they are proudest have brought them less satisfaction than they expected. Looking toward the past, they may seek to define what went wrong and look for ways to correct their past mistakes. The midlife crisis, then, is a painful and tumultuous period of questioning.

Levinson's view is that most people are susceptible to a fairly profound midlife crisis. But before accepting his perspective, we need to consider some critical drawbacks in his research. First, his initial theorizing was based on a group of only 40 men, and his work with women was carried out years later and once again on only a small sample. Furthermore, Levinson overstated the consistency and generality of the patterns he found in the samples he used to derive his theory. In fact, as we consider next, the notion of a universal midlife crisis has come under considerable criticism (McCrae & Costa, 1990; Stewart & Ostrove, 1998; McFadden & Swan, 2012).

Midlife crisis a stage of uncertainty and indecision brought about by the realization that life is finite

E MIDLIFE CRISIS: REALITY OR MYTH? Central to Levinson's model of the sea-
of life is the concept of midlife crisis, a period in the early 40s presumed to be marked
intense psychological turmoil. The notion has taken on a life of its own: There is a gen-
eration expectation in U.S. society that the age of 40 represents an important psychological
culture.

There's a problem, though, with such a view: The evidence for a widespread midlife cri-
sis is simply lacking. Rather, most research suggests that, for most people, the passage into
middle age is relatively tranquil. The majority of people regard midlife as a particularly re-
warding time. If they are parents, for example, their children often have passed the home-
rearing years, allowing parents the opportunity to rekindle an intimacy that they may have lost.
my middle-aged people find that their careers have blossomed—as we discuss later in this
chapter—and far from being in crisis, they may feel quite content with their lot in life. Rather
n looking toward the future, they focus on the present, seeking to maximize their ongo-
ing involvement with family, friends, and other social groups. Those who feel regret over the
course of their lives may be motivated to change the direction of their lives, and those who do
not age their lives end up better off psychologically (Stewart & Vandewater, 1999).

Furthermore, by the time they approach and enter middle adulthood, most people feel
older than they actually are, as can be seen in Figure 16-1 (Miller, Hemmesath, & Nelson,
1997). In short, the evidence for a midlife crisis experienced by most people is no more compel-
ling than the evidence for a stormy adolescence that we discussed in Chapter 12. Yet, like that
generation, the idea that the midlife crisis is nearly universal seems unusually well entrenched in
common wisdom. Why is this the case?

One reason may be that people who do experience turmoil during middle age tend to
be relatively obvious and easily remembered by observers. For instance, a forty-year-old man
divorces his wife, replaces his sedan Volvo station wagon with a red Audi convertible,
marries a much younger woman is likely to be more conspicuous than a happily mar-
ried man who remains with his spouse (and Chevrolet) throughout middle adulthood. As
a consequence, we are more likely to notice and recall marital difficulties than the lack of
them. In this way the myth of a blustery and universal midlife crisis is perpetuated. The real-
ity, though, is quite different: For most people, a midlife crisis is more the stuff of fiction than
reality. For some people midlife may not bring many changes at all. And as we consider in
Developmental Diversity feature, in some cultures, middle age is not even considered a
distinct period of life.

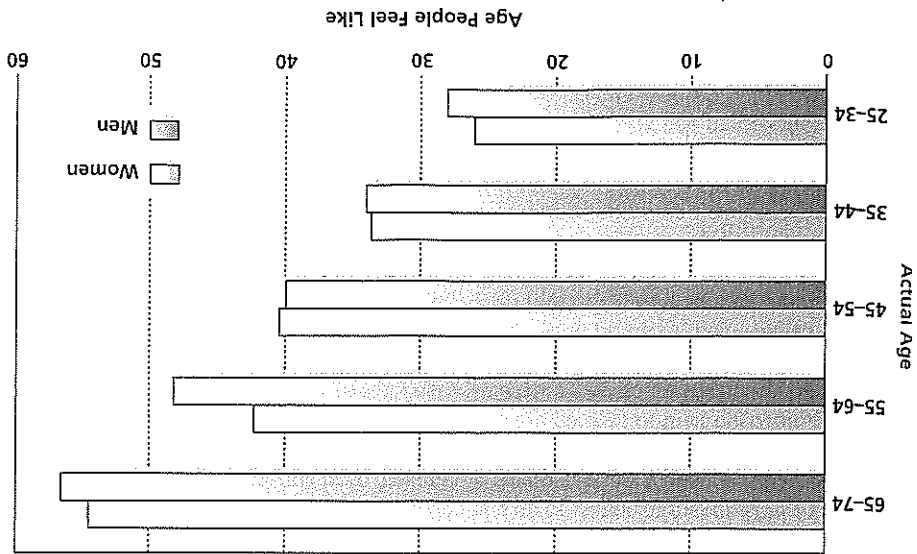


FIGURE 16-1 What Age Do You Feel Most of the Time?

