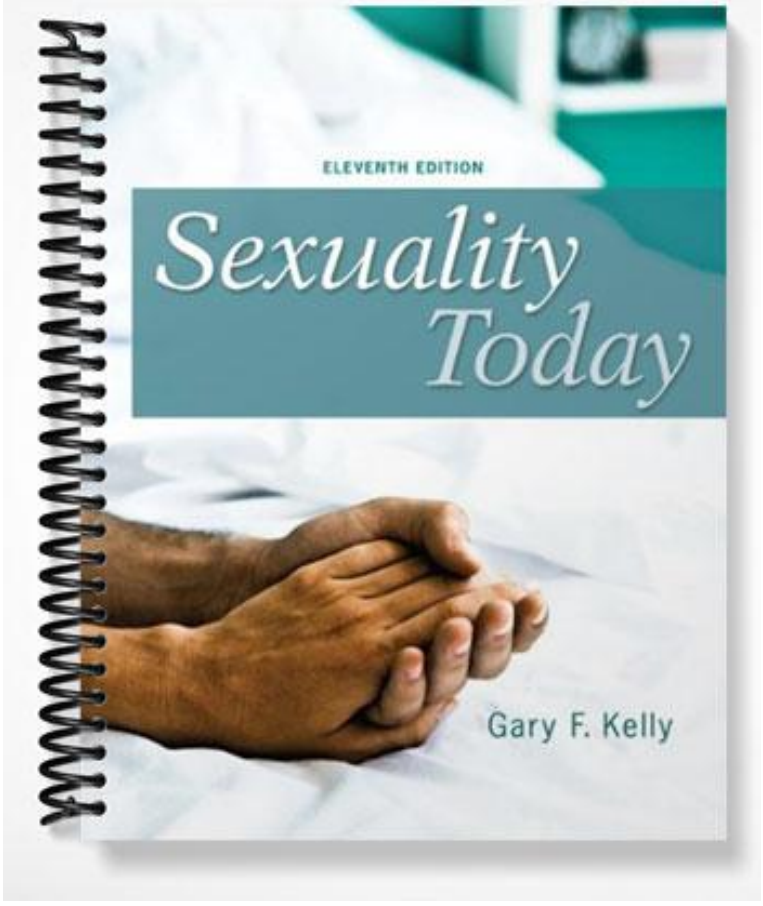
SOLUTIONS MANUAL



CHAPTER 2
FEMALE SEXUAL ANATOMY AND PHYSIOLOGY

TOTAL TEACHING PACKAGE OUTLINE

Lecture Outline	Resources Reference
Chapter 2: Female Sexual Anatomy and Physiology	
THE VULVA	Teaching Suggestions: 1(A), 2(B-1), 2(B-2), 8(A) Learning Objectives: #1,2,3,4,5,6
THE VAGINA	Teaching Suggestions: 1(A), 7(A) Learning Objectives: #7,8,9,10,11,12,13,
THE UTERUS AND OVARIES	Teaching Suggestions: 6(A), 6(B), 7(A), 9(B) Learning Objectives: #14,15, 16,17,18,19,20,21, 22,23,24
FEMALE BREASTS	Teaching Suggestions: 4(A), 5(A), 6(B), 8(A), 9(A) Learning Objectives: #25,26,27,28,29,30,31
THE MENSTRUAL CYCLE	Teaching Suggestions: 2(A), 2(B-3), 2(B-4), 3(A) Learning Objectives: #32,33,34,35,36
MENOPAUSE	Teaching Suggestions: 3(A), 5(B) Learning Objectives: #37, 38, 39

LEARNING OBJECTIVES

After reading this chapter, students should be able to:

1. List and describe the functions of the external female sex organs.
2. List and describe the function of the clitoris, including the parts of the organ.
3. Describe the potential result of, and treatment for, collection of smegma collecting around the clitoral prepuce.
4. Describe the procedure for conducting female genital cutting.
5. Describe the purposes of female genital cutting.
6. Describe different cultural perceptions regarding female genital cutting.
7. Describe the structures, functions, and potential concerns regarding the vagina and surrounding muscles.
8. Describe concerns with the procedure of douching.
9. List the four types of hymens, myths about the presence of a hymen, and cultural expectations surrounding the presence of a hymen.
10. Describe the social and medical concerns regarding the hymen.
11. Describe the procedure for female genital self-exam.
12. List some common disorders of the female sex organs.
13. Describe the causes of and treatments for disorders of the female sex organs.
14. Explain the importance and function of a pap smear.
15. List and describe the parts and functions of the uterus.
16. Identify five sex-related factors associated with higher risk for cervical cancer.
17. Consider the new Pap test screening guidelines from the American Cancer Society.
18. Describe how a pelvic exam is conducted.
19. List and describe the two procedures for examining suspicious cells of the cervix.
20. List and describe the parts and functions of the ovaries.

