

### Chapter in Review

1. Human sexuality includes sex, gender, and sexual behavior. Determining sex at birth includes chromosomal, gonadal, hormonal, and anatomical factors. To be born female (XX), an individual must inherit two X (female) chromosomes, one from each parent. To be born male (XY), the individual must inherit one X and one Y chromosome. Thus, whether you are born male or female depends upon whether the fertilizing sperm is Y- or X-bearing, because females can only contribute an X chromosome to their offspring. The gonad is the reproductive organ—testes in males, ovaries in females. At about 7 weeks after conception, if the fertilizing sperm is Y-bearing, the SRY gene triggers the creation of proteins that develop into the male gonad. Otherwise, the fetus develops female gonads. The hormonal balance of the fetus is the balance between estrogen and testosterone. In male fetuses the testes' production of testosterone and Mullerian Inhibiting Substance (MIS) leads to the development of male genitals. If testosterone and MIS are absent, female genitals will develop. Anatomical sex is the actual development of male or female genitals.
2. In the vast majority of cases, chromosomes, fetal gonads, hormonal balance, and anatomy coincide to produce infants who are unambiguously male or female. However, intersex refers to a number of conditions where (a) a male (XY) infant is born with the appearance of female genitals, or a female (XX) infant is born with the appearance of male genitals; or (b) an infant is born with aspects of both male and female gonads and genital tissue.
3. "Gender" is less to define than "sex." Using the term to apply to human sexuality began during the 1950s when John Money coined the term *gender identity* to refer to people's subjective perception of the sex to which they belonged or with which they identified. During the 1970s, use of the term *gender* was greatly broadened as a result of feminist activism to promote the view that sex roles and sex differences were actually social and psychological categories, not inevitable results of human biology. Many researchers came to subscribe to the view that the term *sex* should only be used in discussions of physical anatomy (genitals and gonads). However, there are numerous problems with dividing sexuality into *sex* and *gender*.
4. Gender identity does not begin to form until the third year, and it is not until the end of the third year that children reliably affix labels *girl* and *boy* to other children. One approach to gender identity development is gender schema theory, a cognitive theory which holds that young toddlers acquire schemas about gender that summarize the child's interpretations of all the information he or she has acquired about gender. Once acquired, the schema controls the way the toddler attends and respond to new information about gender-related aspects of his or her environment. On the other hand, evolutionary theorists propose that human beings have evolved a preverbal level of understanding about gender that emerges much earlier than the third year.
5. The term *transsexual* describes a person who identifies with the sex other than the one to which he or she was assigned at birth, and ultimately takes steps to present himself or herself as a person of that other sex. Transsexuals are a subset of the larger category of *transgender*, which refers to any and all situations where a person is unhappy with the gender to which he or she was assigned at birth. Transgender can include any type of "gender bending," including cross-dressers, androgynous

individuals, third-gender, or those making political statements, as well as transsexuals.