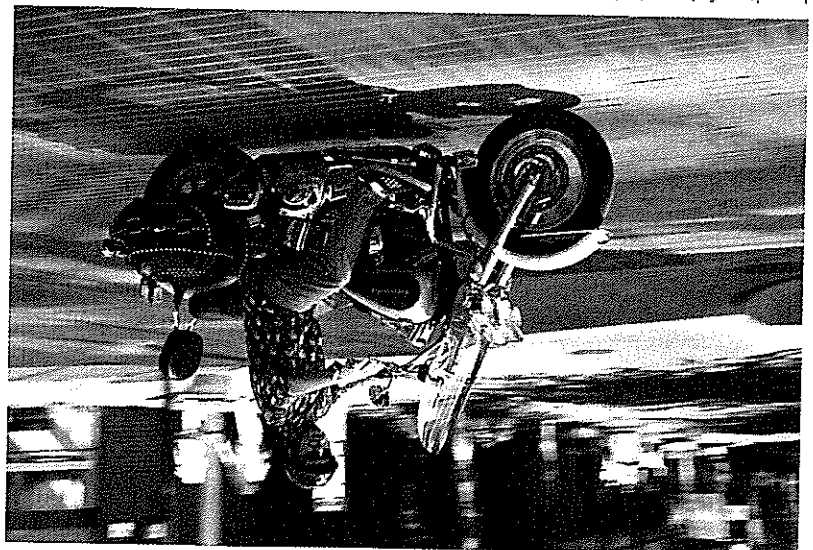
Through adulthood, most people say they feel younger than they actually are. (Source: Based on The John D. and Catherine T. MacArthur Foundation Research Network on Successful Midlife Development, 1999.)

Stability Versus Change in Personality

Harry Hennessey, age 53 and a vice president of an investment banking firm, says that inside, he still feels like a kid. Many middle-aged adults would agree with such a sentiment. Although most people tend to say that they have changed a good deal since they reached adolescence—and mostly for the better—many also contend that in terms of basic personality traits, they perceive important similarities between their present selves and their younger selves.

The degree to which personality is stable across the life span or changes as we age is one of the major issues of personality development during middle adulthood. Theorists such as Erikson and Levinson clearly suggest that there is substantial change over time. Erikson's stages and Levinson's seasons describe set patterns of change. The change may be predictable and related to age, but it is substantial.

Conversely, an impressive body of research suggests that at least in terms of individual traits, personality is quite stable and continuous over the life span. Developmental psychologists Paul Costa and Robert McCrae find remarkable stability in particular traits. Even tempered twenty-year-olds are even-tempered at age 75; affectionate twenty-five-year-olds become affectionate fifty-year-olds; and disorganized twenty-six-year-olds are still disorganized at age 60. Similarly, self-concept at age 30 is a good indication of self-concept at age 80 (Srivastava, John, & Gosling, 2003; Terracciano, Costa, & McCrae, 2006; Terracciano, McCrae, & Costa, 2009; Mottus, Johnson, & Deary, 2012; also see Figure 16-2).



In spite of there being no strong evidence that people universally experience "midlife crisis," the belief that it is commonplace remains. Why is this belief so prevalent?

Middle Age: In Some Cultures It Doesn't Exist

DEVELOPMENTAL DIVERSITY AND YOUR LIFE

There's no such thing as middle age. At least one can draw that conclusion by looking at the lives of women living in the Oriya culture in Orissa, India. According to research carried out by developmental anthropologist Richard Shweder, who studied how high-caste Hindu women viewed the process of aging, a distinct period of middle age does not exist. These women view their life course not on the basis of chronological age, but on the nature of one's social responsibility, family management issues, and moral sense at a given time (Shweder, 1998, 2003).

The model of aging of the Oriyen woman is based on two phases of life: life in her father's house (*bapa gharo*), followed by life in her husband's mother's house (*sasu gharo*). These two segments make sense in the context of Oriyen family life, which consists of multigenerational households in which marriages are arranged. After they are married, husbands remain with their parents, and wives are expected to move into the husband's parents' household. At the time of marriage, a wife's social status is seen as having changed from a child (someone's daughter) to a sexually active female (a daughter-in-law).

In short, the notion of a separate middle age is clearly a cultural construction. The significance of a particular age range differs significantly depending on the culture in which one lives.

To a Western eye, the description of the life course of these Indian women suggests that they might perceive their lives as restricted because in most cases they have no careers outside the home, but they do not see themselves in this light. In fact, in the Oriya culture, domestic work is highly respected and valued. Furthermore, Oriyen women must work outside the home.

become sexually active in order to reproduce the husband's family line from their own parents to the parents of their husband, and they must maintain in social responsibility. For instance, women must shift their focus change from daughter to daughter-in-law that brings about a significant onset of menstruation and its cessation at menopause. Instead, it is the boundaries in life for Oriyen women, nor do physical changes, such as the of 18 to 20. However, chronological age per se does not mark significant

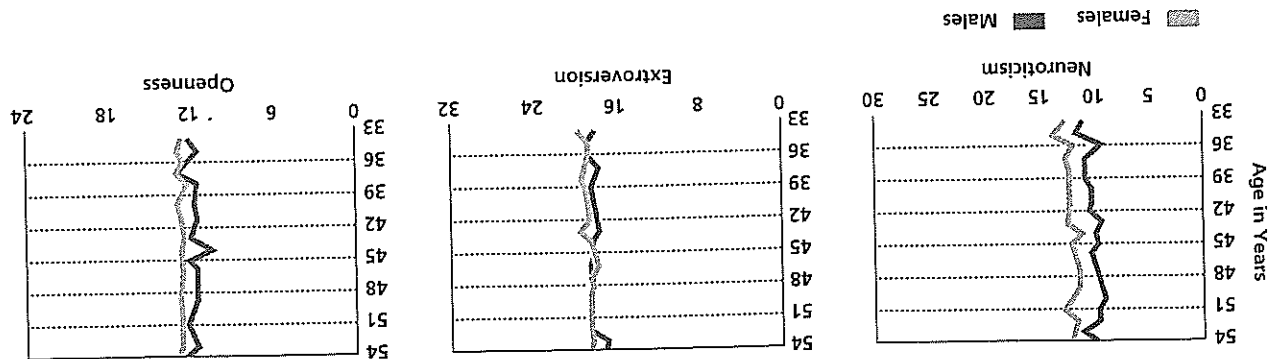


FIGURE 16-2 The Stability of Personality According to Paul Costa and Robert McCrae, basic personality traits such as neuroticism, extroversion, and openness are stable and consistent throughout adulthood. (Source: Based on Costa et al., 1986, p. 148.)

