At one time in our evolutionary history, this double standard may have been adaptive. Today, as many couples limit childbearing and devote more time to career and leisure pursuits, it has become irrelevant. Models of older women in the media and in everyday life whose days are full of intimacy, accomplishment, hope, and imagination can help create a new cultural vision of women growing older—one that emphasizes gracefulness, fulfillment, and inner strength.

**Ask yourself**

**CONNECT** According to the lifespan perspective, development is multidimensional—affected by biological, psychological, and social forces. Provide examples of how this assumption characterizes health at midlife.

**APPLY** During a routine physical exam, Dr. Furrow gave 55-year-old Bill a battery of tests for cardiovascular disease but did not assess his bone density. In contrast, when 60-year-old Cara complained of palpitations and panic attacks, Dr. Furrow opted to “wait and see” before initiating further testing. What might account for Dr. Furrow’s different approaches to Bill and Cara?

**REFLECT** Which midlife health problem is of greatest personal concern to you? What steps can you take now to help prevent it?

### Cognitive Development

In middle adulthood, the cognitive demands of everyday life extend to new and sometimes more challenging situations. Consider a typical day in the lives of Devin and Trisha. Recently appointed dean of faculty at a small college, Devin was at his desk by 7:00 a.m. In between strategic-planning meetings, he reviewed files of applicants for new positions, worked on the coming year’s budget, and spoke at an alumni luncheon. Meanwhile, Trisha prepared for a civil trial, participated in jury selection, and then joined other top lawyers at her firm for a conference about management issues. That evening, Trisha and Devin advised their 20-year-old son, Mark, who had dropped by to discuss his uncertainty over changing his college major. By 7:30 p.m., Trisha was off to an evening meeting of the local school board. And Devin left for a biweekly gathering of an amateur quartet in which he played the cello.

Middle adulthood is a time of expanding responsibilities—on the job, in the community, and at home. To juggle diverse roles effectively, Devin and Trisha called on a wide array of intellectual abilities, including accumulated knowledge, verbal fluency, memory, rapid analysis of information, reasoning, problem solving, and expertise in their areas of specialization. What changes in thinking take place in middle adulthood? How does vocational life—a major arena in which cognition is expressed—influence intellectual skills? And what can be done to support the rising tide of adults who are returning to higher education in hopes of enhancing their knowledge and quality of life?

### Changes in Mental Abilities

**15.8** Describe cohort effects on intelligence revealed by Schaie’s Seattle Longitudinal Study.

**15.9** Describe changes in crystallized and fluid intelligence in middle adulthood, and discuss individual and group differences in intellectual development.

At age 50, when he occasionally couldn’t recall a name or had to pause in the middle of a lecture or speech to think about what to say next, Devin wondered, Are these signs of an aging mind? Twenty years earlier, he had taken little notice of the same events. His questioning stems from widely held stereotypes of older adults as forgetful and confused. Most cognitive aging research has focused on deficits while neglecting cognitive stability and gains.

As we examine changes in thinking in middle adulthood, we will revisit the theme of diversity in development. Different aspects of cognitive functioning show different patterns of change. Although declines occur in some areas, most people display cognitive competence, especially in familiar contexts, and some attain outstanding accomplishment. As we will see, certain apparent decrements in cognitive aging result from weaknesses in the research itself! Overall, the evidence supports an optimistic view of adult cognitive potential.

The research we are about to consider illustrates core assumptions of the lifespan perspective: development as multidimensional, or the combined result of biological, psychological, and social forces; development as multidirectional, or the joint expression of growth and decline, with the precise mix varying across abilities and individuals; and development as plastic, or open to change, depending on how a person’s biological and environmental history combines with current life conditions.

### Cohort Effects

Research using intelligence tests sheds light on the widely held belief that intelligence inevitably declines in middle and late adulthood as the brain deteriorates. Many early cross-sectional studies showed this pattern—a peak in performance at age 35 followed by a steep drop into old age. But widespread testing of college students and soldiers in the 1920s provided a convenient opportunity to conduct longitudinal research, retesting participants in middle adulthood. These findings revealed an age-related increase! To explain this contradiction, K. Warner Schaie (1998, 2005, 2016) used a sequential design, combining longitudinal and cross-sectional approaches (see page 36 in Chapter 1) in the Seattle Longitudinal Study.

In 1956, people ranging in age from 22 to 70 were tested cross-sectionally. Then, at regular intervals, longitudinal follow-ups were conducted and new samples added, yielding a total of 6,000 participants, five cross-sectional comparisons, and longitudinal data spanning more than 60 years. Findings on five