6. Gender roles are beliefs about how men and women ought to behave. Gender roles are not identical around the world, although in some respects there is remarkable similarity across cultures and historical eras. Gender stereotypes are beliefs about what the “typical” man and woman is like. Stereotyping is a necessary and intrinsic property of the human mind, but problems can arise when stereotypes are applied to human beings. This is because within any category there are individuals who do not fit the stereotype well, and because some stereotypes arise because they reflect unfounded negative social attitudes or misinformation. One often does find stereotypic qualities in men and women, but most people also have a mixture of qualities associated with both sexes.
7. All theories of human behavior emphasize that men and women are similar in most ways. However, the sexes also differ in certain respects. Sex differences in children’s play styles and toy preferences are not controversial, although they are explained differently by different researchers. Very young children have rigid ideas about appropriate play and behavior for males and females. Young infants already display sex-typed play and toy preferences prior to the acquisition of gender identity. Childhood sex-typed play styles for boys include higher levels of “propulsive” behavior, rough-and-tumble play, and toys easily adapted for these activities. Girls play is characterized by decreased physical assertion and aggression, heightened interest in play parenting, and play focused upon interrelationships among playmates rather than objects. Both sexes prefer their own sex as playmates.
8. Two general approaches to explaining sex differences in play and toy preferences have emerged. The first stresses early social interactions and home life, and the other stresses sex differences in prenatal exposure to steroid hormones, primarily testosterone and estrogen. Those researchers who stress the importance of the infant’s social and home life observe that parents socialize their children toward sex-typical toys and play. Researchers specializing in the effects of exposure to steroid hormones propose that these hormones organize the fetal brain in ways that are expressed in infancy and childhood as play and toy preferences. Evidence supports the importance of both hormonal exposure and social experiences as these factors interact over time.
9. Sex differences in cognition are controversial. Such sex differences could exist in ability, motivation, or performance. There are well-established average sex differences in performance on various cognitive tests, but researchers often disagree about the strength, causes, and implications of these differences. Girls and women excel at almost all verbal tasks relative to boys and men, particularly writing. However, boys score higher than girls in analogy items of standardized tests which may tap into reasoning about mathematical relationships. Males excel relative to females in most tests of visual-spatial ability. However, women outperform men in recalling the location of objects. Girls’ math and science class grades are consistently higher than boys’ during elementary school years, and they surpass boys’ scores on algebra problems whose solution strategies involve skills similar to those used for language. In all other aspects of math performance—particularly problems involving visual-spatial skills—males consistently score higher on standardized tests. Male

advantage is seen most strongly at the highest end of scoring, but males are also more numerous than females at the lowest end.

10. Although sexual behavior is one of the most important of human motivations, less is known about the psychology of sexual behavior than almost any other aspect of human life. This is the result of resistance to the study of human sexuality among scientists. People differ over what it means to “have sex” as a result of cultural and historical differences, so sexual behavior can only be defined in a circular fashion as “any type of behavior involving feelings and responses which are thought by the participants to be sexual in nature.”
11. William Masters and Virginia Johnson were the first researchers to publish detailed accounts of the physiology of human sexual response. Their sexual response cycle consisted of four phases: excitement, plateau, orgasm, and resolution. However, in their attempt to create a model that applied equally to men and women, they ignored evidence of sex differences in sexual response. For example, men but not women experience a refractory period, and a distinct plateau phase applies primarily to women. Women may experience serial orgasms, but this is extremely unusual in adult men. Men’s and women’s arousal patterns also differ. Women, but not men, may become physiologically aroused by sexual stimuli (e.g., erotic videos) that are not specific to their sexual interests, and women’s genital arousal may not necessarily be accompanied by subjective feelings of arousal. For men, genital arousal is almost always tied to subjective feelings of arousal.
12. When psychologists say that “infants and children are sexual beings” they do not mean that the sexuality of children is similar to that of adults. Yet human sexuality begins prior to birth. Masturbation is quite common in infancy, if not universal, although masturbation to orgasm is not common until well into childhood. Sex play with peers begins in early childhood, and it is likely that the majority of children engage in at least some sex play at some time. There is no evidence that peer sex play is harmful unless it is accompanied by aggression or guilt.
13. Adolescence is not the awakening of sexuality, but it is a particularly important point along a continuum that begins before birth. Characteristic emotional and psychological changes occur during puberty, in addition to anatomical and physiological changes. Romantic and sexual feelings are among the most characteristic aspects of adolescence. Over time, there has been a trend toward lower ages for pubertal changes, particularly in girls and particularly in the United States. Determining the average age of first intercourse in the United States is difficult, and statistics are not very reliable. However, it appears that by age 18, the majority of men and women have had intercourse. There are socioeconomic and ethnic differences in ages of first sexual activity. In research among American teenagers, women tended to produce either of two types of accounts of first intercourse. The first type stressed surprise at the brevity of the event, boredom, disappointment, pain, lack of sexual knowledge, and abdication of responsibility for the event. The second type stressed excitement, humor, and pleasure.
14. Sexual orientation (heterosexual, homosexual, and bisexual) includes elements of behavior, desire, and identity. The three-factor model of sexual orientation includes consideration of all three factors in coming to judgments about sexual orientation. The desire-driven model proposes that a person’s sexual orientation should be judged