There is also evidence that people's traits actually become more ingrained as they age. For instance, some research suggests that confident adolescents become more confident in their mid-50s, while shy people become more diffident over the same time frame.

STABILITY AND CHANGE IN THE "BIG FIVE" PERSONALITY TRAITS. Quite a bit of research has centered on the personality traits that have come to be known as the "Big Five"—because they represent the five major clusters of personality characteristics. These include the following:

- **Neuroticism**, the degree to which a person is moody, anxious, and self-critical
- **Extroversion**, how outgoing or shy a person is
- **Openness**, a person's level of curiosity and interest in new experiences
- **Agreeableness**, how easygoing and helpful a person tends to be
- **Conscientiousness**, a person's tendencies to be organized and responsible

The majority of studies find that the Big Five traits are relatively stable past the age of 30, although there are some variations in specific traits. In particular, neuroticism, extroversion, and openness to experience decline somewhat from early adulthood through middle adulthood, while agreeableness and conscientiousness increase to a degree—findings that are consistent across cultures. The basic pattern, however, is one of stability in these basic traits through adulthood (McCrae & Costa, 2003; Srivastava et al., 2003; Hahn, Gottschling, & Spinath, 2012).

Does evidence for the stability of personality traits contradict the perspective of personality change championed by theorists such as Erikson, Gould, and Levinson? Not necessarily, for on closer inspection the contradictions of the two approaches may be more apparent than real.

On one hand, people's basic traits do appear to show continuity, particularly over the course of their adult lives. On the other hand, people are also susceptible to changes in their lives, and adulthood is jam-packed with major events, such as changes in family status, career, and even the economy. Furthermore, physical changes due to aging, illness, the death of a loved one, and an increased understanding of a finite life span can provide the impetus for changes in the ways people view themselves and the world at large (Krueger & Heckhausen, 1993; Roberts, Walton, & Viechbauer, 2006; also see the *From Research to Practice* box).

me On, Get Happy

M RESEARCH TO PRACTICE

You assume that youth and vitality automatically bring happiness? That middle age is a time when people realize they are growing old and start to feel their life slipping through their fingers, and that every- goes downhill from there? Many people think that the happiest of life is during the years of our youth and that growing old brings s, pains, regrets, fear of dying, and decreasing satisfaction with /erall. And they would be exactly wrong.

re results of a poll of hundreds of thousands of adults of all ages / that actually, life satisfaction in general starts to improve in fe and continues to grow until by the time we reach late adult- /, we are actually happier than we were when we were in our ties. In the poll, respondents were asked to indicate their global being on a scale of one to ten. The youngest respondents at age orteated feeling generally pretty good about themselves, but life faction declined with increasing age from there—perhaps be- e of increasing stress and responsibilities that people encounter ng that period. It worsens until age 50, when there is a sudden rsal. Beyond 50, people's life satisfaction increases with age all way up to age 85; these were the oldest participants in the study, se life satisfaction actually topped that of the 18-year-olds (Stone .., 2010).

articipants were also asked several questions about their specific ng on the day before the poll was taken. These more objective tions about very recent experiences were intended to be resis- to retrospective revision or biased judgment. These data indicated

—[Watch] 43-year-old Huang Yu discuss / her happiness has increased with age /yDavisDevelopmental.

Review

Normative-crisis models portray people as passing through age-related stages of development; life events models focus on specific changes in response to varying life events.

According to Erikson, middle adulthood encompasses the "generativity-versus-stagnation" stage, while Vaillant sees it as the "keeping the meaning versus rigidity" period. Gould suggests that people move through seven stages during adulthood. Levinson argues that the midlife transition can lead to a midlife crisis, but there is little evidence for this in the majority of middle-aged people. Broad, basic personality characteristics are relatively stable. Specific aspects of personality do seem to change in response to life events.

Applying Lifespan Development

How do you think the midlife transition is different for a middle-aged person whose child has just entered adolescence versus a middle-aged person who has just become a parent for the first time?

- ☐ Can you think of any additional reasons why people might become more satisfied with life as they age?
 - ☐ Why do you think many people believe happiness declines with age when the opposite is true?
- to (Stone et al., 2010).
- middle age is not something to dread, but something to look forward to. It may simply be the case that older people become better able to regulate their emotions, or prefer to recall happy thoughts and feelings rather than negative emotions. More research is needed to identify the reason for these patterns. But one thing is certain: passing middle age is not something to dread, but something to look forward to (Stone et al., 2010).
- It's clear that something happens around age 50 to produce a pattern of changes in people's emotional experiences that persist for the remainder of their adult lives. But the reason for these changes is elusive. Gender didn't make much of a difference, and neither did employment or marital status. Speculative causes include changes in how we view ourselves and our world, increasing wisdom and emotional intelligence as we age, or even possibly neurological changes. It may simply be the case that older people become better able to regulate their emotions, or prefer to recall happy thoughts and feelings rather than negative emotions. More research is needed to identify the reason for these patterns. But one thing is certain: passing middle age is not something to dread, but something to look forward to (Stone et al., 2010).

that stress declines across the life span starting at age 22, reaching its lowest point in late adulthood. Anger also declines with age, starting at 18. Worry, on the other hand, stays level until age 50 and then it too declines with age from that point on. Enjoyment and happiness decline until age 50 and then rise again until 75, dropping only slightly thereafter.

