DYING TO BE MEN

Psychosocial, Environmental, and Biobehavioral Directions in Promoting the Health of Men and Boys

Will H. Courtenay
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Men in the United States have greater socioeconomic advantages than women. These advantages, which include higher social status and higher-paid jobs, provide men with better access to health-related resources (Bird & Rieker, 1999; Doyal, 2000). Despite these advantages, men—on average—are at greater risk of serious chronic disease, injury, and death than women. Men in the United States typically die more than 5 years earlier than women (Department of Health and Human Services [DHHS], 2009a). The current life expectancy is 80 years for women and 75 years for men (DHHS, 2009a). For nearly all 15 leading causes of death, men and boys have higher age-adjusted death rates† than women and girls (DHHS, 2009a; see Table 1.1). This remains true in every age group and throughout the life span (DHHS, 2009a). These 15 leading killers account for more than 80% of all deaths in the United States (DHHS, 2009a).

† Women outlive men, so the female population as a whole is older than the male population as a whole. To account for this difference when comparing female and male deaths, health scientists use data that have been age adjusted. These age-adjusted figures are referred to as death rates.

* An earlier version of this chapter appeared in the International Journal of Men’s Health, 2(1), 2003, 1–30, and is used by permission in modified/revised form.
The greatest gender disparity is in the death rates for suicide and homicide, which are 4 times greater for men than they are for women. Men are also more than twice as likely as women to die from Parkinson's disease, unintentional injuries, and chronic liver disease and cirrhosis (DHHS, 2009a). Men's age-adjusted death rates for heart disease and cancer—the two leading causes of death, which account for almost half of all deaths—are 50 and 80% higher, respectively, than women's rates (DHHS, 2009a; Jamal et al., 2008), and one in two men—compared with one in three women—will develop cancer in his lifetime (American Cancer Society [ACS], 2008). The only cause of death for which women are at greater risk is Alzheimer's disease. This is because Alzheimer's disease is most likely to occur late in life, when only the healthiest men remain alive. The death rate for stroke is the same for men and women. But like Alzheimer's disease, stroke—which is the third leading killer—occurs late in life.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Heart disease</td>
<td>1.5</td>
</tr>
<tr>
<td>2. Cancer</td>
<td>1.4</td>
</tr>
<tr>
<td>3. Stroke</td>
<td>1.0</td>
</tr>
<tr>
<td>4. Lower respiratory diseases</td>
<td>1.3</td>
</tr>
<tr>
<td>5. Accidents</td>
<td>2.2</td>
</tr>
<tr>
<td>6. Diabetes</td>
<td>1.4</td>
</tr>
<tr>
<td>7. Alzheimer's disease</td>
<td>0.7</td>
</tr>
<tr>
<td>8. Influenza and pneumonia</td>
<td>1.4</td>
</tr>
<tr>
<td>9. Kidney disease</td>
<td>1.4</td>
</tr>
<tr>
<td>10. Septicemia</td>
<td>1.2</td>
</tr>
<tr>
<td>11. Suicide</td>
<td>4.0</td>
</tr>
<tr>
<td>12. Liver disease and cirrhosis</td>
<td>2.1</td>
</tr>
<tr>
<td>13. Hypertension</td>
<td>1.0</td>
</tr>
<tr>
<td>14. Parkinson's disease</td>
<td>2.2</td>
</tr>
<tr>
<td>15. Homicide</td>
<td>3.9</td>
</tr>
</tbody>
</table>


* The terms unintentional injuries and automobile crashes—rather than accidents—are used throughout this book to emphasize the fact that these events are preventable; see Cramer, 1998.
Key Determinants of the Health and Well-Being of Men and Boys

(Ingall, 2004). However, the incidence of stroke is consistently higher among men than women (Ingall, 2004) and is 25% higher among men aged 55 to 64 years and 50% higher among those aged 65 to 74 years (American Heart Association [AHA], 2009a). The incidence rates for the most common infectious diseases are also higher among men in the United States than among women (Centers for Disease Control and Prevention [CDC], 1997a; Kruszon-Morin & McQuillan, 2005; Whitfield, Weidner, Clark, & Anderson, 2002). For example, men are nearly twice as likely as women to become infected with tuberculosis (Khan et al., 2008). Not only do men contract more diseases than women, but they also tend to suffer more seriously from those diseases and to recover more slowly (Restif & Amos, in press).

Men are also more likely than women to suffer severe chronic conditions and fatal diseases (Restif & Amos, in press; Verbrugge & Wingard, 1987), such as heart disease (CDC, 2007a; Dick et al., 2005; Mendelson & Karas, 1999; National Institutes of Health, 2006)—which kills one person in the United States every 37 seconds (AHA, 2009a); cancer (Cepeda & Gammack, 2006; Kevorkian & Cepeda, 2007); diabetes (CDC, 2008a; DHHS, 2009a); and hypertension (AHA, 2009a). Cardiovascular disease is the underlying cause of one of every three deaths in the United States (Rosamond et al., 2007), and the lifetime risk of developing heart disease after age 40 is 49% for men and 32% for women (AHA, 2009b). After middle age, more men than women live with heart disease: 20% more among 45- to 64-year-olds; 50% more among 65- to 74-year-olds; and 20% more among those aged 75 years and older (DHHS, 2007a). One in every eight men suffers sudden cardiac death, 3 times the number of women who do so (Lloyd-Jones, Berry, Ning, Cai, & Goldberger, 2009). Men also suffer from severe chronic and fatal diseases at an earlier age. Until late in life, rates of major cardiovascular events among women lag 10 years behind those of men (AHA, 2009a), and nearly three of four persons under age 65 who die from heart attacks are men (AHA, 1994).

At any age, males are far more likely than females to be injured or to die violent deaths (specifically, deaths from unintentional injuries, suicide, or homicide). Among men and boys under age 45, unintentional injuries are the leading cause of death (DHHS, 2009b), and nearly three of four people who die from unintentional injuries are male (DHHS, 2007b). While unintentional injuries are the sixth leading cause of death for women, they are the third leading cause of death for men (DHHS, 2007b), and although death rates for unintentional injuries reached a 26-year low in 1992, they have been increasing since then (DHHS, 2008a). Violent deaths in general are far more common among men. Among those under age 45, men and boys account for three of four violent deaths, and these violent deaths account for more than one third (35%) of all deaths that occur among those under age 45 (DHHS, 2007b). Each day, 166 men under age 45 die violent deaths in the United States (DHHS, 2009b). Nonfatal injuries are also much more common.
among men and boys, who suffer up to 1.5 times more of these injuries than women (CDC, 2004a). Males of all ages account for nearly three quarters of the 1.4 million people who sustain a traumatic brain injury each year (CDC, 2006a). Men’s suicide rates are staggering. As I mentioned previously, the suicide death rate is 4 times higher among males than females overall. Suicide rates for males range from 2 times higher among children aged 10 to 14 years to 18 times higher among adults aged 85 years or older (see Table 1.2). Suicide is the eighth leading cause of death for men but is not ranked among the 10 leading causes of death for females (DHHS, 2007b).

National data also consistently indicate that, during their lifetimes, either equal numbers of men and women or more men meet criteria for psychiatric diagnoses (DHHS, 1995; Kessler, 1998; Kessler et al., 2005; Robins, Locke, & Regier, 1991). Antisocial, narcissistic, obsessive-compulsive, paranoid, schizoid, and schizotypal personality disorders are all more common among men (American Psychiatric Association [APA], 1994, 2000; Golomb, Fava, Abraham, & Rosenbaum, 1995). Recent international data also show that personality disorders are significantly more common in men than women and are associated with a wide range of functional role impairments (Huang et al., 2009). Obstructive

### TABLE 1.2  Male and Female Suicide Death Ratesa and Gender Differences (Ratios), by Age Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male Rate</th>
<th>Female Rate</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>10–14</td>
<td>1.4</td>
<td>0.8</td>
<td>1.8</td>
</tr>
<tr>
<td>15–19</td>
<td>10.9</td>
<td>2.7</td>
<td>4.0</td>
</tr>
<tr>
<td>20–24</td>
<td>21.4</td>
<td>4.0</td>
<td>5.4</td>
</tr>
<tr>
<td>25–29</td>
<td>19.5</td>
<td>4.7</td>
<td>4.2</td>
</tr>
<tr>
<td>30–34</td>
<td>18.3</td>
<td>5.2</td>
<td>3.5</td>
</tr>
<tr>
<td>35–44</td>
<td>23.9</td>
<td>6.8</td>
<td>3.5</td>
</tr>
<tr>
<td>45–54</td>
<td>25.8</td>
<td>8.8</td>
<td>2.9</td>
</tr>
<tr>
<td>55–64</td>
<td>21.4</td>
<td>7.0</td>
<td>3.1</td>
</tr>
<tr>
<td>65–74</td>
<td>21.5</td>
<td>3.4</td>
<td>6.3</td>
</tr>
<tr>
<td>75–84</td>
<td>27.3</td>
<td>3.9</td>
<td>7.0</td>
</tr>
<tr>
<td>85 or older</td>
<td>38.6</td>
<td>2.2</td>
<td>17.5</td>
</tr>
<tr>
<td>All agesb</td>
<td>17.8</td>
<td>4.6</td>
<td>3.9</td>
</tr>
</tbody>
</table>


a Per 100,000 U.S. population.

sleep apnea syndrome, adult sleepwalking, gender identity disorder, alcohol- and other substance-related disorders, pyromania, intermittent explosive disorder, and pathological gambling also occur much more frequently among men, as do most sexual disorders—such as exhibitionism, pedophilia, and voyeurism (APA, 1994, 2000; Gomez, 1991). Men are also at greater risk for schizophrenia and experience earlier onset, less complete remissions, and more severe exacerbations, and they have poorer prognoses—based on rehospitalizations, length of hospital stay, duration of illness, time to relapse, response to medication, and social or work functioning (APA, 1994, 2000; Gomez, 1991). Boys are also at greater risk than girls for a number of mental health problems first diagnosed in infancy, childhood, or adolescence. These include mental retardation; attention deficit hyperactivity disorder (ADHD), which is diagnosed up to 9 times more often in boys than in girls; dyslexia; conduct disorder; Tourette’s disorder; stuttering; and autism and Asperger’s disorder—which are both diagnosed up to 5 times more often in boys (APA, 1994, 2000). Autism spectrum disorders are 5 to 8 times more common in boys than in girls (CDC, 2009a). Nearly twice as many boys as girls aged 5 to 17 years—more than one in five—have functional difficulties (sensory, movement, cognitive, emotional, or behavioral) (DHHS, 2009c). These psychiatric problems also increase men’s physical health risks. Indeed, mental disorders are a leading cause of premature death (CDC, 2005a).

GENDER-SPECIFIC HEALTH CARE AND MEN

Although gender-based medicine and health care are receiving increasing attention among health professionals (see Legato, 2009; Lent & Bishop, 1998), most of this attention has focused on women’s health concerns (e.g., Legato, 2003). The gender-specific health care needs of men and boys have only recently begun to be examined (e.g., Broom & Tovey, 2009; Courtenay, 2000a, 2009; Courtenay & Keeling, 2000a, 2000b; Furman, 2010; Lee & Owens, 2002; Sandman, Simantov, & An, 2000). In addition to having different reproductive health needs (Forrest, 2001), men and women have different risks for specific diseases and disabilities, and they differ in their perceptions of health. Gender-based health care addresses these differences, as well as other biological, psychological, social, economic, environmental, and behavioral factors that influence the health of men and women.

In writing this book, I had two primary goals. The first was to provide readers with a solid foundation for understanding men’s health and men’s risks, including understanding differences among men and how masculinity influences men’s health. The second was to provide direction to researchers, academics, and practitioners, including effective, evidence-based strategies for clinicians, community health workers, public health officials, psychologists, and other health care
professionals to improve the health and well-being of men and boys. To accomplish this, I drew from a wealth of literature and research in a diverse array of disciplines—as well as from original research specifically designed to study gender and men’s health. This first chapter examines the main influences on the health of men and boys in the United States. It does so by identifying and discussing 31 key determinants of physical and mental health and well-being (see Table 1.3). It summarizes these factors under the following four categories: behaviors of men and boys, health-related beliefs and the expression of emotions and physical distress, underlying factors that influence the health and health-related behaviors and beliefs of men and boys, and health care.

