Sex and Your Body

Chapter 5

Sexuality

- Sexuality is a dimension of personality shaped by biological, psychosocial, and cultural forces
  - Concerns all aspects of sexual behavior
  - Influences our individual sense of identity
  - Viewed on a spectrum
- Basic information about the body, sexual functioning, and sexual behavior is vital to sexual wellness

Sexual Anatomy

- Both men and women have gonads
  - Ovaries in female
  - Testes in male
- Gonads produce germ cells and sex hormones
  - Ova (eggs) in females
  - Sperm in males
- Ova and sperm are the basic units of reproduction
  - Union of two results in creation of new life
- Intersex: individuals born with genitals that cannot easily be assigned to male or female categories

Female Sex Organs

- External female sex organs are called the vulva
  - Mons pubis
  - Labia major and labia minora
  - Clitoris
  - Urethral and vaginal openings
- Vagina leads directly to the internal reproductive organs
  - G-spot is located 1–2 inches internally in the vagina
  - Cervix is the opening to the uterus, or womb
  - Fallopian tubes lead from the top of the uterus and provide a channel for the ova to reach the uterus

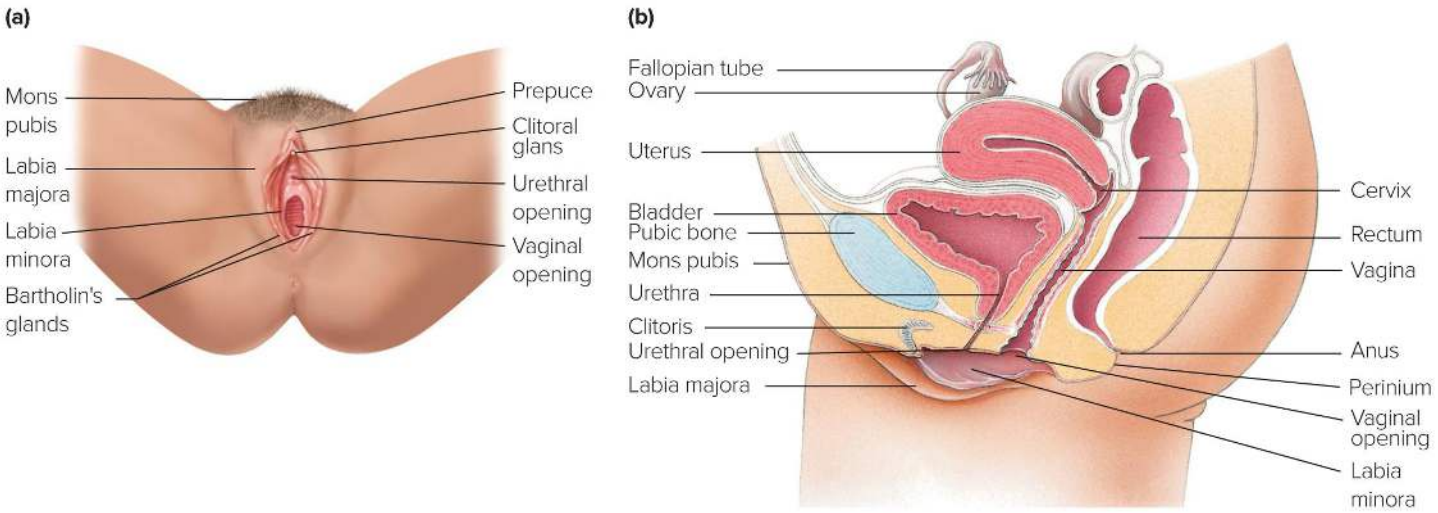

Figure 5.1 The Female Sex Organs

(a) An external view of the vulva.
(b) An internal view of the female pelvis.