Relationships: Family in Middle Age

16-3 What are typical patterns of marriage and divorce in middle adulthood?

16-4 What changing family situations do middle-aged adults face?

16-5 What are the causes and characteristics of family violence in the United States?

For Kathy and Bob, accompanying their son Jon to his college orientation was like nothing they had ever experienced in the life of their family. When Jon had been accepted at a college on the other side of the country, the reality that he would be leaving home didn't really register. It wasn't until the time came to leave him on his new campus that the sense that their family would be changing in ways they could barely fathom hit them. It was a wrenching experience. Not only did Kathy and Bob worry about their son in the ways that parents always worry about their children, but they felt a sense of profound loss—that, to a large extent, their job of raising their son was over. Now he was largely on his own. It was a thought that filled them with pride and anticipation for his future, but with great sadness as well. They would miss him.

Members of many non-Western cultures who live in traditional extended families in which multiple generations spend their lives in the same household or village, middle adulthood is not particularly special. But in Western cultures, family dynamics undergo significant change during middle adulthood. It is in middle age that most parents experience major changes in their relationships not only with their children, but with other family members as well. It is a period of shifting role relationships that, in twenty-first-century Western cultures, encompasses an increasing number of combinations and permutations. We'll start by looking at the ways in which marriage develops and changes over this period and then consider some of the many alternative forms that family life takes today (Kaslow, 2001).

Marriage

Years ago, middle adulthood was similar for most people. Men and women who had married during early adulthood were still married to one another. One hundred years ago, when life expectancy was much shorter than it is today, people in their 40s were most likely married—but essentially not to the same persons they had first married. Spouses often died; people might well enter their second marriage by the time of middle age.

Today the story is different and, as we said earlier, more varied. More people are single during middle adulthood, having either married. Single people may live alone or with a partner. Gay, lesbian adults, for example, may have committed relationships even though marriage is typically not an option for them. Among heterosexuals, some have divorced, lived alone, and then remarried. During middle adulthood, many people's marriages end in divorce, and many families "blend" together into new households, retaining children and stepchildren from previous marriages. Fewer couples still spend between 40 and 50 years together, the average of those years during middle adulthood. Many people experience the peak of marital satisfaction during middle age.

UPS AND DOWNS OF MARRIAGE. Even for happily married couples, marriage has its ups and downs, with satisfaction rising and falling over the course of the marriage. In the most recent research has suggested that marital satisfaction follows an U-shaped configuration shown in Figure 16-3 on page 516.

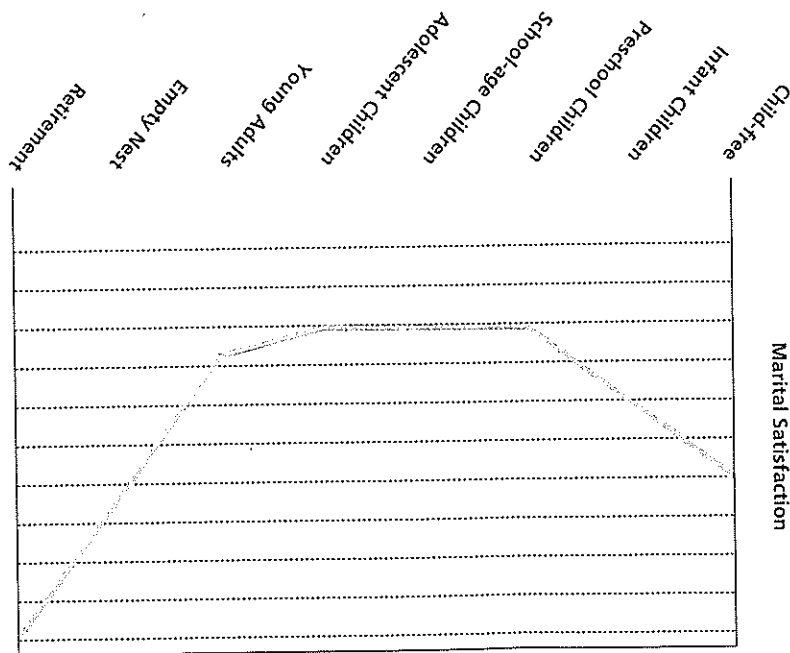


Watch 45-year-old Jeff talk about his marriage and blended family in **MyDevelopmentLab**.

Indian women view their life course not on the basis of chronological age, but on the nature of one's social responsibility, family management issues, and moral sense at a given period.

16-3 The Phases of Marital

any couples, marital satisfaction falls in a U-shaped configuration. It declines after the birth of children but eventually returns to a level of satisfaction similar to that at the start of life. Why do you think this pattern of action occurs?
Based on Rollins & Cannon, 1974.)



(Figley, 1973). Specifically, marital satisfaction begins to decline just after the marriage, and it continues to fall until it reaches its lowest point following the births of the couple's children. However, at that point, satisfaction begins to grow, eventually returning to the same level that it held before the marriage (Harvey & Weber, 2002; Gorchoff, John, & Helson, 2008; Medina, Lederhos, & Lillis, 2009).

Middle-aged couples cite several sources of marital satisfaction. For instance, both men and women typically state that their spouse is "their best friend" and that they like their spouses as people. They also view marriage as a long-term commitment and agree on their aims and goals. Finally, most also feel that their spouses have grown more interesting over the course of the marriage (Levenson, Carstensen, & Gottman, 1993).