**BEHAVIORS AND HEALTH PRACTICES OF MEN AND BOYS**

Men’s and boys’ behaviors and health practices are a major determinant of their excess mortality and premature deaths. An estimated one half of all men’s deaths each year in the United States could be prevented through changes in personal health habits (U.S. Preventive Services Task Force, 1996). Chapter 2 provides an extensive review of large, population-based studies, national data, and meta-analyses systematically demonstrating that men and boys are more likely than women and girls to engage in more than 30 behaviors that increase the risk of disease, injury, and death. This section summarizes some of these findings in regard to six aspects of men’s behaviors: health-promoting behavior, risk-taking behavior, physical abuse and violence, social support, behavioral responses to stress, and health care use.

**Health-Promoting Behavior**

Men and boys, in general, have less healthy lifestyles than women and girls, and they engage in far fewer health-promoting behaviors (CDC, 2003a; Courtenay, 2000b). This gender difference remains true across a variety of racial and ethnic groups (Courtenay, McCreary, & Merighi, 2002). For example, men are more often overweight than women, and they have less healthy dietary habits. They eat more meat, fat, and salt and less fiber, fruits, and vegetables than women. Men are less likely to conduct self-examinations; have higher cholesterol and blood pressure, and do less to reduce them; use less sun protection; wear safety belts less often; and use fewer medications, vitamins, and dietary supplements. Men also sleep less, and less well, and they stay in bed to recover from illness for less time than women do.

**Risk-Taking Behavior**

As I discuss in Chapter 2, men and boys further compound the risks associated with not adopting health-promoting behaviors by engaging
TABLE 1.3 Thirty-One Key Determinants of the Health and Well-Being of U.S. Men and Boys

<table>
<thead>
<tr>
<th>Behaviors of men and boys</th>
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<tbody>
<tr>
<td>1. Health-promoting behavior</td>
</tr>
<tr>
<td>2. Risk-taking behavior</td>
</tr>
<tr>
<td>3. Physical abuse and violence</td>
</tr>
<tr>
<td>4. Social support</td>
</tr>
<tr>
<td>5. Behavioral responses to stress</td>
</tr>
<tr>
<td>6. Health care use</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Health-related beliefs and the expression of emotions and physical distress</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Self-rated health status</td>
</tr>
<tr>
<td>8. Perceived susceptibility to risk</td>
</tr>
<tr>
<td>9. Body image</td>
</tr>
<tr>
<td>10. Personal control</td>
</tr>
<tr>
<td>11. Readiness to change unhealthy behaviors</td>
</tr>
<tr>
<td>12. Masculinity</td>
</tr>
<tr>
<td>13. Expression of emotions and physical distress</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Underlying factors that influence the health and health-related behaviors and beliefs of men and boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Biology and genetics</td>
</tr>
<tr>
<td>15. Psychophysiology</td>
</tr>
<tr>
<td>16. Ethnicity</td>
</tr>
<tr>
<td>17. Socioeconomic status</td>
</tr>
<tr>
<td>18. Age group</td>
</tr>
<tr>
<td>19. Marital status</td>
</tr>
<tr>
<td>20. Sexual orientation</td>
</tr>
<tr>
<td>21. Occupational hazards</td>
</tr>
<tr>
<td>22. Unemployment</td>
</tr>
<tr>
<td>23. Imprisonment</td>
</tr>
<tr>
<td>24. Societal beliefs about masculinity and the social treatment of boys and men</td>
</tr>
<tr>
<td>25. Media and advertisements</td>
</tr>
<tr>
<td>26. Health knowledge</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Health care</th>
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<tbody>
<tr>
<td>27. Insurance coverage and health care costs</td>
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<tr>
<td>28. Health care access</td>
</tr>
<tr>
<td>29. Institutional influences and research methodology</td>
</tr>
<tr>
<td>30. Clinician–patient interaction and communication</td>
</tr>
<tr>
<td>31. Clinicians’ gender biases</td>
</tr>
</tbody>
</table>
in risk-taking behaviors. Compared with women, men use more alcohol and other drugs. More men than women use tobacco products and have more dangerous patterns of tobacco use. Men and adolescent males engage in more reckless and illegal driving, and drive drunk more frequently than women and adolescent females. They also have more sexual partners than women, and engage in significantly more high-risk physical activities—such as dangerous sports and leisure-time activities—and physical fights. They are also more likely than women and girls to carry guns or other weapons, and engage in more criminal activity. Gender differences in risk taking remain true across a variety of racial and ethnic groups.

These risk-taking behaviors undermine not only the health of men who engage in these behaviors but also the health and well-being of other men, women, and children. For example, men are at fault for most automobile accidents, including most injury crashes. Similarly, men’s high-risk sexual practices are largely responsible for the continued spread of sexually transmitted diseases (STDs), which have a seriously damaging impact on the lives of both men and women.

**Physical Abuse and Violence**

There is extensive empirical evidence (reviewed in Chapter 2) indicating that men and boys are more likely than women and girls to be the victims of physical abuse and violence. For example, nearly one half of men nationally have been punched or beaten by a person, who in most cases is another man. The violent victimization rate among those aged 12 to 19 years is 50% higher for boys than for girls (DHHS, 2000a). Among high school students nationally, boys are nearly 70% more likely than girls to have been in a physical fight and more than twice as likely to be injured in a physical fight (CDC, 2008b, 2008c). Among adolescent boys nationally in grades 5 through 12, more than 1 in 10 (12%) report that they have been physically abused (Schoen, Davis, DesRoches, & Shekhdar, 1998). Although half as many boys (5%) as girls (10%) nationally report having been sexually abused, sexual victimization increases the health risks of both girls and boys (Schoen et al., 1998; Silverman, Raj, Mucci, & Hathaway, 2001). Among adolescent boys nationally, those who have been sexually abused are more likely than those who were not abused to report poor mental health and are twice as likely to smoke or drink frequently or to have used drugs (Schoen et al., 1998; Wolf, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). Violent deaths from suicide and homicide are a leading cause of premature death. The suicide rate is 2 to 18 times higher for men and boys than for women and girls (see Table 1.2), and the homicide death rate is 4 times higher (DHHS, 2009b). The gender disparity in homicide is greatest among those aged 16 to 29 years; death rates of males are 5 to 7 times higher than those of females (DHHS, 2008b). Each day, 15 children and young adults aged 10 to
24 years are murdered, and nearly 85% of them are boys or young men (DHHS, 2007b).

**Social Support**

As we will see in Chapter 2, research consistently indicates that men have much smaller social networks than women do. Men and boys also have fewer, less intimate friendships, and they are less likely to have a close confidant, particularly someone other than a spouse. Men's restricted social networks limit their levels of social support. In times of stress, for example, men mobilize less varied social supports than women do. Among adolescents nationally in grades 5 through 12, boys are more likely than girls to have no one to turn to for support at times when they feel stressed, overwhelmed, or depressed (Schoen et al., 1998). This is more likely still if the boy adheres to traditional masculine norms (Lindsey et al., 2006; Sears, Graham, & Campbell, 2009). Furthermore, there is consistent evidence that the lack of social support constitutes a risk factor for mortality—especially for men. Men with the lowest levels of social support are 2 to 3 times more likely to die than men with the highest levels of social support, even after controlling for health and a variety of other possible confounding factors. Men's social isolation significantly decreases their chance of survival after heart disease, cancer, and stroke. Men with higher levels of social support also maintain more positive health practices. They are more likely to modify unhealthy behavior and to adhere to medical treatment.

**Behavioral Responses to Stress**

Men respond to stress in less healthy ways than women do (see Chapter 2). They are more likely than women to use avoidant coping strategies—such as denial, distraction, and increased alcohol consumption—and are less likely to use healthy, vigilant coping strategies and to acknowledge that they need help. Furthermore, men have been found to respond to stress by engaging in more risk-taking behaviors, whereas women respond to stress by engaging in fewer such behaviors (Lighthall, Mather, & Gorlick, 2009). Similarly, job strain appears to be associated with increases in health risk behaviors among men, but not among women, who report more effective coping strategies (Frankenhaeuser, 1996); these behaviors include cigarette smoking, excessive alcohol and coffee consumption, and lack of exercise (Hellerstedt & Jeffery, 1997; Landsbergis et al., 1998). Increased alcohol consumption—as well as depression—after exposure to a disaster has been found among men but not among women.

Compared with women, men are more likely to deny their physical or emotional distress (Lee & Owens, 2002), or attempt to conceal their illnesses or disabilities (Charmaz, 1995; Courtenay, 1998a, 2001a; Stanton & Courtenay, 2003; Sutkin & Good, 1987)—responses that
have been linked with the emergence of psychological disorders (Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002). Among people with depression, for example, men are more likely than women to rely only on themselves, to withdraw socially, and to try to talk themselves out of feeling depressed. These behavioral responses contribute to the poor outcomes associated with stressful events that men and boys experience (see Chapter 2). For example, boys are more severely affected than girls by the death of a parent, and men are more negatively affected than women by the death of a spouse—and at higher risk of death, including suicide. Similarly, there is evidence that more men than women may commit suicide in response to stress. Exposure to stress can also lead to enhanced cardiovascular arousal or reactivity, which has been shown to predict heart disease, particularly in men (I discuss this later in the chapter, under Psychophysiology).

**Health Care Use**

Epidemiological data consistently indicate that men use fewer health care services than women do and visit physicians less often. Twice as many men (20%) as women (11%) have no regular source of health care; furthermore, even among those with a usual source of health care, more than 1.5 times more men than women consider a hospital emergency room or outpatient department to be their usual source of health care (DHHS, 2009d). Given the lack of a regular source of health care, it is not surprising that twice as many men (23%) as women (12%) have not seen a doctor in the past year (DHHS, 2009e). Indeed, among adults aged 18 to 64 years, women make more than 1.5 times more physician visits than men (DHHS, 2009e); women between the ages of 18 and 44 make twice as many visits (DHHS, 2006a). More than half (53%) of men aged 18 to 29 years do not have a regular physician compared with one third (33%) of women in this age group; among 30- to 44-year-olds, two of five men (38%) and one of five women (22%) lack a regular physician (DHHS, 2010a; Sandman et al., 2000). More than twice as many men as women have not visited a physician in 2 to 5 years, and men represent 75% of those who have not done so in more than 5 years (DHHS, 2009d). These gender differences in health care use remain even when reproductive and other sex-specific conditions are excluded (Koopmans & Lamers, 2007; Merzel, 2000). Indeed, among adults over the ages at which most women bear children, men are still less likely to have a regular physician. Twenty-four percent of men aged 45 to 64 years have no regular doctor—compared with 13% of women in this age group (Sandman et al., 2000). These differences also remain true for mental health care. As noted earlier, more men than women meet criteria for psychiatric diagnoses. Despite this increased risk, half as many men as women seek psychological services (DHHS, 2004a). Research has consistently shown for decades that men are less likely than women to receive help for mental health problems (DHHS, 2004a;
Key Determinants of the Health and Well-Being of Men and Boys


Although gender differences in seeking care often begin to disappear when a health problem is serious, there is consistent evidence that men are generally less willing and have less intention than women to seek help when they need it (Chandra & Minkovitz, 2006; Courtenay, 1998a, 2000b, 2001a; Fischer & Turner, 1970; Good et al., 1989; Tudiver & Talbot, 1999; Wills & DePaulo, 1991), and that men delay seeking care when they are ill (Galdas, Cheater, & Marshall, 2005). It has been suggested that men are least likely to ask for help when they are most in need of it (Rappaport, 1984). One in four men nationally says he would wait as long as possible before consulting a physician if he felt sick or experienced pain, or if he was concerned about his health (Sandman et al., 2000). Indeed, among people with health problems, men are significantly more likely than women to have had no recent physician contacts regardless of income or ethnicity (DHHS, 1998a). Delays in obtaining timely health care can have profound consequences for men’s health; early detection is often critical for preventing disease and premature death (see Chapter 2).