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Male Sex Organs

- Penis consists of the glans and the shaft
- Scrotum is a pouch that contains and maintains the temperature of the testes
- Urethra runs the length of the penis
    - Both semen and urine pass through the urethra
- Cowper's glands flank the urethra and excrete preejaculatory fluid

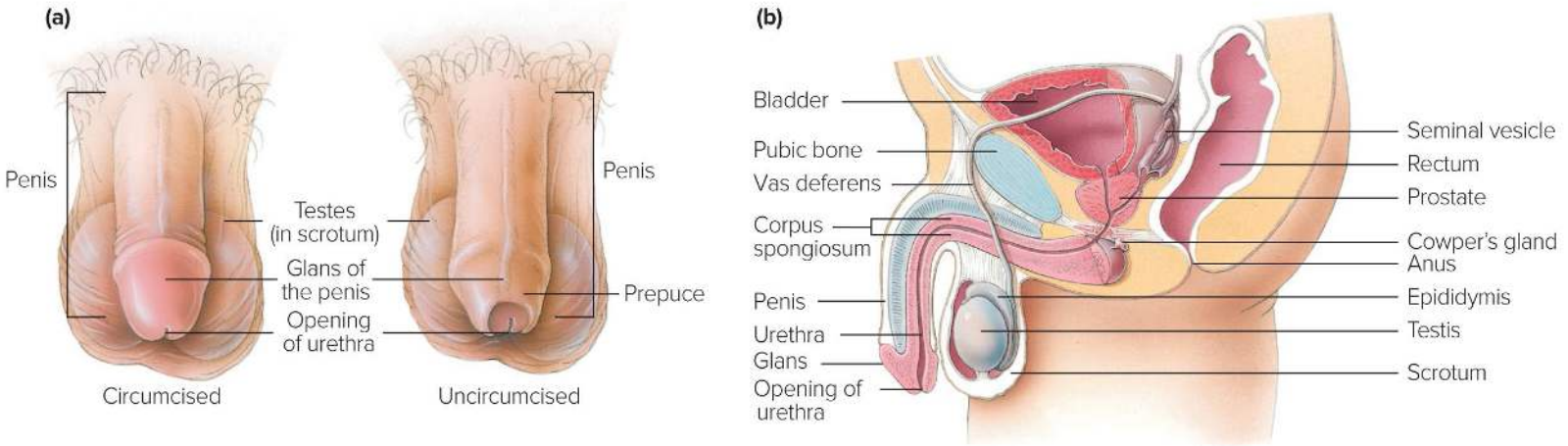

Figure 5.2 The Male Sex Organs

(a) An external view.
(b) An internal view.

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Male Sex Organs (2)

- During a brief lifetime, the sperm take the following route:
  - Produced in a maze of tubules inside the testes
  - As they mature, they flow into a storage tube called the epididymis
  - They then move to the two vas deferens
  - Vasa deferentia merge into seminal vesicles
    - Secretions provide nutrients for the sperm
    - Sperm pass through the prostate gland, picking up milky fluid and becoming semen
  - They then flow into the ejaculatory ducts

Hormones and the Reproductive Life Cycle

- Male sex hormones are made by the testes
  - Androgens, the most important of which is testosterone
- Female sex hormones are produced by the ovaries
  - Estrogen, progestogens, and a small amount of testosterone
- Adrenal glands also produce sex hormones in both sexes
- Hypothalamus controls hormones of the pituitary gland, which regulate hormones produced by the ovaries, testes, and adrenal glands

Differentiation of the Embryo

- Conception—combining of 23 pairs of chromosomes
  - Twenty-third pair is the sex chromosomes
    - Egg carries an X sex chromosome
    - Sperm carries either an X or a Y chromosome
    - XX provides the blueprint to produce a female
    - XY provides the blueprint to produce a male
      - » Testosterone is key to sexual differentiation
- Abnormalities sometimes occur
  - Klinefelter syndrome
  - Turner syndrome