Sexual satisfaction is related to general marital satisfaction. What matters is not how often married people have sex. Instead, satisfaction is related to *agreeing* about the quality of their sex lives (Spence, 1997; Litzinger & Gordon, 2005; Butzer & Campbell, 2008).

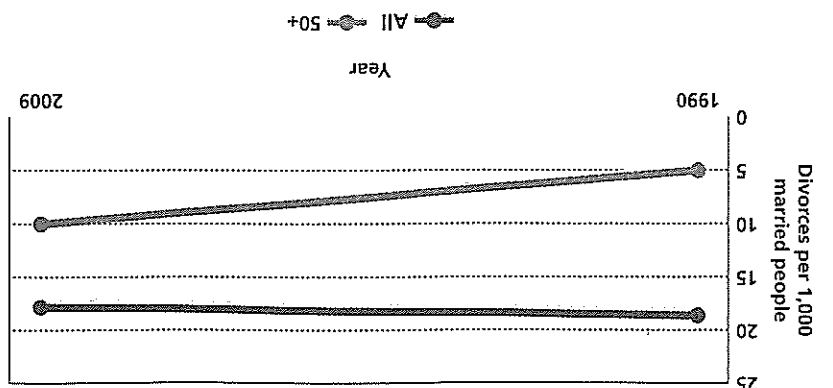
Are there "secrets" to successful marriages? Not really. However, there are proven coping mechanisms that allow couples to remain together happily. Among them (Ortuch, 2009; Bernstein, 2010):

- **Holding realistic expectations.** Successful couples understand that there are some things about their partner that they may not like all that much. They accept that their partner will do things that they don't like some of the time.
- **Focusing on the positive.** Thinking about the things that they like about their partner helps them to accept the things that bother them.
- **Compromising.** Partners in successful marriages understand that they are not going to win every argument, and they don't keep score.
- **Avoiding suffering in silence.** If something does bother them, they let their partner know about it. But they don't bring it up in an accusatory way. Instead, they talk about it at a time when they are both calm.

Divorce

Louise knew after two months that the marriage was doomed. Tom never listened to a word she said, never asked her how her day had been, never lifted a hand to help around the house. He was completely self-centered and seemingly unaware of her existence. Still, it took

Bucking the Trend
Increase in the U.S. divorce rate among those ages 50+ vs. a decline in the U.S. divorce rate overall



Source: The Gray Revolution; Susan Brown and I-Fen Lin, Bowling Green State University.

FIGURE 16-4 Rising Divorces in Middle Adulthood

Both the divorce rate and the number of people that experience divorce in those 50 years and above have risen significantly, and the increases are projected to continue in the future.

(Source: Brown & Lin, 2012, Figure 1.)

years before she got up the nerve to tell him she wanted a divorce. His response was casual: "What took you so long? I always wondered why you stayed with me." After her initial belief that there would be no resistance, she felt betrayed and foolish. All the anguish, all the trying to make a go of it, all the pain of a bad marriage—and they both knew all along that there was no point. "Why did we never face facts?" she wondered.

ough the overall divorce rate has declined in the last two decades, divorce among couples aged middle is actually rising. One woman in eight who is in her first marriage will get divorced after the age of 40, and one in four of all divorces were by people 50 and older. In the divorce rate for people 50 and over has doubled in the last 20 years and is expected to

base (see Figure 16-4; Enright, 2004; Brown & Lin, 2012; Thomas, 2012). Why do marriages unravel? There are many causes. One is that people in middle adulthood spend less time together than in earlier years. In individualistic Western cultures, people concerned with their own personal happiness and self-fulfillment. If their marriage is not trying, they feel that divorce may be the answer to increasing their happiness. Divorce is so more socially acceptable than in the past, and there are fewer legal impediments to it. In some cases—but certainly not all—the financial costs are not high. Furthermore, opportunities for women grow, wives may feel less dependent on their husbands, both an emotional and an economic standpoint (Wallerstein, Lewis, & Blakeslee, 2000; Amato

evitt, 2003; Fincham, 2003; Brown & Lin, 2012). Another reason for divorce is that, as we discussed in Chapter 14, feelings of romantic,ionate love may subside over time. Because Western culture emphasizes the importance of romance and passion, members of marriages in which passion has declined may feel that that sufficient reason to divorce. In some marriages, it is a lack of excitement and an increase in freedom that leads to marital dissatisfaction. Finally, there is a great deal of stress in house-

s in which both parents work, and this stress puts a strain on marriages. Much of the energy directed toward families and maintaining relationships in the past is now directed toward work other institutions outside the home (Macdonald, 2001; Tsapelas, Aron, & Orbach, 2009). Finally, some marriages end because of *infidelity*, in which a spouse engages in sexual activity with a person outside of the marriage. Although statistics are highly suspect—if you your spouse, why would you be truthful to a pollster?—one survey found that 20 percent en and 15 percent of women under the age of 35 say they have ever been unfaithful. In en year, about 12 percent of men and 7 percent of women say they have had sex outside marriage (Atkins & Furrow, 2008).

Whatever the causes, divorce can be especially difficult for men and women in midlife. It is particularly hard for women who have followed the traditional female role of staying



quarters of people who divorce remarry again, usually within two

with their children and never performing substantial work outside the home. They may face prejudice against older workers, finding that they are less likely to be hired than younger people, even in jobs with minimal requirements. Without a good deal of training and support, these divorced women, lacking recognized job skills, may remain virtually unemployed (McDaniel & Coleman, 2003; Williams & Dunne-Bryant, 2006; Hilton & Anderson, 2009).