HEALTH-RELATED BELIEFS AND THE EXPRESSION OF EMOTIONS AND PHYSICAL DISTRESS

The attitudes and beliefs that one adopts can have powerful influences on both one’s health and one’s health behavior. In the United States, men and boys are more likely than women and girls to adopt attitudes and beliefs that undermine their health and well-being (Courtenay, 1998a, 2000c, 2003). This section will discuss the following six attitudes and beliefs: self-rated health status, perceived susceptibility to risk, body image, personal control, readiness to change unhealthy behaviors, and masculinity. This section will also examine the relationship between the expression of emotions and physical distress and men’s health.

Self-Rated Health Status

Despite their greater risk of death and serious chronic health problems, the majority of American men believe that their health is “excellent” or “very good” and rate their health as better than women do (DHHS, 1998b, 2007a; Goldberg, 2009; Merighi, Courtenay, & McCreary, 2000; Ross & Bird, 1994). Even among African Americans—who are
least likely to report that their health is excellent or very good—men are still significantly more likely to do so (DHHS, 2007a). Similarly, men in Europe generally see themselves as having better health than women (White & Cash, 2003). A large study of European and U.S. adolescents also found that boys from the age of 11 report better health than girls (Torsheim et al., 2006).

Men are also more likely than women to rate their health behavior as better than the health behavior of their peers (Rakowski, 1986). Similarly, men report significantly fewer symptoms of physical and mental illness than women do (Hibbard & Pope, 1986; Koopmans & Lamers, 2007; Verbrugge, 1988; Wyke, Hunt, & Ford, 1998). Self-reports of symptoms and health behaviors are generally assumed to be accurate determinants of men’s risks, but often they are not. Men may be less likely than women to notice signs of illness when they are ill (Verbrugge, 1985). Even when measured physiological responses to a stressful event are greater among men than women, men still report less distress (Frankenhaeuser et al., 1978; Rauste-von Wright & Frankenhaeuser, 1989). Self-reported risk is also confounded by what appears to be the underestimation of health needs among men. For example, although men get far less sleep than women—which increases their risk of death—far more men than women report that they get more sleep than they need (46 and 35%, respectively); alternatively, more women than men report getting less sleep than they need (24 and 19%, respectively) (Sleep Foundation, 2005).

Furthermore, men are frequently found to misrepresent their health behavior. One large study of safety belt use that compared self-reports with actual use showed that among drivers who had been observed not wearing safety belts—one third had reported that they always wore safety belts (Preusser, Williams, & Lund, 1991). The validity of self-reported hypertension or high blood pressure has also been found to be lower among men than women nationally (Vargas, Burt, Gillum, & Pamuk, 1997). Similarly, men—but not women—have been found to report more colorectal cancer screening than they actually receive (Griffin et al., 2009). People who think they are healthy despite being ill, and who underreport symptoms or risk behaviors, may be less likely to seek health care or to be counseled or diagnosed correctly when they do.

Perceived Susceptibility to Risk

Men are consistently found to be less likely than women to perceive themselves as being at risk for illness, injury, and a variety of health problems (Boehm et al., 1993; Cutter, Tiefenbacher, & Solecki, 1992; Davidson & Freudenberg, 1996; DeJoy, 1992; Dosman, Adamowicz, & Hrudey, 2001; Finucane, Slovic, Mertz, Flynn, & Satterfield, 2000; Gustafson, 1998; Savage, 1993; Slovic, 1999; Weissfeld, Kirsch, & Brock, 1990). This consistent gender difference is found in a variety
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of countries (e.g., Antoñanzas et al., 2000a, 2000b; Brown & Cotton, 2003; Liu & Hsieh, 1995; Lundborg & Lindgren, 2002). Despite being at greater risk from drug and alcohol use, for example, males of all ages perceive significantly less risk associated with the use of cigarettes, alcohol, and other drugs than females do (DHHS, 2009f; Flynn, Slovic, & Mertz, 1994; Kauffman, Silver, & Poulin, 1997; Lundborg & Lindgren, 2002; Pascale & Evans, 1993; Spigner, Hawkins, & Loren, 1993; Thomas, 1995). The most common substances abused by adolescents are tobacco products, alcohol, and marijuana, and for all three substances, males are significantly less likely than females to accurately perceive the risks associated with their use (DHHS, 2009f). Similarly, men and boys perceive themselves as less susceptible to skin cancer than women and girls do and underestimate the risks associated with sun exposure (Banks, Silverman, Schwartz, & Tunnessen, 1992; Flynn et al., 1994; Mermelstein & Riesenberg, 1992). About three of four men nationally report that they are not worried about becoming infected with HIV or getting an STD, even when their sexual experiences put them at high risk (EDK Associates, 1995). Although they represent three of four of those infected with HIV (CDC, 2009b), men perceive less risk from HIV disease than women do (Flynn et al., 1994). Men are also more likely than women to underestimate the risks associated with involvement in physically dangerous activities (Zuckerman, 1983, 1984, 1994), including risks associated with dangerous driving (DeJoy, 1992; Flynn et al., 1994; Savage, 1993). Similarly, they perceive less risk than women for being the victim of violent crime or of dying from any cause (Department of Justice [DOJ], 2009a; Lerner, Gonzales, Small, & Fischhoff, 2003), although men are at significantly greater risk for both. For example, 1.5 times more women than men worry about being murdered (DOJ, 2009a), despite the fact that four of five people murdered are men (DHHS, 2009a).

With rare exceptions, people who think they are invulnerable take fewer precautions with their health—and thus have greater health risks—than people who recognize their vulnerability (Courtenay, 1998a, 2000c, 2003). Perceptions of risk are often associated with health-related behaviors, and this association is consistently a negative one (DHHS, 2009f). In terms of alcohol, tobacco, or other substances, for example, as risk perception decreases, substance use increases. This negative relation between perceived risks and risk taking is consistently found for risks related to smoking, with nonsmokers having stronger perceptions of the risks associated with cigarettes than smokers (e.g., Antoñanzas et al., 2000a, 2000b; Viscusi, 1990, 1992); driving (e.g., Brown & Cotton, 2003; Parker, Manstead, Stradling, & Reason, 1992; Ryb, Dischinger, Kufera, & Read, 2006; Stasson & Fishbein, 1990; Svenson, Fischhoff, & MacGregor, 1985); and drug and alcohol use (DHHS, 2009f). Men’s perceived invulnerability can prevent them from practicing preventive care or changing unhealthy behavior, thus increasing their health risks (Janz & Becker, 1984; Kreuter & Strecher,
Dying to Be Men

(1995; Mermelstein & Riesenberg, 1992; Reno, 1988; Rosenstock, 1990; Taylor, 1986; Weinstein, 1987). In contrast, there is evidence that risk perception influences health screenings in a positive fashion. African American men with a higher than average perceived risk of prostate cancer have been found to be more likely than others to have had a recent prostate-specific antigen test (Bloom, Stewart, Oakley-Girvans, Banks, & Chang, 2006). A review of research has also shown that perceived susceptibility to severe acute respiratory syndrome during the 2003 outbreak was positively associated with hand washing (Fung & Cairncross, 2007), which can significantly reduce the risk of disease and death (see Chapter 2).

Body Image

Men’s and boys’ perceptions of their muscularity and weight influence their physical and mental health. Researchers studying eating disorders have focused primarily on the desire to be thin, which is most common among women and girls (see McCreary, 2009). Only recently have researchers begun to study the health effects of the desire to be physically big, which is most common among men and boys (McCreary & Sadava, 2001; McCreary & Sasse, 2000; Pope, Olivardia, Gruber, & Borowiecki, 1999). Most of these researchers have focused on the drive for muscularity. Boys with a stronger desire to be muscular tend to have poorer self-esteem and more depressive symptoms than other boys (McCreary & Sasse, 2000). A preoccupation with muscularity has also been found to be associated with psychological distress, impaired social functioning, and substance abuse, including abuse of anabolic steroids (see Pope, Gruber, Choi, Olivardia, & Phillips, 1997). However, men also misperceive their weight. Whereas women tend to perceive themselves as heavier than they really are, men tend to perceive themselves as smaller than they are (Chang & Christakis, 2003; McCreary, 2002; McCreary & Sadava, 2001; Yan, Zhang, Wang, Stoesen, & Harris, 2009). Men who do not accurately perceive themselves as overweight will be unlikely to attempt to reduce or control their weight.

Personal Control

Men believe less strongly than women that they have control over their future health or that personal actions contribute to good health (Furnham & Kirkcaldy, 1997; Verbrugge, 1990; Wilson & Elinson, 1981). Although research findings are not entirely consistent and have been challenged (Ratner, Bottorff, Johnson, & Hayduk, 1994), the perception of health as internally controlled rather than controlled by luck or chance has been found to be associated with reduced risk of heart disease (Friedman & Booth-Kewley, 1987). It has also been found to be associated with such health-promoting behaviors as abstaining from smoking, maintaining healthy drinking habits, wearing safety belts, controlling one’s weight,
maintaining a healthy diet (Hayes & Ross, 1987; Palank, 1991), and practicing monthly self-testicular examinations (Neef, Scutchfield, Elder, & Bender, 1991)—and with a health-promoting lifestyle in general (e.g., Courtenay, 1998a, 2003; Pender, Walker, Sechrist, & Frank-Stromborg, 1990; Rakowski, 1986; Weiss & Larson, 1990).

Readiness to Change Unhealthy Behaviors

Extensive research has examined people’s readiness to change unhealthy behaviors and has identified discrete stages that people move through in changing those behaviors (i.e., Stages of Change or Transtheoretical Model; see Prochaska, Norcross, & DiClemente, 1994). When gender is analyzed in this research, a consistent finding is that women are more likely than men to contemplate changing unhealthy habits, or to already maintain healthy habits (Auld et al., 1998; Glanz et al., 1994; Weinstock, Rossi, Redding, Maddock, & Cottrill, 2000). Men, however, are more likely than women not to consider changing unhealthy behaviors, and to deny that these behaviors are problematic; they are also more likely than women not to maintain healthy behaviors (e.g., Laforge, Greene, & Prochaska, 1994; Laforge, Velicer, Richmond, & Owen, 1999; Rossi, 1992). For example, among inactive adults in a recent large population-based study, men were less likely than women to have little or no intention of increasing physical activity (Garber, Allsworth, Marcus, Hesser, & Lapane, 2008).

Masculinity

There are various forms of masculinity, and these masculinities are adopted by various populations of men—both in the United States and around the world. Masculinities derive from cultural and subjective meanings that shift and vary over time and place (Kimmel, 1995; Rotundo, 1993). As I discuss in Chapter 3, there is currently high agreement among people in the United States about what are considered to be typically feminine and typically masculine characteristics, and men and boys in particular experience a great deal of social pressure to conform to these stereotypic characteristics. These dominant norms of masculinity dictate, for example, that men should be self-reliant, strong, robust, and tough; that men should welcome danger; and that men should never reveal vulnerability, back down, or do anything “feminine.” These norms represent an idealized form of gender—often referred to as “traditional masculinity”—that is a particularly damaging form of masculinity for men.