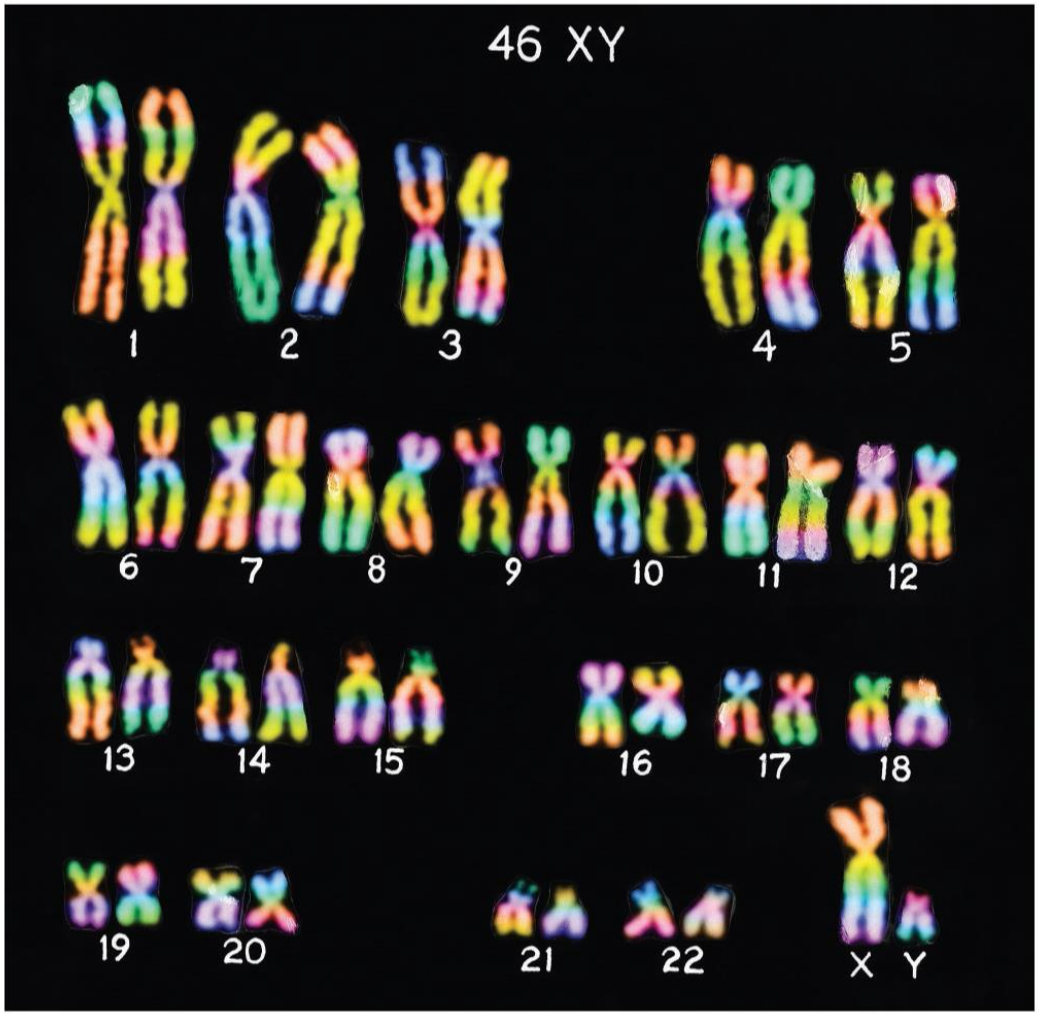

Figure 5.3 A Normal Set of Chromosomes

The first 22 pairs are matched, but the last pair (the sex chromosomes) does not match, indicating the person carrying these chromosomes is male.

Female Sexual Maturation

- Puberty is when the reproductive system matures

  Secondary sex characteristics develop

  - Breast development
  - Rounding of hips and buttocks
  - Body hair growth
  - Increase in growth rate

  Female body begins to appear distinctively different from male bodies

  Puberty is induced by estrogen in females

The Menstrual Cycle

- Timing of menarche (the first menstrual period) varies with race/ethnicity, genetics, and nutrition
- Menstrual cycle has four phases:
  - Menses, days 1–5
  - Estrogenic phase, days 6–13
    - Egg matures; endometrium (uterine lining) thickens
  - Ovulation, about day 14
    - Ovum released
    - Most fertile time of the menstrual cycle
  - Progestational phase, days 15–27