At the same time, many people who divorce in midlife end up happy with the decision. Women, in particular, are apt to find that developing a new, independent self-identity is a positive outcome. Furthermore, both men and women who divorce during midlife are likely to enter new relationships, and—as we will see—they typically remarry (Enright, 2004).

REMARriage. Many of the people who divorce—some 75 to 80 percent—end up marrying again, usually within 2 to 5 years. They are most likely to marry people who have

also been divorced, partly because divorced people tend to be the ones in the available pool, but also because those who have gone through divorce share similar experiences (DeWitt, 1992). Although the overall rate of remarriage is high, it is far higher in some groups than in others. For instance, it is harder for women to remarry than men, particularly older women. Whereas 90 percent of women under the age of 25 remarry after divorce, less than one-third of women over the age of 40 remarry (Bumpass, Sweet, & Martin, 1990; Besharov & West, 2002). The reason for this age difference stems from the *marriage gradient* that we first discussed in Chapter 14: Societal norms push men to marry women who are younger, smaller, and lower in status than themselves. As a consequence, the older a woman is, the fewer the socially acceptable men she has available to her since those men her age are likely to be looking for younger women. In addition, women have the disadvantage of societal double standards regarding physical attractiveness. Older women tend to be perceived as unattractive, while older men tend to be seen as “distinguished” and “mature” (Bernard, 1982; Buss, 2003; Doyle, 2004a).

There are several reasons divorced people may find getting married again more appealing than remaining single. One motivation to remarry is to avoid the social consequences of divorce. Even in the twenty-first century, when the breakup of marriages is common, divorce carries with it a certain stigma that people may attempt to overcome by remarrying. In addition, divorced people overall report lower levels of satisfaction with life than married people (Lucas, 2005).

Divorced people miss the companionship that marriage provides. Divorced men in particular report feeling lonely and experience an increase in physical and mental health problems following divorce. Finally, marriage provides clear economic benefits reserved for spouses, such as sharing the cost of a house and medical benefits (Ross, Microwsky, & Goldstein, 1991; Stewart et al., 1997).

Second marriages are not the same as first marriages. Older couples tend to be more mature and realistic in their expectations of a partner and a marriage. They tend to look at marriage in less romantic terms than younger couples, and they are more cautious. They are also likely to show greater flexibility in terms of roles and duties; they share household chores more equitably and make decisions in a more participatory manner (Hetherington, 1999).

Unfortunately, however, this doesn't make second marriages more durable than first ones. In fact, the divorce rate for second marriages is slightly higher than for first marriages. Several factors explain this phenomenon. One is that second marriages may be subject to stresses that are not present in first marriages, such as the strain of blending different families. For another, having experienced and survived divorce before, partners in second marriages may be less

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Leaving their youngest child at college marks the start of a significant transition for parents, who face an "empty nest."

Family Evolutions: From Full House to Empty Nest

mitted to relationships and more ready to walk away from unsatisfactory ones. Finally, they may have personality and emotional characteristics that don't make them easy to live with (Cherlin, 1993; Warshak, 2000; Emsman, Ganong, & Weaver, 2001). Despite the high divorce rate for second marriages, many people are able to remarry quite successfully. In such cases, remarried couples report as great a degree of satisfaction as couples in successful first marriages (Bird & Melville, 1994; Michaels, 2006).

Many parents, a major transition that typically occurs during mid-adulthood is the departure of children, who may be either going to college, getting married, joining the military, or taking a job far from home. Even people who become parents at relatively late ages are likely to experience this transition at some point during middle adulthood, since the period spans nearly a quarter century. As we saw in the description of Kathy and Bob, a child's departure can be a wrenching experience—so wrenching, in fact, that it has been labeled the "empty nest syndrome." The empty nest syndrome refers to instances in which parents experience unhappiness, worry, loneliness, and depression from their children's departure from home (Lauer & Lauer, 1999).

Many parents report that major adjustments are required. Particularly for women who have stayed home to rear their children, the loss can be difficult. Certainly, if traditional gender roles have little or nothing else in their lives except their children, they do face a challenging period. While coping with the feelings of loss can be difficult, parents can also find that some aspects of this era of middle adulthood are quite positive. Even mothers who have not worked outside the home find that after the children leave, they have time for other outlets for their physical and psychological energies, such as community or recreational activities. Moreover, many mothers find that the period of motherhood is not easy; surveys show that most people that being a mother is harder than it used to be. Such mothers may now feel liberated from a comparatively difficult set of responsibilities (Heubusch, 1997; Morfett et al., 2004; Yang, & Agard, 2012). Consequently, although some feelings of loss over the departure of children are common to most people, there is little, if any, evidence to suggest that the departure of children produces anything more than temporary feelings of sadness and distress. This is especially true for women who have been working outside the home (Antonucci, 2001; Crowley, Hayslip, & Jay, 2003). In fact, there are some discernible benefits when children leave home. Married spouses have more time for one another. Married or unmarried people can throw themselves into their own work without having to worry about helping the kids with homework, carpools, and so on. Keep in mind that most research examining the so-called empty nest syndrome has been based on women. Because men traditionally are not as involved as women in childrearing, it is assumed that the transition when children leave home would be relatively smooth for men. However, men also may experience feelings of loss when their children depart, although the nature of that loss may be different from that experienced by women. One survey of fathers whose children had left home found that although most fathers assessed either happy or neutral feelings about the departure of their children, almost a quarter felt unhappy (Lewis, Frenneau, & Roberts, 1979). Those fathers tended to mention lost

empty nest syndrome the experience that relates to parents' feelings of unhappiness, worry, loneliness, and depression resulting from their children's departure from home

opportunities, regretting things that they had not done with their children. For instance, some felt that they had been too busy for their children or hadn't been sufficiently nurturing or caring. Some parents react to the departure of their children by becoming what have become known as *helicopter parents*, parents who intrusively intervene in their children's lives. Helicopter parenting first became apparent when parents micro-managed their children's college careers, complaining to instructors and administrators about poor grades that their children received or seeking to get them into certain classes. In some cases, the phenomenon extends to the workplace; some employers complain that parents call human relations departments to extol the virtues of their children as potential employees.