With few exceptions (Levant et al., 2003; Levant, Wimer, Williams, Smalley, & Noronha, 2009; Wade, 2008a), a large body of empirical research reveals that men who endorse these traditional beliefs or dominant norms of masculinity engage in poorer health-related behaviors and have greater health risks than men who hold less traditional
beliefs (Courtenay, 1998b; Granié, 2010; Hamilton & Mahalik, 2009; Huselid & Cooper, 1992; Locke & Mahalik, 2005; Mahalik, Burns, & Syzdek, 2007; Mahalik et al., 2003; Mahalik, Lagan, & Morrison, 2006; Mahalik, Levi-Minzi, & Walker, 2007; Marcell, Ford, Pleck, & Sonenstein, 2007; McCreary, Newcomb, & Sadava, 1999; McCreary & Sadava, 2009; Mormon, 2000; Neff, Prihoda, & Hoppe, 1991; Pleck, Sonenstein, & Ku, 1994; Powell, 2005; Springer & Mouzon, 2009). Poor health practices and greater risks have also been found among men and adolescent males who experience high levels of masculine gender role stress (Copenhaver & Eisler, 1996; Eisler, 1995; Eisler & Blalock, 1991; Eisler, Skidmore, & Ward, 1988) and gender role conflict (Berger, Levant, McMillan, Kelleher, & Sellers, 2005; Blazina & Watkins, 1996; Fragoso & Kashubeck, 2000; Good et al., 1989; Good & Mintz, 1990; Lane & Addis, 2005; Mansfield, Addis, & Courtenay, 2005; McCreary & Courtenay, 2003; Monk & Ricciardelli, 2003; O’Neil, 2008; O’Neil, Good, & Holmes, 1995; Robertson & Fitzgerald, 1992). Two prospective studies have shown that traditional beliefs about manhood predict both involvement in a variety of high-risk behaviors over time among a large, nationally representative sample of young men (Courtenay, 1998b) and a greater risk of death (Lippa, Martin, & Friedman, 2000). In contrast, androgynous (Baffi, Redican, Sefchick, & Impara, 1991; Shifren, Bauserman, & Carter, 1993) or feminine gender identity (Kaplan & Marks, 1995) and nontraditional masculinity (Wade, 2008b) have been found to be associated with positive health behaviors in men. Additionally, a recent, large community-based general population study found that higher femininity scores in men were associated with a decreased risk of death from coronary heart disease, and femininity remained a significant predictor of lower risk when controlling for a variety of known risk factors for heart disease (Hunt, Lewars, Emslie, & Batty, 2007). A growing body of qualitative research has also linked traditional or dominant beliefs about masculinity with poor health behavior and increased health risks in men (Bottorff, Oliffe, Kalaw, Carey, & Mroz, 2006; Canaan, 1996; Chapple, Ziebland, & McPherson, 2004; Eisler, 1995; Emslie & Hunt, 2009; George & Fleming, 2004; McCreary et al., 1999; Nasir & Rosenthal, 2009; Neff et al., 1991; Nobis & Sandén, 2008; O’Brien, Hunt, & Hart, 2005; Pleck et al., 1994; Robertson, 2007; Singleton, 2008; Smith, Braunack-Mayer, & Warin, 2007). This research has also elucidated the variations in men’s experiences of masculinity and in the experiences that influence their health (O’Brien et al., 2005; Robertson, 2007).

The endorsement of traditional masculinity or dominant norms of masculinity has been linked with low levels of health-promoting practices (Chapple et al., 2004; George & Fleming, 2004; Mahalik, Burns, et al., 2007; Mahalik et al., 2006; Mahalik, Levi-Minzi, et al., 2007; Mormon, 2000; Powell, 2005; Singleton, 2008) and a variety of specific, unhealthy behaviors—including smoking; alcohol and drug use; and behaviors related to safety, diet, sleep, sexual practices, and driving (Baffi et al., 1991; Blazina & Watkins, 1996; Eisler et al., 1988;
Hamilton & Mahalik, 2009; Huselid & Cooper, 1992; Korcuska & Thombs, 2003; Locke & Mahalik, 2005; Mahalik, Burns, et al., 2007; Mahalik et al., 2003, 2006; McCreary et al., 1999; McCreary & Sadava, 2009; Monk & Ricciardelli, 2003; Shifren et al., 1993). One of the studies revealed that alcohol use and problem drinking are strongly associated with traditional masculinity; this association is even stronger than the link between problem drinking and being male (Huselid & Cooper, 1992). Men with high gender role conflict are also more likely to engage in multiple health risk behaviors (McCreary & Courtenay, 2003; see also Chapter 9). Men who adopt traditional beliefs about manhood also experience higher levels of depression and are more vulnerable to psychological stress and maladaptive coping patterns (Eisler & Blalock, 1991; Fragoso & Kashubeck, 2000; Good et al., 1989; Good & Mintz, 1990; Liu & Iwamoto, 2006; Oliver & Toner, 1990; O’Neil, 2008; Sharpe & Heppner, 1991). Indeed, in O’Neil’s (2008) review of 27 studies that examined gender role conflict specifically, only three studies found no significant relationship between gender role conflict and depression. Masculine gender role stress has also been linked with higher levels of depression in men, as well as psychological stress and maladaptive coping patterns (Eisler et al., 1988; Good et al., 1989; Sharpe, Heppner, & Dixon, 1995); it is also associated with heightened cardiovascular reactivity in situations of stress, including situations that potentially threaten traditional masculinity (Cosenzo, Franchina, Eisler, & Krebs, 2004; Eisler, 1995; Eisler, Franchina, Moore, Honeycutt, & Rhatigan, 2000; Franchina, Eisler, & Moore, 2001; Lash, Eisler, & Schulman, 1990; Lash, Gillespie, Eisler, & Southard, 1991; Moore & Stuart, 2004; Thompson & Pleck, 1995).

Compounding these health risks, the endorsement of traditional or dominant norms of masculinity is consistently found to have a negative influence on a man’s willingness to seek help or to use health services when he needs them (Addis & Mahalik, 2003; Berger et al., 2005; Blazina & Watkins, 1996; Burda & Vaux, 1987; Chapple et al., 2004; Galdas et al., 2005; George & Fleming, 2004; Good et al., 1989; Lane & Addis, 2005; Levant et al., 2009; Mahalik et al., 2006; Mansfield, Addis, & Mahalik, 2003; Mansfield et al., 2005; Marcell et al., 2007; Moller-Leimkühler, 2002; O’Brien et al., 2005; O’Neil et al., 1995; Powell-Hammond, Matthews, & Corbie-Smith, 2010; Robertson & Fitzgerald, 1992; Singleton, 2008; Springer & Mouzon, 2009). Nineteen studies have examined the relationship between help seeking and masculine gender role conflict specifically, and only one reported no significant relationship (O’Neil, 2008). There is increasing evidence that men delay seeking care when they are ill (for a review of this research, see Galdas et al., 2005). Dominant norms of masculinity are consistently implicated in these delays (Galdas et al., 2005), including delays in seeking care for cancer (Chapple et al., 2004; George & Fleming, 2004; Singleton, 2008)—which increases the risk of not detecting the cancer until it is advanced, and often incurable. In the only empirical, population-based
study examining masculinity and preventive health care screening in a large sample of middle-aged men, those men who endorsed traditional norms of masculinity were nearly 50% less likely than other men to seek preventive health care services—including physical examinations; these findings remained true even after controlling for socioeconomic status, marital status, and previous health status (Springer & Mouzon, 2009). Similarly, among men with heart disease, one study found that those who held traditional beliefs were less likely to follow their physician’s orders and made fewer healthy lifestyle changes after hospital discharge than their less traditional peers (Helgeson, 1994).

Not all aspects of traditional masculinity are unhealthy. Indeed, some aspects of traditional masculinity have been found to be positively associated with men’s health and health-promoting practices (Eisler, 1995; O’Brien et al., 2005; Robertson, 2007; Sabo & Gordon, 1995; Wade, 2008a). Among men in rehabilitation for spinal cord injuries, researchers have found a positive association between recovery and restrictive emotionality (Schopp, Good, Mazurek, Barker, & Stucky, 2007). Similarly, certain masculine-identified characteristics have been found to be highly adaptive for both men and women. These characteristics include the ability to act independently, to be assertive, and to be decisive (e.g., see Eisler, 1995; Nezu & Nezu, 1987; Sharpe et al., 1995). Reliance on masculine-identified characteristics such as these has been found to help enable men to cope with cancer (Gordon, 1995) and chronic illness (Charmaz, 1995). Among African American men, Wade (2008a) found that traditional masculine attitudes of self-reliance and aggression were associated with personal wellness. Self-reliance, for example, was associated with being aware of and thinking about one’s health, being motivated to avoid poor health and to keep in excellent health, and believing that one can exert an influence—whether positive or negative—on one’s health. These studies show that certain aspects of traditional masculinity are associated with good health in men. However, the weight of the evidence suggests that—for the most part—the endorsement of these traditional or dominant norms of masculinity increases men’s risks. Furthermore, as I discuss in Chapter 3, the vast majority of the gender resources men have at their disposal to demonstrate masculinity, or to be masculine, are unhealthy.

Expression of Emotions and Physical Distress

In general, women are more emotionally expressive than men—except when it comes to expressing anger, which men do more frequently; men also report less fear or emotional distress than women do, and are less likely than women to cry (Allen-Burge, Storandt, Kinscherf, & Rubin, 1994; Balswick, 1982; Belle, Burr, & Cooney, 1987; Brody, 1999; Chino & Funabiki, 1984; Courtenay, 2001a, 2003; Croake, Myers, & Singh, 1987; Grigsby & Weatherley, 1983; Hyde, 1986; Kraemer & Hastrup, 1986; Lee & Owens, 2002; Liddell, Locker, & Burman, 1991;
Lombardo, Crester, Lombardo, & Mathis, 1983; Stapley & Haviland, 1989; Tannen, 1990; Williams, 1985). Men’s inexpressiveness can have both direct and indirect effects on their health and well-being. Self-disclosure, for example, has been found to be associated with improvements in immune functioning and physical health (Pennebaker, 1997; Smyth, 1998). Men are also more likely than women to exhibit emotionally inexpressive Type A behavior and to experience or express hostility, both of which are strongly linked with increased health risks—particularly for cardiovascular disease (Booth-Kewley & Friedman, 1987; Chida & Steptoe, 2009; Friedman, 1991; Strube, 1991; Weidner, Kopp, & Kristenson, 2002; Whitfield et al., 2002), which is the leading killer of men. Furthermore, the findings from a recent meta-analysis of 729 studies (Chida & Hamer, 2008) indicate that anger and hostility are more strongly linked with cardiovascular responses to psychological stressors in men than they are in women; this finding from more than 30 years of research suggests that the accumulation of stress responses in daily life may have greater pathophysiological significance for heart disease among men than among women.

Research also suggests that men are disinclined to discuss experiences of pain or physical distress. Compared with women, men report less pain for the same pathology, less severe pain, greater tolerance of pain, higher pain thresholds, and shorter duration of pain (Gijsbers van Wijk & Kolk, 1997; Miaskowski, 1999; Unruh, Ritchie, & Merskey, 1999; Wiesenfeld-Hallin, 2005). Although hormones may play some role in mediating the experience of pain (Miaskowski, 1999; Wiesenfeld-Hallin, 2005), research indicates that psychosocial factors are certainly a contributor. Men have been found to report less pain in front of female experimenters than male experimenters (Aslaksen, Myrbakk, Høifødt, & Flaten, 2007; Kallai, Barke, & Voss, 2004), and to female health professionals than to male health professionals (Levine & DeSimone, 1991; Puntillo & Weiss, 1994). Traditional masculinity has also been found to be associated with emotional inexpressiveness in general (e.g., Eisler, 1995; Moller-Leimkuhler, 2002; Thompson, Grisanti, & Pleck, 1985) and with higher thresholds of pain specifically (Otto & Dougher, 1985; Wise, Price, Myers, Heft, & Robinson, 2002). The reluctance to acknowledge or report physical or emotional distress can have far-reaching implications for men’s health; it can influence help-seeking decisions, delay intervention, and undermine diagnosis and treatment planning.

UNDERLYING FACTORS THAT INFLUENCE THE HEALTH AND HEALTH-RELATED BEHAVIORS AND BELIEFS OF MEN AND BOYS

A variety of additional factors contribute to men’s health risks both directly and indirectly through their influence on men’s health.
behaviors and beliefs. This section examines the health influences of biology and genetics, psychophysiology, ethnicity, socioeconomic status, age, marital status, occupational status, unemployment, imprisonment, societal beliefs about masculinity and the social treatment of boys and men, media and advertisements, and men’s health knowledge.