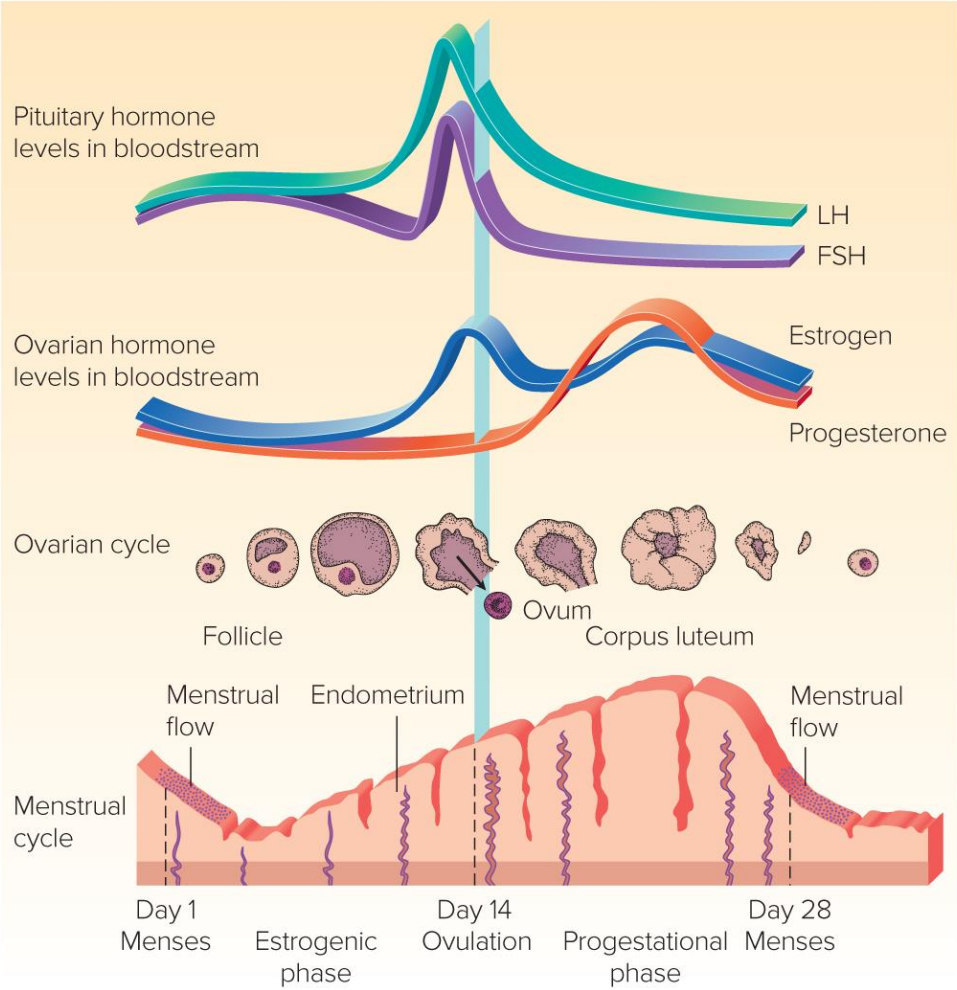

Figure 5.4 The Menstrual Cycle

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Menstrual Problems

- Dysmenorrhea: discomfort associated with menstruation
- Emotional symptoms are common
    - Premenstrual tension
    - Premenstrual syndrome (PMS)
    - Premenstrual dysphoric disorder (PMDD)
- Combination of hormonal, neurological, genetic, dietary, and psychological factors

Menstrual Problems (2)

- Lifestyle changes to reduce symptoms:
  - Limit salt intake
  - Exercise
  - Don’t use alcohol or tobacco
  - Eat a nutritious diet
  - Reduce stress
- If systems persist, keep a daily diary and discuss the issue with your physician

Male Sexual Maturation

- Puberty is induced by testosterone in males
  - Lags behind female sexual maturation by about two years
- Physical changes:
  - Testicular growth
  - Penis growth
  - Pubic hair growth
  - Facial and body hair growth
  - Voice deepens
  - Height and weight increase