Although statistics about the prevalence of helicopter parenting are hard to come by, it is clear that the phenomenon is real. One survey of 799 employers found that nearly a third said that parents had submitted resumes for their child, sometimes not even informing their son or daughter. One-quarter said that parents had contacted them, urging them to hire their son or daughter. And four percent said that a parent had accompanied the child on a job interview. Some parents even help their children complete work assignments once they get a job (Gardner, 2007; Ludden, 2012).

In most cases, though, parents permit their children to develop independently once they leave home. On the other hand, children may not always leave home for good, and the empty nest sometimes becomes replenished with what have been called "boomerang children," as we discuss next.

BOOMERANG CHILDREN: REFILLING THE EMPTY NEST

Carole Ollis doesn't know what to make of her twenty-three-year-old son, Rob. He has been living at home since his graduation from college more than two years ago. Her six older children returned to the nest for just a few months and then bolted.

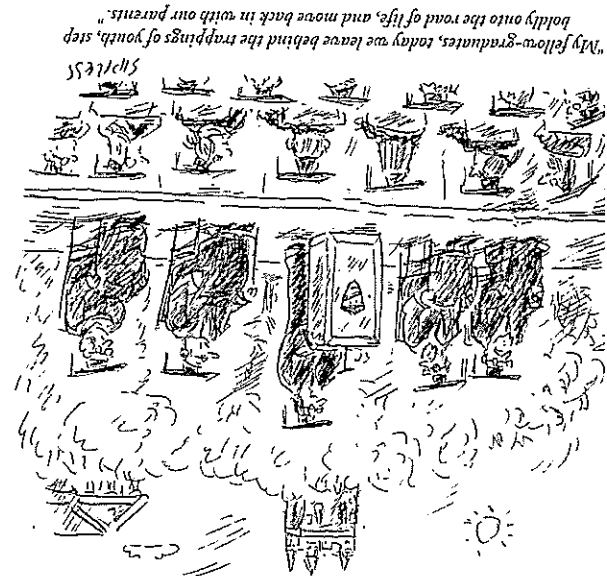
"I ask him, 'Why don't you move out with your friends?'" says Mrs. Ollis, shaking her head. Rob has a ready answer: "They all live at home, too."

Carole Ollis is not alone in being surprised and somewhat perplexed by the return of her son. There has been a significant increase in the United States in the number of young adults who come back to live in the homes of their middle-aged parents.

Known as **boomerang children**, these returning offspring typically cite economic issues as the main reason for coming back home. Because of a difficult economy, many young adults cannot find jobs after college, or the positions they do find pay so little that they have difficulty making ends meet. Others return home after the breakup of a marriage. Overall, close to one-third of young adults ages 25 to 34 are living with their parents. In some European countries, the proportion is even higher (Roberts, 2009; Parker, 2012).

Because about half of boomerang children pay rent to their parents, parental finances may benefit. The arrangement doesn't seem to effect social relationships within the family: half say it makes no difference or is a plus. Only a quarter of boomerang children find the arrangement has been bad for their relationship with their parents (Parker, 2012; see Figure 16-5).

THE SANDWICH GENERATION: BETWEEN CHILDREN AND PARENTS. At the same time children are leaving the nest, or perhaps even returning as boomerang children, many middle-aged adults face another challenge: growing responsibility for the care of their own aging parents. The term **sandwich generation** has come to be applied to these middle adults who feel squeezed between the needs of both their children and their aging parents (Riley & Bowen, 2005; Grundy & Henretta, 2006; Chassin et al., 2009).

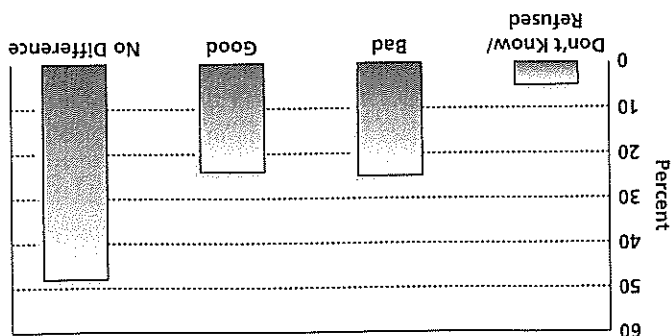


sandwich generation couples who in the adulthood must fulfill the needs of both children and their aging parents

FIGURE 16-5 More Boomerang Children, Enjoying It Less

The percentage of those saying that living with their parents at this stage of life has been bad, good, or no different in terms of their relationship.

(Source: Pew Research Center, 2012.)



being part of the sandwich generation is a relatively new phenomenon, produced by converging trends. First, both men and women are marrying later and having children older age. At the same time, people are living longer. Consequently, the likelihood is that those in middle adulthood will simultaneously have children who still require a significant amount of nurturing and parents who are still alive and in need of care.