**Biology and Genetics**

Biology contributes to men’s and boys’ greater risk of death, which begins in utero (Kraemer, 2000). Although an estimated 120 to 160 males are conceived for every 100 females, by birth the sex ratio drops to approximately 106:100 (Stillion, 1995). Boys are also more likely than girls to die from congenital cardiovascular defects, which are the most common cause of infant death (AHA, 2009b), and males are at greater risk of mortality as a result of congenital anomalies throughout the life span (DHHS, 1991, 2009b; Kraemer, 2000). Biological sex differences in mitochondria (intracellular organelles responsible for oxidative metabolism) and oxidative damage to mitochondria DNA are believed to contribute to gender differences in life expectancy (Kevorkian & Cepeda, 2007). Consistent differences are found in the immune functioning of women and men—including higher antibody levels in women—which probably contribute to the gender difference in longevity (Kevorkian & Cepeda, 2007; Whitfield et al., 2002). Biology also contributes to a variety of sex-specific reproductive health problems. For example, erectile dysfunction—which can result in significant emotional and interpersonal distress—occurs in at least one in four U.S. men (Goldberg, 1993), and this risk increases with age. In a survey of more than 3,000 health professionals, the frequency of erectile dysfunction was 4% in men under age 50, 26% in those aged 50 to 59 years, and 40% in those aged 60 to 69 years (Bacon et al., 2003). More than half of all men over 70 experience erectile dysfunction (Melman & Gingell, 1999).

Hormonal differences also contribute to gender differences in longevity (Kevorkian & Cepeda, 2007). Although some studies have cast doubt on the protective role of estrogen in heart disease (Barrett-Connor, 1997; Rossouw, 1999), it is generally believed that men’s lack of estrogen increases their risk of heart disease by lowering their levels of “good” cholesterol relative to women (Kevorkian & Cepeda, 2007; Mendelson & Karas, 1999; Rosano & Panina, 1999). In addition, there is extensive research suggesting that estrogen contributes to the lower levels of atherosclerosis—or hardening of the arteries—found in women compared with men, which provide women with significant protection from stroke, heart attack, and death (AHA, 2009a; Iemolo, Martiniuk, Steinman, & Spence, 2004; Reis et al., 2000; Williams, Adams, Herrington, & Clarkson, 1992; Williams, Adams, & Klopfenstein, 1990). Similarly, estrogen affects levels of cellular oxidation and the length of
telomeres. Both of these are believed to influence gender differences in longevity (Kevorkian & Cepeda, 2007).

The enzyme monoamine oxidase (MAO), a neuroregulator, and hormones in the brain, such as androgens and cortisol, are associated with a desire for varied and intense sensations and experiences. Decades of research have consistently linked this desire—which is significantly more common among men than women—with risky driving, high-risk sexual activity, alcohol use, drug use, and cigarette smoking, as well as involvement in high-risk sports and criminal activity (Struber, Luck, & Roth, 2008; Zuckerman, 1983, 1984, 1994). Low serotonin levels in the male brain may also contribute to men’s greater displays of physical aggression (Volavka, 1999; Wallner & Machatschke, 2009). Stress hormones—and the balance between cortisol and rapid adrenocorticotropin (ACTH)—are also believed to influence longevity (Kevorkian & Cepeda, 2007). In addition, biology may mediate the health effects of substances such as nicotine and alcohol. For example, there is some evidence that men metabolize nicotine faster than women do, and that the protective effects of moderate alcohol consumption—through its influence on levels of “good” cholesterol—occur at higher doses of alcohol in men than in women (Whitfield et al., 2002).

Although findings are controversial, there is some evidence of possible biological differences among men. Recent research suggests, for example, that biology might explain the prostate cancer death rate for African American men, which is nearly 2.5 times greater than that for European American men and more than 5 times greater than that for Asian and Pacific Islander men (DHHS, 2009a). Findings from studies specifically designed to examine the contributions of socioeconomic, clinical, and pathologic factors have led researchers to conclude that biology might play a role in explaining African American men’s greater risk (Hoffman et al., 2001; Lunn, Bell, Mohler, & Taylor, 1999; Makridakis et al., 1999; Sartor, Zheng, & Eastham, 1999; Thompson et al., 2001). (For further discussion regarding ethnicity, race, genetics, and disease, see Cooper, 2003; Frank, 2007; Karter, 2003.)

Although a variety of biological factors do contribute to men’s risks, research indicates that the explanatory power of biological factors in predicting gender differences in morbidity and mortality is comparatively small (Kandrack, Grant, & Segall, 1991; Krantz, Grunberg, & Baum, 1985; Ory & Warner, 1990; Verbrugge, 1985, 1990; Waldron, 1997, 2008; Whitfield et al., 2002). Biological influences on health and longevity are best understood within the complex interaction among biology, environment, and behavior (Foley et al., 2004; Kevorkian & Cepeda, 2007). One line of research suggests that certain diseases, including asthma and diabetes, are linked with gender-based susceptibilities caused by the interplay of sex steroid hormones or sex chromosomes.

* Telomeres are structures at the ends of the chromosomes that protect them from damage and that shorten with age.
with environmental risk factors at particular developmental windows, which would explain why these diseases are more common among males (Gabory, Attig, & Junien, 2009). Indeed, behavioral and other modifiable factors associated with men’s poor health can further compound men’s biological risks. In the study of erectile dysfunction among 3,000 health professionals cited previously, for example, the frequency was significantly higher in men who were hypertensive, diabetic, obese, or smokers (Bacon et al., 2003).

Genetic factors can also increase men’s risk. Men with a family history of heart disease (Lloyd-Jones et al., 2004; Murabito et al., 2005), prostate cancer (Chung, Isaacs, & Simons, 2007; Grönberg, 2003; Isaacs & Xu, 2007), or colorectal cancer (Kushi et al., 2006) are at much greater risk for these diseases. Indeed, life expectancy itself has a strong genetic basis (Kevorkian & Cepeda, 2007). Hereditary influences similarly contribute to men’s risk of ADHD (Elia & Devoto, 2007) and depression (Kendler & Prescott, 1999). However, genetic factors—like biological ones—are mediated by a variety of additional factors. An analysis of international trends in prostate cancer incidence and mortality throughout the world, for example, suggests that the large disparities that exist between countries are the result of the interaction of genetic and environmental factors (Hsing, Tsao, & Devesa, 2000). Similarly, although MAO has a strong genetic determination (Zuckerman, 1994), research examining antisocial behavior in boys has demonstrated that the influence of MAO is mediated by the environment (Foley et al., 2004).

**Psychophysiology**

Psychophysiological responses to emotional stress—such as increased catecholamine and cortisol excretion, ACTH responses, heart rate, and blood pressure—are hypothesized to be related to the risk of death in general (Kevorkian & Cepeda, 2007). Studies consistently report that men exhibit greater psychophysiological responses during acute behavioral stress, and that men are slower to recover from stress—which may help to explain men’s greater risk of death in general, and of coronary heart disease mortality in particular (Allen, Stoney, Owens, & Matthews, 1993; Chaplin, Hong, Bergquist, & Sinha, 2008; Cosenzo et al., 2004; Dorn et al., 1996; Glynn, Christenfeld, & Gerin, 2002; Kajantie, 2008; Kirschbaum, Wust, & Hellhammer, 1992; Kudielka, Hellhammer, & Kirschbaum, 2000, 2007; Kudielka & Kirschbaum, 2005; Lash et al., 1990, 1991; Otte et al., 2005; Polefrone & Manuck, 1987; Stone, Dembroski, Costa, & MacDougall, 1990; Stoney, Davis, & Matthew, 1987; Weidner & Messina, 1998). Similarly, systolic and diastolic blood pressure reactivity is also greater among men and boys than it is among women and girls (Earle, Linden, & Weinberg, 1999; Girdler, Turner, Sherwood, & Light, 1990; Glynn et al., 2002; Jackson, Treiber, Turner, Davis, & Strong, 1999; Lash et al., 1990;
Heightened cardiovascular reactivity has also been found among men with gender role stress in situations that threaten traditional masculinity (Cosenzo et al., 2004; Eisler et al., 2000; Franchina et al., 2001; Lash et al., 1990; Moore & Stuart, 2004). The activation of the autonomic nervous system and the subsequent response of the cardiovascular system are generally considered to be the common pathway by which stress compromises physical health (Kezorkian & Cepeda, 2007; Matthews et al., 1986). In addition, strong and consistent associations between stress and decreased levels of human immune system functioning, as well as stress and chronic disease—such as heart disease—are consistently found (Carver, 2007; Cohen, Janicki-Deverts, & Miller, 2007; Gouin, Hantsoo, & Kiecolt-Glaser, 2008; Herbert & Cohen, 1993). Although it is difficult to directly control or alter psychophysiological responses to emotional stress, it is relatively easy to modify the behavioral and situational factors that stimulate these responses.

**Ethnicity**

There are important differences in mortality and in the leading causes of death among men and boys of various ethnicities (Courtenay, 2001b, 2002, 2003). The difference between the life spans of African American men and European American men is greater than the difference between the life spans of men and women in general: African American men die 6 years younger than European American men, whereas—on average—men die 5 years younger than women (DHHS, 2009a). African American men experience earlier onset of disease, more severe disease, higher rates of complications, and more limited access to medical care than European American men (Barnett et al., 2001). Among American Indian and Alaska Native men, unintentional injuries are the second leading cause of death (Rhoades, 2003), surpassing cancer, which is the second leading cause of death among all other ethnic groups of men (CDC, 2006b). The death rate for motor vehicle–related deaths among American Indians and Alaska Natives is nearly twice as high as the rate for European Americans and African Americans (CDC, 2009c). HIV disease is among the five leading causes of death for African American and Latino men (DHHS, 2009a), but it is not even among the top 10 leading causes for any other ethnic group of men (CDC, 2006b). African American men are 8 times more likely than European American men and 24 times more likely than Asian and Pacific Islander men to die from HIV disease (DHHS, 2009a). Similarly, homicide ranks among the five leading causes of death only for African American men (DHHS, 2009a)—not for men of other ethnic groups. Stroke ranks as the third leading cause of death among Asian American men but not among men of any other ethnic group, for whom injuries are a greater risk (DHHS, 2009a). Compared with European American
men, African American men experience earlier onset of heart disease, more severe heart disease, and higher rates of complications resulting from heart disease (Barnett et al., 2001). Gender differences in mortality, however, persist regardless of ethnicity. For example, within all ethnic groups, nearly 1.5 times more men than women die from cardiovascular diseases (DHHS, 2006b, 2009a) (see Table 1.4). The largest gender gap in death from all causes occurs among 15- to 24-year-old Latinos; four of every five deaths are males (DHHS, 2000b, 2007b).