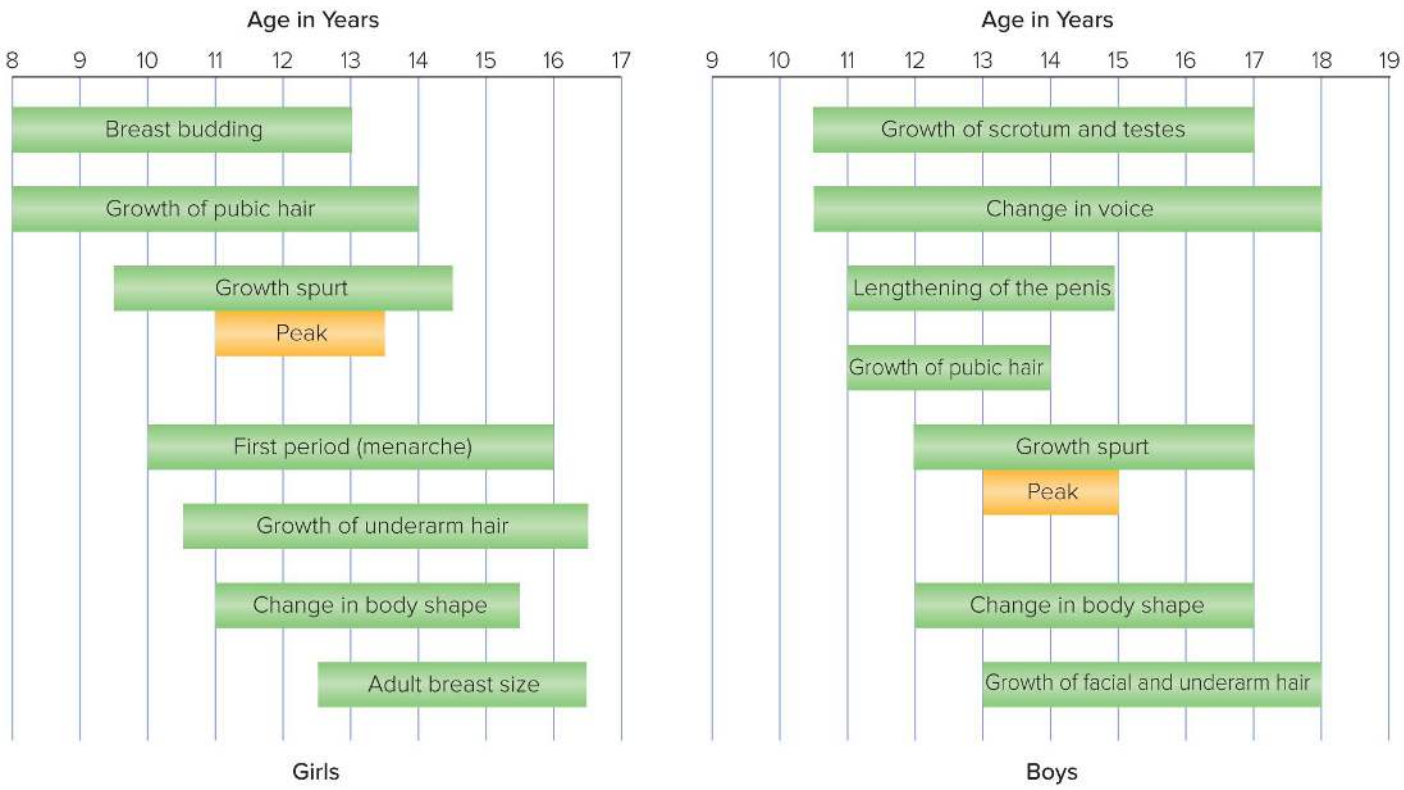

Figure 5.5 Milestones in Sexual Maturation of Girls and Boys

SOURCE: The Merck Manual Home Health Handbook, Online Version. © 2010–2013 Merck Sharpe & Dohme Corp., a subsidiary of Merck & Co., Inc., Whitehouse Station, NJ, USA (http://merckmanuals.com/home/childrens_health_issues/adolescents/physical_andsexual_development.html).

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Aging and Human Sexuality

- Sexual functioning changes as we age
- Menopause

  Around age 50, a woman's ovaries cease to function and menstruation ends

  Unpleasant symptoms may be experienced, and osteoporosis can develop
- Aging male syndrome

  Andropause occurs more gradually, between 35 and 65

Table 5.1 Reproductive Aging in Women

AGE	SIGNS & SYMPTOMS—WHAT'S HAPPENING	STAGE OF REPRODUCTION
9–15	First period; variable menstrual cycles	Menarche; beginning reproductive years
16–30	Regular menstrual cycle; fertility peaking	Reproductive years
31–42	Regular menstrual cycle; fertility progressively declining	Reproductive years
Early 40s	Lengths of menstrual cycle vary increasingly	Menopausal transition
Late 40s–early 50s	Two or more skipped periods; hot flashes, irritability, and sleep disturbance; bone loss begins	Menopausal transition
45–55	Final period (i.e., no period for 12 months)	Menopause
50s and beyond	Vaginal dryness, bone loss. Hot flashes can persist (for a few women, into their 60s and 70s).	Postmenopause

Women vary a great deal in the ages at which they go through these stages. The average length of menopause and the transition leading up to it is four years, but for some women symptoms may last only a few months, and for others, 10 years.