- by considering only the sex to which the person is most strongly drawn by erotic desire. The continuum model denies that the labels “straight,” “gay,” and “bisexual” adequately describe very much about sexual orientation. From this perspective a person may be “slightly gay” “somewhat straight” “completely straight,” and so forth.
15. Patterns of sexual orientation development and expression differ for men and women. Substantially more “heterosexual” women than men report at least some sexual attraction to their own sex, and substantially more “homosexual” women than gay men report at least some attraction to the other sex. According to researcher Lisa Diamond, women’s sexual orientation is more fluid and subject to fluctuations, and less easy to characterize using the terms *lesbian*, *straight*, and *bisexual*. Among women who are not heterosexual, a stable lesbian identity is the least common type of nonheterosexuality.
  16. Causes of sexual orientation are not known with certainty. Research suggests that biological correlates increasing the likelihood of male homosexuality include differences in brain structure, having more genetically related older brothers, differences in second to fourth finger ratios, and higher incidence of left-handedness. There are fewer if any such biological correlates of female homosexuality. There is a genetic influence on the development of homosexual identity both for men and women.
  17. Romantic or passionate love (“being in love”) is a set of characteristic emotions, motivations, cognitions, and goal-directed behaviors. Feelings of passionate love are temporary, typically lasting no more than 12 to 24 months on average, although it can sometimes last longer—particularly if the lovers experience some sort of adversity or barrier to their love. The triangular model of love of Robert Sternberg holds that love consists of three related but independent components: intimacy, passion, and commitment. Different experiences of love result, depending upon the magnitude of presence of each of the three components.
  18. Romantic love is a human universal with cultural variations. For example, romantic love in the United States is associated with joy, whereas in China it is associated with sorrow. Despite cultural differences, the quality and expressions of romantic love are more similar than different among cultures.
  19. Sex and love often occur together, but although it is hard to imagine passionate love without sexual interest, it is not as hard to imagine sexual interest without love. According to researcher Lisa Diamond, love and sex are not always connected because they have different evolutionary histories and are controlled by the activities of different hormones and neurotransmitters. Sex steroids estrogen and testosterone are the primary systems governing sexual desire, whereas “reward centers” of the brain and the hormones and neurotransmitters which fluctuate within these centers—primarily dopamine, oxytocin, and the endorphins—govern affectional bonds. Diamond also proposes that bonds of affection and love evolved to promote behaviors which kept infants in close proximity to their caregivers. Thus, love evolved to serve a commitment function, whereas sexual desire evolved to serve a reproductive function.

### Section Summaries

#### *Are sex and gender different?*

1. There are four determinants of sex at birth—chromosomal, gonadal, genital, and hormonal.
2. The term *intersex* refers to a number of unusual conditions where (a) a genetic male (XY) infant is born with the appearance of female genitals, or a genetic female (XX) infant is born with the appearance of male genitals; or (b) an infant is born with aspects of both male and female gonads and genital tissue.
3. The term *gender* is usually used to refer to any aspect of male or female that is considered to be primarily social or psychological, and not biological in nature. However, maleness and femaleness contain biological, social, and psychological aspects, and many researchers have come to believe that it is not productive to use separate terms to describe sex and gender.
4. Gender identity generally does not develop until well into the third year of life. Both gender-schema theory and evolutionary theory contribute to an understanding of how and why gender identity develops.
5. A transsexual is a person who identifies with the sex other than the one to which he or she was assigned at birth, and ultimately takes at least some steps to present himself or herself as a person of the other sex. *Transgender* is an umbrella term that can refer to any and all situations where a person's gender identity differs in some way from normative expectations based upon the sex that the person was assigned at birth.
6. Gender roles are beliefs about how men and women ought to behave—for example, what activities they should engage in and jobs they should perform. Gender stereotypes are beliefs about how the “typical” man or woman actually behaves.