Ethnicity is also linked with risk factors for disease. Among adults aged 55 years or older, for example, risk factors for chronic disease are much more common among American Indians and Alaska Natives than European Americans (Denny, Holtzman, Turner-Goins, & Croft, 2005). Similarly, ethnicity is associated with health care use (CDC, 2004b; Courtenay, 2001b, 2002, 2003). Latino Americans, for example, are less likely to have health care coverage or providers, or to have a regular place of care; they are also less likely to be screened for blood cholesterol and colorectal cancers (CDC, 2004b). Almost twice as many Latino men (33%) as European American men (17%) or African American men (18%) do not have a usual source of health care (DHHS, 2009d). Despite their high risks, Latino and African American men are significantly less likely than European American men to see a physician regularly; 55% of Latino men and 45% of African American men do not have a doctor who they see regularly compared with 33% of European American men (Sandman et al., 2000). These findings probably help to explain why, for example, African and Latino Americans are significantly more likely

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Males</th>
<th>Females</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>European American</td>
<td>305</td>
<td>214</td>
<td>1.4</td>
</tr>
<tr>
<td>African American</td>
<td>420</td>
<td>296</td>
<td>1.4</td>
</tr>
<tr>
<td>American Indian or Alaskan Native</td>
<td>207</td>
<td>156</td>
<td>1.3</td>
</tr>
<tr>
<td>Latino American</td>
<td>225</td>
<td>162</td>
<td>1.4</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>189</td>
<td>132</td>
<td>1.4</td>
</tr>
</tbody>
</table>


a Per 100,000 U.S. population.

b These ratios indicate that the death rates for men are nearly 1.5 times greater for men than women, or 40% higher for men (except in the case of American Indians and Alaskan Natives, for whom heart disease death rates are 30% higher for men).
than European Americans to be first diagnosed with an advanced-stage cancer (Halpern et al., 2008; Wu et al., 2001). Among adolescent boys nationally in grades 5 through 12, more Asian (30%), Latino (27%), and African Americans (25%) than European Americans (17%) report not having a usual source of health care (Schoen et al., 1998). Among young men aged 20 to 29 years, young European American men make more than 1.5 times more doctor visits than young African American men and nearly twice as many visits as young Latino men (Fortuna, Robbins, & Halterman, 2009). Young African and Latino men also receive only half as much care for chronic conditions compared with European American men (Fortuna et al., 2009). The patient’s ethnicity also influences both the clinician’s treatment and the patient’s satisfaction with health care. Mental health clinicians, for example, are less likely to correctly diagnose mental health problems among African Americans and Latinos than among European Americans (Borowsky et al., 2000). Not surprisingly, African Americans—including African American men—report being more dissatisfied with their care by doctors and in hospitals than European Americans (Blendon, Aiken, Freeman, & Corey, 1989; Cooper-Patrick et al., 1999; LaVeist, Nickerson, & Bowie, 2000; Powell-Hammond et al., 2010).

Ethnicity, however, does not explain gender differences in health care utilization; the gender-specific patterns of use reported previously can be found in most ethnic groups (Dunlop et al., 2002; Neighbors & Howard, 1987; Williams, 2003). Women in every ethnic group, for example, are more likely than men to have a usual source of care (DHHS, 2007a). Among African Americans, women make more than 1.5 times more physician visits than men (DHHS, 1990), and men are significantly less likely to visit physicians regardless of the type or severity of their health problem (Neighbors & Howard, 1987). One study was specifically designed to examine health care utilization and interactions between gender and ethnicity; this research, based on national data from a probability sample of more than 6,000 community-dwelling adults aged 65 years or older, reveals that African American and Latino American men are twice as likely as women of any race or ethnicity not to have seen a physician in the past 2 years (Dunlop, Manheim, Song, & Chang, 2002). National data indicate that among persons with health problems, men are significantly more likely than women to have had no recent physician contacts regardless of ethnicity (see Chapter 2). Among Latinos, more men than women have not had a physical examination within the past 5 years, and these differences persist regardless of acculturation (Marks, Garcia, & Solis, 1990). Twice as many Mexican American men as Mexican American women report having no routine place to get health care, and 1.5 times more women than men report having had a routine physical examination within the previous 2 years (Solis, Marks, Garcia, & Shelton, 1990). Similarly, both outpatient and inpatient health services are used far less often by American Indian and Alaska Native men than
women, despite much greater risk of illness and death among these men compared with women (Rhoades, 2003).

**Socioeconomic Status**

A large body of research indicates a clear and strong association between poor health and low socioeconomic status (SES), both in the United States (Courtenay, 2002, 2003; DHHS, 1998a; Dunn, 2010; Hayward, Pienta, & McLaughlin, 1997; Phelan & Link, 2005; Rich & Ro, 2002; Sorlie, Backlund, & Keller, 1995; Whitfield et al., 2002) and in other countries (Kunst, Feikje, Mackenbach, & EU Working Group on Socioeconomic Inequalities in Health, 1998; Mackenbach et al., 2008). SES is typically based on income, education, and occupation. Of these three proxies, income is most strongly associated with health (Whitfield et al., 2002). Economically disadvantaged men are more likely to live in crowded, substandard housing and in areas with high levels of crime; to be exposed to dangerous and toxic environments; to lack access to health information; and to experience greater overall life stress (Rich & Ro, 2002). However, the association between SES and health is not limited to a comparison between poor and wealthy populations. Among most ethnic groups in the United States, there is a continuous gradient in this association between SES and health, so that the health of persons of middle SES is worse than the health of those of slightly higher SES (DHHS, 1998a). As people's SES rises, their health improves (Adler et al., 1994; Phelan & Link, 2005; Sandman et al., 2000).

Although differences and disparities in SES are the result of many factors—including differences in accessing a variety of resources (Berkman & Epstein, 2008)—one way SES influences people's health is by influencing their access to medical care (Rich & Ro, 2002). Men with the lowest income are also the most likely to report not having a regular doctor and to report that it is somewhat, very, or extremely difficult for them to get the medical care they need (Sandman et al., 2000). Among adolescent boys nationally in grades 5 through 12, those from lower-income families are 50% more likely than boys from higher-income families not to have received medical care (Schoen et al., 1998). One in five boys nationally has not received medical care when he needed it (Schoen et al., 1998), and among urban middle and high school students, males are significantly more likely than females to believe that it is difficult to obtain health care (Aten, Siegel, & Roghmann, 1996).

SES, however, does not explain gender differences in mortality any more than does ethnicity. As Williams (2003) explains, men's greater health risks and increased mortality persist at all levels of SES. Similarly, despite its relevance to access and care, SES does not account for gender differences in health care utilization (Neighbors & Howard, 1987). Even among a variety of income groups in the United States, men are still less likely to use health care than women. Among

http://www.routledgementalhealth.com/dying-to-be-men-9780415878760
those who are poor, men are twice as likely as women to have had no recent contact with a health care provider (DHHS, 1998a). Even when health services are provided without cost, men use them less than women (Stockwell, Madhavan, Cohen, Gibson, & Alderman, 1994; Wells, Manning, Duan, Newhouse, & Ware, 1986). Similarly, high-income men are 2.5 times more likely than high-income women to have had no recent contact with a health care provider. Even among persons with health problems, men are significantly more likely than women to have had no recent physician contact regardless of income (DHHS, 1998a). Indeed, it appears as though health-related behaviors such as these are the cause of men’s greater risks. A sophisticated, 25-year prospective cohort study of nearly 10,000 people revealed that the strong association between SES and the risk of early death largely disappears when differences in health behaviors are taken into account (Stringhini et al., 2010).

**Age Group**

The age group with the greatest gender disparity in mortality is 15- to 24-year-olds (DHHS, 2000b). Three of every four deaths in this age group are males (DHHS, 2007b). Male adolescents experience 174% more injuries (Rivara, Bergman, LoGerfo, & Weiss, 1982) and are significantly more likely to be hospitalized for serious injuries than female adolescents (Slap, Chaudhuri, & Vorters, 1991). The incidence of traumatic brain injury is highest among 16- to 24-year-old males, whose injury rates are 3 to 4 times higher than those for females in this age group (Bruns & Hauser, 2003; Winslade, 1998). Among adolescents, males are also significantly more likely than females to be exposed to a variety of work hazards (Dunn, Runyan, Cohen, & Schulman, 1998). Violent deaths (unintentional injuries, homicide, and suicide) account for 80% of all deaths among 15- to 24-year-olds, and four of five of these deaths are males (DHHS, 2007b). Each day, 15 young men aged 15 to 24 years die violent deaths (DHHS, 2007b). Most of these diseases, injuries, and deaths are preventable; they result from young men’s lack of healthy habits and their propensity to engage in high-risk behaviors. Motor vehicle crashes are the leading cause of death in this age group (DHHS, 2009b), which has higher motor vehicle death rates than any other age group (CDC, 2009c), and young men represent three of four people killed (DHHS, 2007b, 2009b). Among high school students nationally, males are more likely than females to engage in 39 of 59 specific health risk behaviors (CDC, 2008c), and among California college students, males are more likely than females to engage in 20 of 26 specific high-risk behaviors (Patrick, Covin, Fulop, Calfas, & Lovato, 1997). Young men of this age are also at far greater risk than women for STDs (see Chapter 2). Boys are significantly more likely than girls to smoke cigarettes or marijuana and to drink alcohol for the first time before age 13 years (CDC, 2008b, 2008c). Among both high school
and college students nationally, the use of marijuana, cocaine or crack cocaine, inhalants, and injection drugs is greater among males than females (see Chapter 2). Indeed, according to the CDC, the leading causes of disease, injury, and death among children and adolescents are significantly related to six categories of modifiable behaviors: behaviors that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviors that contribute to unintended pregnancy and STDs, including HIV infection; unhealthy dietary behaviors; and physical inactivity (CDC, 2008b). With the one exception of physical activity, significantly more male than female children and adolescents engage in these behaviors. Furthermore, once established in childhood or adolescence, these behaviors frequently continue into adulthood (CDC, 2008b) and are frequently associated with disease, injury, and death in adulthood (DHHS, 2000a).

Marital Status

As I discuss in Chapter 2, marriage is an important health-related factor. Whether single, separated, widowed, or divorced, unmarried men have more serious health risks than married men, and they engage in poorer health behavior (Ben-Shlomo, Smith, Shipley, & Marmot, 1993; Courtenay, 2000b). For example, unmarried men drink and smoke more; they eat fewer fruits and vegetables; they are at greater risk of contracting STDs; they use medical services less often; they are less likely to have had a blood pressure test in the past year or ever; and they are likelier to commit suicide. Not surprisingly, marriage is consistently found to be positively associated with longevity (Kaplan & Kronick, 2006). Furthermore, all the current evidence indicates that this correlation with mortality—and the other health risks associated with being unmarried—are greater for men than for women (see Courtenay, 2000b and Chapter 2).

Sexual Orientation

Men who have sex with men (MSM)—gay and bisexual men, or other MSM—and transsexuals are at increased risk for disease and death relative to other men. They are more likely to participate in high-risk behaviors such as substance abuse, smoking, drinking before sexual activity, and having multiple sexual partners (Blake et al., 2001). STDs are more common in MSM, particularly among those who engage in unsafe sex practices (Gay and Lesbian Medical Association [GLMA], 2001). Consequently, MSM are 44 to 86 times more likely than non-MSM men to be diagnosed with HIV, and unlike other high-risk groups, their rate of infection is increasing (Division of HIV Prevention, 2010). They also suffer more frequently from hepatitis, pneumonia, and some cancers, and there is further evidence suggesting that the high prevalence of smoking among MSM additionally increases their risk for hypertension.
and heart disease (ACS, 2010; Division of Viral Hepatitis, 2010). There is also substantial research suggesting that their experience of stigmatization, social exclusion, and violence puts MSM and transgender people at risk for mental disorders, including substance abuse, eating disorders, depressive disorders, and suicide (Cochran, 2001; Feldman & Meyer, 2007; GLMA, 2001; Gruskin et al., 2007; Meyer, 2003).

When seeking health care, MSM and transsexuals are often faced with unique challenges that can compound their risks (GLMA, 2001; Johnson, Mimiaga, & Bradford, 2008). Out of fear of stigmatization, these men often hesitate to disclose their sexual identity, which can result in unhealthy delays in seeking care (GLMA, 2001). They also often encounter a lack of cultural competence, as well as discrimination, on the part of health care providers. Transgender persons, in particular, have unique needs that are little understood by providers (Dean et al., 2000; Green, 2000; Tewksbury & Gagne, 1996). Access to care may also be limited because male partners in committed relationships are often denied health insurance provided to heterosexual spouses (Benditt, Engel, Gavin, & Stransky, 2009). Because MSM are “invisible” and do not always identify themselves as MSM, health research with this population is difficult; data are often limited and unreliable, particularly at a national level (Benditt, Engel, Gavin & Stransky, 2009; Boehmer, 2002). These health care dynamics only further compound the particular vulnerabilities of these populations of men.