SOURCE: American Society for Reproductive Medicine. 2012. Reproductive Aging in Women (http://www.reproductivefacts.org).

How Sex Organs Function During Sexual Activity

- Sexual stimulation
  - Physical stimulation comes through the senses, especially touch
    - Kissing, caressing, fondling, and touching in erogenous zones
  - Psychological stimulation is at least as significant as physical touch
    - Fantasies
    - Ideas
    - Memories of past experience
    - Mood
    - Attitudes about sex

Sexual Response Cycle

- Men and women respond physiologically with a predictable set of reactions
  - Vasocongestion
  - Increased muscular tension
- Four phases characterize the sexual response cycle
  - Excitement phase
  - Plateau phase
  - Orgasmic phase
  - Resolution phase
    - In males, a refractory period

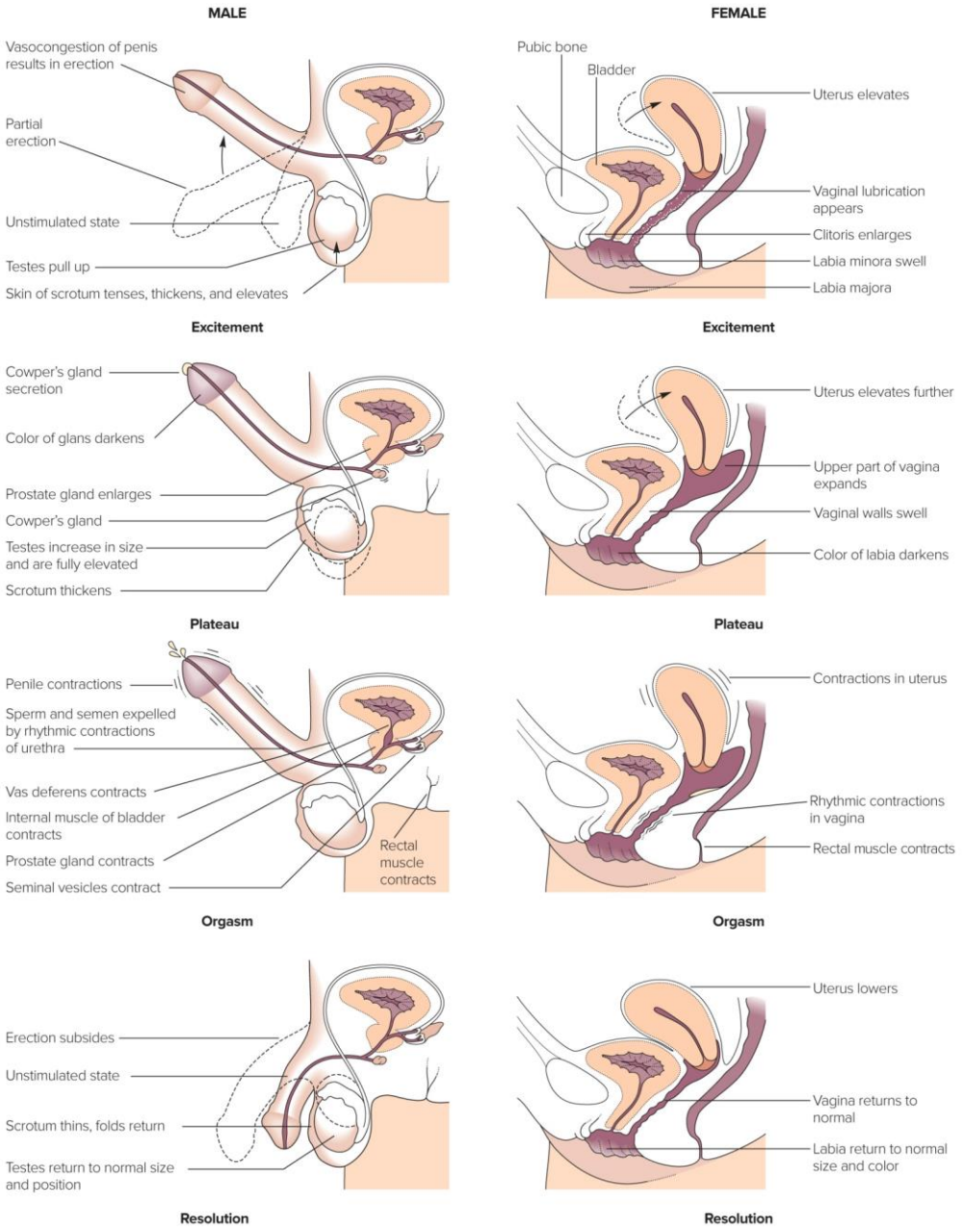

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Figure 5.6 Stages of the Sexual Response Cycle