#### *How do the sexes differ?*

1. Males and females behave similarly in most ways, but some consistent differences exist. In general, boys prefer higher levels of “propulsive” and rough-and-tumble play, and they like toys that may be easily adapted for these activities. Girls generally prefer play characterized by decreased physical assertion and aggression. They frequently enjoy alloparenting (play parenting) and play focused upon interrelationships among playmates rather than play objects. They prefer toys that may be adapted to these uses. Both sexes prefer same-sex playmates.
2. Sex differences in play and toy preferences may emerge in part as a result of social interactions and in part as a result of prenatal exposure to androgens and estrogens.
3. Sex differences in cognitive performance exist in children and adults. Some of these differences begin to emerge in early childhood or even infancy. Differences exist in verbal, visual-spatial, and quantitative (mathematics) performance.
4. Although females in general have been found to excel in verbal tasks and males in visuospatial and quantitative tasks, to some extent the nature of the difference—favoring females or favoring males—will depend upon the specific verbal, visuospatial, or quantitative task.

#### *Sexual behavior: What is “having sex”?*

1. Sexual behavior is highly diverse, and people do not always agree as to what constitutes “having sex.” The term *sexual behavior* itself can only be defined in circular terms.
2. Sexual fantasy is the most common form of sexual behavior. The vast majority of people fantasize at one time or another, often several times per day. Fantasy is not a substitute for sex but is often used to enhance one’s sex life.
3. Men’s and women’s sexual response cycles are not identical. Women’s cycle contains a plateau stage absent from men’s; women may experience serial orgasms, whereas men do not; women may not experience orgasm at all, whereas men almost always do; and men almost always experience a refractory period after orgasm, whereas a woman may or may not wish to continue with sexual activity after orgasm.

#### *How does sexuality develop?*

1. Self-stimulation of the genitals is nearly universal in infancy, and continues in childhood. Children in all societies, if they are permitted to, will engage in sex play to one degree or another. Unless accompanied by guilt or coercion, sex play appears to be harmless.
2. Adolescence does not mark the awakening of sexuality, but is a particularly important point along a continuum of sexual development beginning before birth. Characteristic changes include the development of primary and secondary sex characteristics as well as emotional and psychological changes.
3. The age of onset of pubertal changes has been declining over the centuries, particularly for girls, with particularly rapid changes noted in certain nations over the past several decades. Currently, precocious puberty is defined as the appearance of secondary sex characteristics prior to age 7 for European American (white) girls and age 6 for African American (black) girls.
4. Approximately 54 percent of U.S. women and 60 percent of U.S. men have had sexual intercourse by age 18. This is a substantial increase over figures collected during the 1950s and 1960s.
5. Teenage women tend to report either of two types of responses to their initiation into sexuality. The first type of response stresses feelings of boredom, pain, lack of sexual knowledge, abdication of responsibility, and disappointment. The second type stresses pleasure, humor, and excitement.

#### *What is sexual orientation?*

1. Sexual orientation includes factors related to desire, behavior, and identity. Definitions of sexual orientation are controversial.
2. Patterns of sexual orientation differ for men and women. Women’s sexual orientation appears to be more fluid—more subject to change over time.
3. Causes of sexual orientation are not known with certainty. Because exclusive preference for members of one’s own sex is rare, most research in sexual orientation development has focused on causes of homosexuality. Early theories of homosexual development which stressed relations with parents or traumatic childhood experiences have largely been abandoned, and research emphasis has shifted to biological factors. But these factors are merely correlates and do not predict homosexuality in any given individual.

*How closely are sex and love linked?*

1. Although some psychologists view love as an emotion, most view love as a collection of different emotions, motivations, goal-directed behaviors, and cognitions.
2. Helen Fisher has compiled a set of 20 emotional, cognitive, and behavioral characteristics of the experience of being “in love.” Although love may last a lifetime, being “in love” rarely lasts longer than 1 to 2 years.
3. Romantic love is a human universal. However, love differs in each society in the importance individuals place upon it, its general prevalence, associated rituals, beliefs about its typical outcome, and the degree to which it is permitted to flourish.
4. Lisa Diamond’s biobehavioral theory of romantic love and sexual desire states that love and desire have different neurohormonal components and evolutionary histories. Thus, while desire and love are often linked, each can also exist without the other. Diamond’s theory is speculative, but some research is consistent with it. Nevertheless, some of the research findings may be explained in ways other than those predicted by the theory.