### Occupational Hazards

Jobs held by men are the most dangerous jobs, as I explain in Chapter 2 (see also Courtenay, 2000b). Although men constitute only half (53%) of the workforce (National Institute for Occupational Safety and Health [NIOSH], 2004), they account for nearly all (92%) fatal injuries on the job (Bureau of Labor Statistics [BLS], 2008; CDC, 2001, 2007b; National Safety Council, 2010). Mining, construction, timber cutting, and fishing have the highest injury death rates, and the largest number of total injury deaths occurs in production, craft and repair, transportation, labor, farming, forestry, and fishing—all of which are jobs held primarily by men (BLS, 1993, 2008; CDC, 1998a, 2010a; NIOSH, 1993, 2006). Among law enforcement officers, 95% of those killed in the line of duty are male (Federal Bureau of Investigation, 2009), and 97% of all firefighters killed are male (U.S. Fire Administration, 2009). Young men aged 25 to 34 years account for the largest number of occupational injury deaths (CDC, 2001).

Injuries, however, are only one cause of occupational morbidity and mortality. Approximately 32 million workers are exposed to one or more chemical hazards (Winawer & Shike, 1995). The five occupations with the greatest percentage of workers exposed to hazardous chemicals are, in descending order, construction, agriculture, oil and gas extraction, water transportation, and forestry—all jobs held primarily by men.
Unemployment

Unemployment is consistently linked with a variety of negative health effects, and there is evidence that these negative effects are greater for men than for women (Artazcoz, Benach, Borrell, & Cortès, 2004; Courtenay, 2000b; Mathers & Schofield, 1998) (see also Chapter 2). Associations between unemployment and psychological problems are stronger among men, and rates of suicide are linked with unemployment and times of economic depression for men, but not for women (Bambra, 2010; Courtenay, 2000b; see also Chapter 2). One prospective study among youth found that unemployment is also a risk factor for increased alcohol consumption, increased tobacco use, illicit drug use, suicide, and unintentional injuries, particularly for males (Hammarstrom, 1994).

Imprisonment

Nearly 1.5 million men are incarcerated in U.S. state and federal prisons (DOJ, 2008a). Prisoners are among those at highest risk for tuberculosis, hepatitis, and HIV (Courtenay & Sabo, 2001; Polych & Sabo, 2001; see also Chapter 7). The incidence of HIV disease in prison is 14 times greater than the incidence of HIV disease in the general population (Smyer, Gragert, & LaMere, 1997). It is estimated that 41% of prisoners in California are infected with hepatitis C (see Polych & Sabo, 2001). Of those, it is estimated that chronic infection will develop in 85%, and that within 20 years, cirrhosis will develop in 20% (Spaulding, Greene, Davidson, Schneidermann, & Rich, 1999). In American jails and prisons, suicide is the third leading cause of death; suicide rates for prisoners are up to over four times higher than the rates for individuals in the general population, and nearly all these deaths are male (CDC, 2010b; Mumola, 2005). Other factors that increase the health risks of prisoners include violence, prison health care, poor health knowledge, and poor diet and nutrition (Courtenay & Sabo, 2001). Finally, newly released prisoners face an increased risk of death 13 times higher than that of the general population; causes include drug overdose, cardiovascular disease, homicide, and suicide (Binswanger et al., 2007).

Societal Beliefs About Masculinity and the Social Treatment of Boys and Men

North Americans strongly endorse the cultural—and health-related—beliefs that men are independent, self-reliant, strong, robust, and tough (Courtenay, 2000c). As I explain in Chapter 3, men and boys experience enormous social pressure to adopt these beliefs, and in general experience comparatively greater social pressure than women and girls to endorse societal prescriptions about gender. Boys experience more
ridicule and are punished more severely than girls—by both peers and adults—for engaging in nontraditional or nonstereotypical “boy” behavior (e.g., expressing hurt or asking for help). As I explain in Chapter 3, the contexts in which men and boys live, work, and play often foster unhealthy forms of masculinity. In many of men’s sports, for example, the use of aggression, the acceptance of health risks, and the denial of pain are both rationalized and glorified.

From birth through adolescence and early adulthood, parents and other adults treat girls and boys differently in ways that can profoundly influence their health. One study demonstrated that, even in preschool, the degree to which boys conform to masculine norms predicts their injury risk behaviors (Granié, 2010). But even at this age they are expected to conform to gender norms more than girls are (Kane, 2006). Despite the fact that boys are at relatively greater risk, parents are less concerned about the safety of their sons than they are about the safety of their daughters, and boys are also less likely to receive warmth and nurturance, which may both contribute to the development of boys’ risks and further compound their risks (Beyers, Bates, Pettit, & Dodge, 2003; Schwartz et al., 2009). Boys are talked to less about sadness and more about anger (Dunn, Bretherton, & Munn, 1987); are perceived as being physically stronger and less vulnerable—despite being more vulnerable; are handled more roughly; engage in more intense and competitive play; and are physically punished more. They are exposed to more violence both inside and outside the home. Boys are also more likely than girls to be encouraged in activities that distance them from their parents, to be discouraged from seeking help, and to be punished when they do seek help. Once at school and among peers, masculinity—toughness and athletic ability—is often associated with high status (Adler, Kleiss, & Adler, 1992), and peer pressure, bullying, or gay baiting (calling a boy gay when he demonstrates behavior that is not stereotypically boy behavior) of boys to conform to sex-typical behavior aggressively promote traditional gender norms. This pressure to conform is typically exerted by children who link their own masculine behavior with self-esteem (Gini & Pozzoli, 2006; Lamb, 2009).

This differential treatment by parents and social pressure by peers has both short- and long-term effects on the health of men and boys. As noted earlier, compared with women and girls, men and boys have greater difficulty identifying and expressing their emotions, are more likely to perceive themselves as invulnerable to risks commonly associated with unhealthy behavior and to engage in violent behavior, and are less likely to ask others for help.

**Media and Advertisements**

My review of research, both in this book (see Chapter 3) and elsewhere (Courtenay, 2000c), indicates that clear distinctions are drawn in the media between the health and health behavior of women and
girls and that of men and boys. For example, in prime-time television, 3 times more male than female characters are obese. On television and in films, men are shown smoking 3 to 7 times more often than women. Two thirds of all characters who drink in prime-time television programs are men, and in the various media, alcohol, masculinity, and high-risk behaviors are consistently linked. Boys are 60% more likely than girls to be portrayed using physical aggression on television, and men and boys on television are more likely than women and girls to initiate violence—which typically is rewarded and without negative consequences. In general, women and girls are portrayed in the media as having the greatest health risks and being the most likely to die, whereas men and boys are portrayed as engaging in unhealthy or high-risk behaviors—and as being healthy and invulnerable to the risks that their high-risk behaviors pose. These media representations of gender and health have been found to contribute to negative health effects. For example, there is an association between the viewing of television or video violence and subsequent violent and aggressive behavior, which may be causal (e.g., Anderson & Bushman, 2002; Bushman & Anderson, 2001; Sege & Dietz, 1994; Signorielli, 1993). Similarly, exposure to alcohol consumption on television has been found to be associated with more favorable attitudes toward drinking (Engels, Hermans, van Baaren, Hollensteine, & Bot, 2009; Signorielli, 1993).

Research indicates that advertisements reinforce unhealthy and stereotypical gender behavior among boys and men, which I discuss in Chapter 3. Toy commercials, for example, are more likely to portray boys demonstrating aggressive behavior than girls. Alcohol advertisements are strategically placed in magazines and television programs with predominantly male audiences. For example, Sports Illustrated, a magazine most often read by men, has more tobacco and alcohol advertisements than any other magazine (Klein et al., 1993). Advertisers also often portray men in high-risk activities to sell their products. Beer commercials, for example, have been found to link men’s drinking with taking risks and facing danger without fear (Signorielli, 1993; Strate, 1992). Tobacco companies link the use of smokeless tobacco with virility and athletic performance in marketing to men (Connolly, Orleans, & Blum, 1992).

**Health Knowledge**

Research shows that men and boys are less knowledgeable than women and girls are about health in general (American School Health Association, 1989; Chandra & Minkovitz, 2006; Courtenay, 1998a; Mills, 2000), about mental health in particular (Chandra & Minkovitz, 2006), and about specific diseases, such as cancer (Beier & Ackerman, 2003; Bostick, Sprafka, Virnig, & Potter, 1993; Mermelstein & Riesenberg, 1992; Polednak, 1990), heart disease (Ford & Jones, 1991; White & Klimis-Tavantzis, 1992), stroke (CDC, 2008d), STDs (Allen, Fantasia, Fontenot, Flaherty, & Santana, 2009; EDK Associates, 1995).
and influenza (Bethel & Waterman, 2009). For example, far more men than women are unaware of the correct symptoms of a stroke—which needs to be treated within the first 3 hours of the first signs of symptoms for the treatment to be effective (CDC, 2008d). Researchers have consistently reported that women and girls know significantly more about skin cancer, sunscreen protection, and the harmful effects of sun exposure than men and boys do (American Academy of Dermatology, 2005; Bostick et al., 1993; Mermelstein & Riesenberg, 1992; Vail-Smith & Felts, 1993). Young men know significantly less about self-examinations for testicular cancer than young women know about self-examinations for breast cancer (Katz, Meyers, & Walls, 1995). Men even have limited knowledge of prostate cancer (Demark-Wahnefried et al., 1995; Steele, Miller, Maylahn, Uhler, & Baker, 2000). Less than half (40%) of men in the United States and Europe identify prostate cancer when asked to identify cancers that they have heard about (Schulman, Kirby, & Fitzpatrick, 2003). Many studies of young adults' knowledge have examined risk factors for HIV and HIV disease. Although gender differences were not found consistently in those studies, when differences are found, young men were less knowledgeable than women (Carroll, 1991; CDC, 2008b; Dekin, 1996; Jadack, Hyde, & Keller, 1995; Johnson et al., 1992; Lollis, Johnson, Antoni, & Hinkle, 1996). The Department of Agriculture (2003) found that men in the United States score significantly lower than women regarding their knowledge of diet, including knowledge of the sources and nutrients in foods, the relationship of specific dietary components to specific diseases, and the number of servings of various food groups in a healthy diet.

This lack of knowledge has a significant impact on men’s health. The consistent research finding that men have poorer knowledge of warning signs for cancer than women is believed to explain men’s frequent failure to conduct self-examinations for cancer, as well as to explain men’s delays in seeking medical help for symptoms of cancer (Evans, Brotherstone, Miles, & Wardle, 2005; Love, 1991). For example, a population-based, case-control study found that people with the least knowledge about skin cancer were at greater risk of death from melanoma (Berwick et al., 2005). Knowledge about prostate cancer has been found to be associated with attending cancer screening (Nijs, Essink-Bot, DeKoning, Kerkels, & Schroder, 2000), and increased knowledge of testicular cancer is associated with positive attitudes toward testicular self-examination, stronger intentions to conduct testicular self-examinations, and higher levels of actual practice of testicular self-examination (Best, Davis, Vaz, & Kaiser, 1996; Murphy & Brubaker, 1990; Steffen, Sternberg, Teegarden, & Shepherd, 1994). A national study (EDK Associates, 1995) found that those people who were least knowledgeable about STDs—and most of them were men—were nearly half as likely as those with more knowledge to look for signs and symptoms. Among those people at highest risk, the least knowledgeable were also the least likely to practice safer sex consistently. The men with less
knowledge were less likely to feel comfortable telling their doctors they had an STD, or to have discussed risk assessment, testing, or prevention with a health professional. Indeed, health knowledge is frequently found to be an important determinant of reductions in risky sexual behaviors related to HIV disease (Carmel, 1990; Carroll, 1991; Lollis, Johnson, Antoni, & Hinkle, 1996; Thomas, Gilliam, & Iwrey, 1989). Similarly, most men lack basic knowledge about foods and nutritional risk factors (Altekruse, Cohen, & Swerdlow, 1997). This knowledge is considered essential to improving dietary practices and reducing health risks. Men’s lack of knowledge about health matters is caused, in part, by the failure of the health care institutions to educate men, a topic that is discussed in the following section.