Sexual Problems

- Common sexual health problems in women:
  - Vaginitis—vaginal inflammation
  - Vulvodynia—chronic and unexplained vulvar pain
  - Endometriosis—growth of endometrial-like tissue outside the uterus
  - Pelvic inflammatory disease (PID)—a uterine or ovarian infection introduced to the vagina
    - 50–75% are associated with STDs
  - Dyspareunia—painful intercourse
    - Many possible causes

Sexual Problems (2)

- Common sexual health problems in men:
  - Prostatitis
  - Prostate cancer
  - Testicular cancer
  - Epididymitis—an inflammation of the epididymis
    - Usually caused by STIs
  - Testicular torsion—twisting of the spermatic cord
- Systemic diseases such as diabetes and cardiovascular disease can affect sexual function in both men and women

Sexual Dysfunctions

- Common sexual dysfunctions in men:
  - Erectile dysfunction
  - Premature ejaculation
  - Delayed ejaculation
- Common sexual dysfunction in women:
  - Lack of desire or failure to become aroused
  - Orgasmic dysfunction
  - Dyspareunia

Sexual Dysfunctions (2)

- Causes of sexual dysfunction:
  - Physical factors
  - Smoking
  - Obesity
  - Alcohol
  - Prescription and nonprescription drugs
- Treatments
  - Pharmaceuticals
  - Therapy and counseling
  - Kegel exercises and masturbation

Gender Roles and Sexual Orientation

- Gender role: everything in daily life that expresses your maleness or femaleness as defined by society
  - Queer or queergender: those who feel like neither a man nor a woman
- Cisgender: biological sex matches their gender role
- Transgender: sex does not match their gender
  - Transsexuals seek sex reassignment
  - Transvestites enjoy wearing clothing identified with the other gender

Sexual Orientation

- Sexual orientation: emotional and sexual attraction along a continuum ranging from exclusive heterosexuality to exclusive homosexuality
- Heterosexuality
  - Male and female partnerships
- Homosexuality
  - Lifestyles often depend on the degree of openness about sexual orientation
- Bisexuality

Origins of Sexual Orientation

- There is no clear explanation
  - Most agree sexual orientation results from multiple genetic, biological, cultural, social, and psychological factors
- Genes play an important but limited role
- Exposure to hormones before birth may also have an impact
- Parents' sexual orientation seems to have little or no impact

Sexual Behavior

- Many behaviors stem from sexual impulses
- Sexual expression takes many forms
- Mass media contribute to our ideas about sexuality and gender roles
- Childhood sexual behavior is manifested from birth
- Adolescent sexuality
    - Biological versus psychological maturity
    - Sexual fantasies, masturbation, and nocturnal emissions
    - Many American teens engage in sexual intercourse
    - Same-sex attractions are common

Sexual Behavior (2)

- Adult sexuality
  - With marriage happening later, young adults are intent on experiencing sexual relationships before marriage
  - Motivations for sexual relations change over the life span
- Sexuality in illness and disability
  - Those with chronic diseases or disabilities face particular challenges, but they can learn to be creative about sexual expression
  - Positive body image is important

Varieties of Sexual Behavior

- Celibacy and abstinence
- Autoeroticism
    - Masturbation and erotic fantasy
- Touching and foreplay
- Oral-genital stimulation
    - Cunnilingus (stimulation of the female genitals)
    - Fellatio (stimulation of the penis)
- Anal intercourse
- Sexual intercourse

Commercial Sex

- Pornography
  - Soft-core porn vs. hard-core porn
  - No evidence that pornography by itself leads to violence
- Online porn and cybersex
  - Addition is of special concern
  - Sexting can have serious consequences
- Prostitution, also called sex work
  - Sex workers come from a variety of backgrounds and are economically (rather than sexually) motivated
  - Many report having been sexually abused as children

Responsible Sexual Behavior

- Key components:
  - Open, honest communication
  - Agreed-on sexual activities
  - Sexual privacy
  - Safe sex
  - Contraception use
  - Sober sex