The care of aging parents can be psychologically tricky. For one thing, there is a significant degree of role reversal, with children taking on the parental role and parents in a dependent position. As we'll discuss further in Chapter 18, elderly people, who were once independent, may resent and resist their children's efforts to help. They certainly do not want to be burdens on their children. For instance, almost all elderly people live alone report that they do not wish to live with their children (CFCEPLA, 1986; III, 1997).

People in middle adulthood provide a range of care for their parents. In some cases, the care is merely financial, such as helping them make ends meet on meager pensions. In other cases, it takes the form of help in managing a household, such as taking down storm windows in the spring or shoveling snow in the winter.

In more extreme cases, elderly parents may be invited to live in the home of a son or daughter. Census data reveal that the multigenerational household, which includes three or more generations, is the fastest-growing household arrangement of any sort. Multigenerational households increased by more than a third between 1990 and 2000, and they represent 1 percent of all households (Navarro, 2006).

Multigenerational families present a tricky situation, as parental and children's roles are complicated. Typically, the adult children in the middle generation—who, after all, are no longer children—are in charge of the household. Both they and their parents must adjust to changing relationships and find some common ground in making decisions. Elderly parents may find the loss of independence particularly difficult, and this can be wrenching for their adult child as well. The youngest generation may resist the inclusion of the oldest generation.

In many cases, the burden of caring for aging parents is not shared equally, with the larger portion often taken on by women. Even in married couples where both husband and wife share the labor force, middle-aged women tend to be more involved in the day-to-day care of aging parents, even when the parent or parents are their in-laws (Soldo, 1996; Putney & Iton, 2001).

Culture also influences how caregivers view their roles. For example, members of Asian cultures, which are more collectivistic, are more likely to view caregiving as a traditional duty. In contrast, members of more individualistic cultures may view caregiving as less central, and caring for a member of an older generation may be experienced as more burdensome (Ho et al., 2003; Kim & Lee, 2003). Despite the burden of being sandwiched in the middle of two generations, which can include the caregiving child's resources, there are also significant rewards. The psychological benefit between middle-aged children and their elderly parents can continue to grow.

better understand the h generation, Watch a video in developmentLab of Amy, 42, who her 6-year-old son and her old mother while balancing work or responsibilities.



ason that African American grand- are more involved with their children than white grandparents is later prevalence of three-generation s living together in African American olds.

Watch three adults talk about their experiences becoming grandparents in developmentLab.

Becoming a Grandparent: Who, Me?

Both partners in the relationship can see each other more realistically. They can become closer, more accepting of each other's weaknesses and more appreciative of each other's strengths (Mancini & Blieszner, 1991; Vincent, Phillipson, & Downs, 2006).

When her eldest son and daughter-in-law had their first child, Leah couldn't believe it. At age 54, she had become a grandmother! She kept telling herself that she felt far too young to be considered anybody's grandparent.

Middle adulthood often brings one of the unmistakable symbols of aging: becoming a grandparent. For some people, becoming a grandparent has been eagerly awaited. They may miss the energy and excitement and even demands of young children, and they may see grandparenthood as the next stage in the natural progression of life. Others are less pleased with the prospect of grandparenthood, seeing it as a clear signpost of aging.

Grandparenting tends to fall into different styles. *Involved* grandparents are actively engaged in grandparenting and have influence over their grandchildren's lives. They hold clear expectations about the ways their grandchildren should behave. A retired grandmother or grandfather who takes care of a grandchild several days a week while her parents are at work is an example of an involved grandparent (Cherlin & Furstenberg, 1986; Mueller, Wilhelm, & Elder, 2002; Fergusson, Maughan, & Golding, 2008).

In contrast, *companionate* grandparents are more relaxed. Rather than taking responsibility for their grandchildren, companionate grandparents act as supporters and buddies to them. Grandparents who visit and call frequently, and perhaps occasionally take their grandchildren on vacations or invite them to visit without their parents, are practicing the companionate style of grandparenting.

Finally, the most aloof type of grandparents are *remote*. Remote grandparents are detached and distant, and they show little interest in their grandchildren. Remote grandparents, for example, would rarely make visits to see their grandchildren and might complain about their childish behavior when they did see them.

There are marked gender differences in the extent to which people enjoy grandparenthood. Generally, grandmothers are more interested and experience greater satisfaction than grandfathers, particularly when they have a high level of interaction with younger grandchildren (Smith, 1995; Smith & Drew, 2002).

Furthermore, African American grandparents are more apt to be involved with their grandchildren than white grandparents. The most reasonable explanation for this phenomenon is that the prevalence of three-generation families who live together is greater among African Americans than among Caucasians. In addition, African American families, which are more likely than white families to be headed by single parents, often rely substantially on the help of grandparents in everyday child care, and cultural norms tend to be highly supportive of grandparents taking an active role (Baydar & Brooks-Gunn, 1998; Baird, John, & Hayslip, 2000; Crowther & Rodriguez, 2003; Stevenson, Henderson, & Baugh, 2007; Keene, Prokors, & Held, 2012).

Family Violence: The Hidden Epidemic

After finding an unidentified earring, the wife accused her husband of being unfaithful. His reaction was to throw her against the wall of their apartment, and then to toss her clothes out the window. In another incident, the husband became angry. Screaming at his wife, he threw her against a wall, and then picked her up and literally threw her out of the house. Another time, the wife called 911, begging for the police to protect her. When the police came, the woman, with a black eye, a cut lip, and swollen cheeks, hysterically screamed, "He's going to kill me." Unfortunately, the scene described above is far from rare. Violence both physical and psychological, is part of many relationships.