HEALTH CARE

The health care system and its allied health fields represent important influences on men’s health. This section will discuss the following aspects of health care: insurance coverage and health care costs, health care access, institutional influences and research methodology, clinician–patient interaction and communication, and clinicians’ gender biases.

Insurance Coverage and Health Care Costs

Having health insurance coverage is one of the most important predictors of receiving preventive and diagnostic clinical services—such as periodic health examinations and blood and cholesterol screenings (Faulkner & Schauffler, 1997; Hadley, 2003; Urban Institute, 2008). Nearly 5 times more people under age 65 who are uninsured (48%) have no usual place of health care compared with people with private health care coverage (10%) (DHHS, 2009d). Adults under age 65 who are uninsured are also significantly less likely than insured adults to have last contacted a doctor or other health professional within the past 6 months (DHHS, 2009d), and are less likely than those with insurance to seek preventive care (DHHS, 2007a). People without insurance are also at significantly greater risk of being first diagnosed with cancers that are advanced stages (Halpern et al., 2008). Among young adults aged 20 to 29 years, those who are insured make nearly 4 times more doctor visits per year than those who are not insured; among young men specifically, those without insurance are seen for preventive care once every 25 years compared with roughly once every 9 years among young men in general (Fortuna et al., 2009). Consequently, people without health insurance coverage experience greater morbidity, tend to be more severely ill when they are finally diagnosed, and receive less therapeutic care (Hadley, 2003; Urban Institute, 2008). More significantly, people without insurance are at increased risk of death, regardless of whether
they are employed (Sorlie, Johnson, Backlund, & Bradham, 1994; Urban Institute, 2008).

In the United States, more men (19%) than women (15%) under age 65* lack health insurance coverage; nearly one in three (29%) unmarried men have no coverage (DHHS, 2009e). Four million more men than women aged 18 to 64 years lack health insurance, and more men than women are uninsured at every age (Institute for Women’s Policy Research, 2010). Women represent 7 of 10 adults enrolled in Medicare, the national health insurance program for people aged 65 and older in the United States (DHHS, 2006c). Seventy percent of working-aged men who are uninsured have no regular physician compared with only 27% of those who are insured (Sandman et al., 2000). Nearly one half (48%) of uninsured men recently surveyed did not visit a doctor in the previous year compared with one fifth (21%) of men who were continuously insured (Sandman et al., 2000). These uninsured men were also 3 times more likely to have gone without needed care and not to have had a prescription filled because they could not afford it (Sandman et al., 2000). Men with full coverage are nearly 2 to 3 times more likely to receive recommended preventive services—such as periodic health examinations and blood and cholesterol screenings—than men whose plans do not cover these services (Faulkner & Schauffler, 1997). Adolescents without health insurance are more than twice as likely not to have visited a physician or other health professional in the past year as adolescents with health insurance (DHHS, 2000a). Nearly 3 in 10 (29%) uninsured adolescent boys nationally in grades 5 through 12 report a time when they did not receive needed medical care (Schoen et al., 1998).

Cost (and perceived cost) of medical care are also barriers to health care utilization, particularly for people with low incomes and people without a job or health insurance (Nelson, Thompson, Bland, & Rubinson, 1999). Among adolescent boys nationally, one quarter report that they did not receive medical care because it cost too much or because they lacked health insurance (Schoen et al., 1998). Among male college students, cost was also recently found to be a leading barrier to obtaining health care (Davies et al., 2000). Cost and insurance coverage, however, do not account for gender differences in health care utilization. Even when there is no fee for those services—or when care is paid for through insured health plans—men still use fewer health services than women (Stockwell et al., 1994; Wells et al., 1986). One study showed that women used significantly more primary care medical services than men, even though their mean incomes were lower and the mean cost of their care was higher (Bertakis, Rahman-Azari, Helms, Callahan, & Robbins, 2000).

* Persons over 65 years of age in the United States are eligible for government-sponsored Medicare and Medicaid services.
Health Care Access

One in five adolescent boys nationally has not received medical care when he needed it (Schoen et al., 1998), and among urban middle and high school students, males are significantly more likely than females to believe that it is difficult to obtain health care (Aten et al., 1996). One in three men has no regular physician (Sandman et al., 2000). Factors such as geography and time contribute to differences in health care access between men and women, and among men. The unavailability of health services during nonwork hours may further limit access to health care for many working men. People living in rural U.S. communities find it more difficult to obtain care than people in metropolitan areas (Mueller, Ortega, Parker, Patil, & Askenazi, 1999). Rurality, however, does not explain gender differences in access to care. Among rural populations, men and boys in general are less likely than women and girls to visit a physician or to seek help from a mental health clinician (Cook & Tyler, 1989; Dansky, Brannon, Shea, Vasey, & Dirani, 1998; Hoyt, Conger, Valde, & Weihs, 1997).

Institutional Influences and Research Methodology

The health care system, public health departments, and other health-related institutions—as well as medical researchers—have contributed to cultural portrayals of men as healthy and to the invisibility of men’s poor health status (Courtenay, 2000a, 2000c, 2002). Historically, women but not men in the United States have been encouraged to pay attention to their health. For example, cancer education during the 20th century was directed primarily at women (Reagan, 1997). Despite their greater risk for the disease, significantly fewer high school men than women in the United States have been taught about AIDS and HIV infection (CDC, 2008b). A variety of scientific methodological factors and research methods also contribute to misperceptions about men’s health status. For example, the use of behavioral indices of health—such as bed rest and health care utilization—to determine health status underestimates the significance of men’s health problems and confounds our understanding of morbidity. These indices represent how men and women cope with illness rather than representing true health status (for further discussion on this topic, see Chapter 4).

Clinician–Patient Interaction and Communication

Men receive significantly less physician time in their health visits than women do, and they generally receive fewer services and dispositions than women (Courtenay, 2000a, 2000c; 2001a). As I discuss in Chapters 3 and 12, men are also provided with fewer and briefer explanations—both simple and technical—in medical encounters. Men also receive less information overall from physicians. In fact, no study has ever...
found that women receive less information from physicians than men do. Although they are more likely to engage in high-risk behaviors and less likely to adopt health-promoting behaviors, men receive less advice from physicians about changing risk factors for disease during checkups than women do (Friedman, Brownson, Peterson, & Wilkerson, 1994). For example, only 30% of men nationally are counseled by their physicians about the health risks associated with smoking, 22% are counseled about drinking, and only 14% are counseled about STDs (Sandman et al., 2000). They are also less likely than women to be taught how to perform self-examinations (Faigel, 1983; Misener & Fuller, 1995). Only 29% of physicians routinely provide age-appropriate instruction on performing self-examinations for testicular cancer compared with 86% who provide age-appropriate instruction to women on performing breast self-examinations (Misener & Fuller, 1995).

**Clinicians’ Gender Bias**

Gender biases about men and boys (as well as women and girls) influence the counseling and diagnostic decisions of clinicians (Adler, Drake, & Teague, 1990; Fernbach, Winstead, & Derlega, 1989; Ford & Widiger, 1989; Waisberg & Page, 1988). For example, men and boys are under-diagnosed for those mental health disorders that are more commonly diagnosed among women and girls. Perhaps because major depression is diagnosed more often in women than in men (APA, 2000), mental health clinicians are less likely to correctly diagnose depression in men; this remains true even when they have similar scores on standardized measures of depression or present identical symptoms to clinicians (Borowsky et al., 2000; Callahan et al., 1997; Potts, Burnam, & Wells, 1991; Stoppe, Sandholzer, Huppertz, Duwe, & Staedt, 1999). One large and well-constructed study found that clinicians were less likely to identify the presence of depression in men than in women, and that they failed to diagnose nearly two thirds of the depressed men (Potts et al., 1991). This gender bias in the diagnosis of depression contributes to a suicide rate that is up to 18 times higher for men than it is for women (see Table 1.2). Similarly, more women than men are diagnosed with eating disorders; however, some populations of men—notably men involved in athletics and gay or bisexual men—appear to be at increased risk for such disorders (Andersen, 1999; Gomez, 1991; Hausenblas & Carron, 1999). Gender biases may also influence the medicines that one is prescribed. Men are less likely than women to be prescribed any kind of medication (Simoni-Wastila, Ritter, & Strickler, 2004), including psychotropic drugs (Simoni-Wastila, 2000), which further compounds their health risks. (I discuss this further in Chapter 2.) Women in the United States are prescribed nearly 1.5 times more medications than men (DHHS, 2009e). For example, 30% more women than men receive prescriptions for medication to control their high blood pressure (DHHS, 2009e). In contrast, boys may be overprescribed some...
psychotropic medications. For example, the use of stimulants to treat ADHD among 5- to 14-year-olds has increased significantly during the past 15 years, and methylphenidate medication—which accounts for 90% of the stimulant treatment—is prescribed to 3 to 4 times more boys than girls (Zito et al., 2000).

CONCLUSION

The preceding review provides an overview and brief summaries of key determinants of the health and well-being of U.S. men and boys. Thirty-one key determinants of physical and mental health were identified from a review of literature and were discussed under the following four categories: behaviors of men and boys, health-related beliefs and the expression of emotions and physical distress, underlying factors that influence the health and health-related behaviors and beliefs of men and boys, and health care. This review has important implications for public and private organizations or institutions and health care providers who provide services to men and boys, as well for future policy and research.

Culturally appropriate, gender-specific health promotion and disease prevention interventions are needed for men and boys. Although many counseling and psychological interventions with men have been recommended in the past 2 decades (Courtenay, 2000d), rarely are these interventions designed to reduce men’s health risks. Even more rarely are health interventions designed to address the unique needs of various populations of men, such as gay and bisexual men (Ramirez-Valles, 2007; Scarce, 1999), men in prison (Courtenay & Sabo, 2001), African American men (Davis, 1999; Rich, 2001), Native American men (Joe, 2001), rural men (Courtenay, 2006b), men with cancer (Nicholas, 2000), or other populations of men at risk for physical and mental health problems (Furman, 2010). Furthermore, this review suggests that new intervention strategies must go beyond addressing the physiology of individual men to address the environmental, sociocultural, psychological, and behavioral determinants identified here that influence the health of various communities of men and boys, as well as the ways in which these factors mediate men’s biological and genetic risks. It is important to note that the social, environmental, psychological, behavioral, biological, and genetic determinants discussed here do not occur in isolation; they are interrelated, and often these determinants compound one another. The multifactorial nature of the risks to the health and well-being of men and boys, as well as the complex interrelationships among these factors, suggests that multidisciplinary and interdisciplinary interventions designed to address the dynamic intersection of these various health determinants are especially needed (Bird & Rieker, 2008; Courtenay, 2000e, 2002; Courtenay & Keeling, 2000a; Rieker & Bird, 2005).
Multidisciplinary and interdisciplinary research, which would inform the development of intervention strategies, is also needed. Although the past decade has witnessed a dramatic increase in the level of interest in men's health among scholars and health scientists internationally, relatively little is known about the subject. Both basic and applied research is necessary, as well as interdisciplinary collaboration to develop interactive models and new gender-specific perspectives on human behavior, health, and illness. The development of interdisciplinary approaches to investigate men's health will require addressing a variety of methodological challenges, including the numerous and varied health determinants involved, and disciplinary differences in outcome measures, populations studied, methodologies applied, and rigor of intervention evaluations.

Most of the key determinants identified here represent factors that are modifiable. Consequently, the resulting adverse health effects of these determinants are preventable. Efforts to address these factors through practice, policy, and research could contribute to enhanced health conditions for men and boys. Furthermore, as the preceding data suggest, many of the health concerns of men and boys—including their injuries and premature mortality as well as their risk behaviors—affect not just themselves but everyone in the community. Therefore, efforts to address these concerns and improve men's health not only will lead to enhanced health conditions for men and boys, but also will contribute to building healthier families and communities.