Review

- Describe the structure and function of human sexual anatomy
- Explain the reproductive life cycle and the role hormones play in it
- Describe how the sex organs function during sexual activity
- Explain the range of gender roles and sexual orientations
- Explain the development and varieties of sexual behavior

Long image descriptions

APPENDIX A

Figure 5.1 The Female Sex Organs Appendix

The mons pubis, a rounded mass of fatty tissue over the pubic bone, becomes covered with hair during puberty. Below it are two paired folds of skin called the labia majora and the labia minora, and at the base of these are the Bartholin's glands. Enclosed within the labia is the clitoris, the urethral opening, and the vaginal opening. The prepuce is the clitoral hood.

The clitoris may be externally visible between the labia but then extends internally into the anterior wall of the vagina. The female urethra is a duct that leads directly from the urinary bladder to its opening between the clitoris and the opening of the vagina.

The vagina is the passage that leads to the internal sexual organs. Projecting into the upper part of the vagina is the cervix, which is the opening of the uterus. A pair of fallopian tubes extends from the top of the uterus. The end of each surrounds an ovary.

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Figure 5.2 The Male Sex Organs Appendix

The penis consists of the glans and the shaft, which extends from the head to the body of the penis. The glans is partially covered by the foreskin, or prepuce.

The scrotum is a pouch containing the testes. The male urethra is a tube that runs through the entire length of the penis to the opening of the tip.

The Cowper's glands are two small structures flanking the urethra.

The epididymis lies on the surface of each testis. Sperm move from each epididymis into a tube called the vas deferens. The two vasa deferentia merge into a pair of seminal vesicles. The sperm then pass through the prostate gland.

Ultimately the sperm flow into the ejaculatory ducts.

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Figure 5.4 The Menstrual Cycle Appendix

Blood levels of hormones from the ovaries and the pituitary glands are low during menses.

Pituitary hormones increase in the estrogenic phase. An egg-containing follicle begins to mature, producing increasing amounts of estrogen.

Estrogen surges during ovulation. After ovulation, the follicle is transformed into the corpus luteum. Progesterone, secreted from the corpus luteum, increases.

The endometrium continues to develop, readying itself to receive and nourish a fertilized ovum.

If pregnancy does not occur, the corpus luteum degenerates, estrogen and progesterone levels fall, and the endometrium begins to slough off.

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Figure 5.5 Milestones in Sexual Maturation of Girls and Boys Appendix

In girls between ages 8 and 12, breast budding; between 8 and 14, growth of pubic hair; between 9 and 15, growth spurt, which peaks between 11 and 14; between 10 and 16, first period (menarche); between 10 and 17, growth of underarm hair; between 11 and 16, change in body shape; and between 11 and 17, adult breast size is attained.

In boys between ages 10 and 17, growth of scrotum and testes; between 10 and 18, change in voice; between 11 and 15, lengthening of the penis; between 11 and 14, growth of pubic hair; between 12 and 17, growth spurt peaking between 13 and 15; between 12 and 17, change in body shape; and between 13 and 18, growth of facial and underarm hair.

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Figure 5.6 Stages of the Sexual Response Cycle Appendix

In men, in the excitement phase, vasocongestion results in the penis going from an unstimulated state to an erect state; the skin of the scrotum tenses, thickens, and elevates; and the testes pull up. In the plateau phase, the scrotum thickens; the testes increase in size and are fully elevated; the prostate gland enlarges; the color of the glans darkens, and secretions from the Cowper's glands appear at the tip of the penis. In the orgasm phase, the rectal muscle, seminal vesicles, prostate gland, internal muscle of the bladder, and vas deferens all contract; penile contractions are experienced; and sperm and semen are expelled by rhythmic contractions of the urethra. In the resolution phase, the erection subsides to an unstimulated state; the testes return to normal size and position; and the scrotum thins, and folds return.

In women, in the excitement phase, the uterus elevates; vaginal lubrication appears; the clitoris enlarges, and the labia minora swell. In the plateau phase, the uterus elevates further; the upper part of the vagina expands; the vaginal walls swell; and the color of the labia darkens. In the orgasm phase, the rectal muscle contracts; contractions occur in the uterus; and rhythmic contractions are felt in the vagina. In the resolution phase, the uterus lowers; the vagina returns to normal; and the labia return to normal size and color.

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