21. List and describe the parts and functions of the fallopian tubes.
22. List and describe two stages of uterine cancer.
23. List and describe three additional disorders associated with the uterus.
24. Describe two anatomical abnormalities associated with the uterus.
25. Describe the parts of the breast.
26. Describe the process of lactation.
27. Discuss three facts about breast cancer.
28. Describe genetic concerns associated with the female breasts.
29. Describe the process for undertaking breast self-examination.
30. Describe the recommendations for mammograms.
31. List and describe two procedures for addressing malignant breast tumors.
32. Briefly describe perceptions of menarche and menopause.
33. List the glands and hormones associated with the menstrual cycle.
34. Describe the four-phase process of menstruation.
35. Describe the difference between premenstrual syndrome (PMS) and premenstrual dysphoric disorder (PMDD).
36. Describe the hormonal and physiological body changes associated with menopause.
37. Describe the benefits and risks of hormone replacement therapy.
38. Describe the sexual implications of menarche and menopause, as well as the relationship to positive self-perception.

CHAPTER OVERVIEW

The first part of this chapter covers basic female sexual anatomy, with a view toward making the material interesting and accessible to students. Understanding anatomical details and relationships is fundamental to examining the mechanisms of sexual response as discussed in Chapter4.

Focus on Health (FOH) questions are particularly evident in this chapter. Remember that the FOH questions are listed at the end of each chapter in the main text with appropriate page numbers where students may find the answer.

For some students, this chapter will represent the first time female sexual anatomy has been discussed frankly and in detail. It is important to be sensitive to their naiveté, as well as the sense of relief and liberation that can result from dealing with this material. For every student, being well grounded in the biological basis of sexuality is important to the development of later concepts.

- The female sex organs have always been recognized for their procreative (reproductive) functions, but their potentials for pleasure and intimate communication have become increasingly recognized.

- The female vulva consists of the external sex organs known as the mons, the labia majora and minora, the clitoris, and the openings to the urethra and vagina.

- Some cultures, religions, or social customs require surgical procedures such as a clitoridectomy or infibulation to be performed as rites of passage. These forms of female genital mutilation (FGM) (or genital cutting) have created worldwide controversy.

- The vagina is a muscular-walled organ of sexual pleasure and reproduction that extends into the woman's body. Its opening may be partially covered by tissue called a hymen.

- The hymen may be present in the opening of the vagina and may be one of several types. The hymen may cause sexual difficulties if it is imperforate (having no openings) or tough and fibrous.

- The uterus is the organ in which fetal development takes place. Its cervix extends into the posterior part of the vagina.

- The ovaries mature eggs (ova) and produce female hormones. The fallopian tubes transport ova down toward the uterus, and fertilization of an egg by a sperm can take place in these tubes.

- Papanicolaou (Pap) smears offer the possibility of early detection for cervical cancer or precancerous cells in the cervix called cervical intraepithelial neoplasia (CIN). Untreated cervical cancer may become invasive cervical cancer (ICC).

- The female breasts are strongly connected with sexuality in our culture, and women often worry about breast size.

- Milk glands in the breasts produce milk after a woman gives birth.

- Breast cancer is one of the more common types of malignancy. Regular breast self-examination is essential to the detection of potentially malignant lumps. Mammography is a form of X-ray that can detect breast cancer in very early stages.

- Between menarche and menopause, a woman's fertility is regulated by the menstrual cycle. At roughly four-week intervals, an ovum ripens in one ovary as the result of increased levels of follicle-stimulating hormone (FSH). Estrogen thickens the uterine wall, producing a suitable location for fetal growth. The ovum breaks through the ovary wall at ovulation. If the ovum is not fertilized, extra blood and tissue are shed from the uterus in menstruation. Hormones from the pituitary, hypothalamus, and ovaries regulate the menstrual cycle.

- Premenstrual syndrome (PMS) consists of uncomfortable physical and emotional symptoms. Severe symptoms may be classified as premenstrual dysphoria disorder (PMDD).

- Menopause is the time of life when menstruation ceases. The perimenopausal years may have unpleasant symptoms as hormone production decreases.

TEACHING SUGGESTIONS

1. Small Group Activities

   A) Female Sexual Anatomy Name Game

   Objective: To learn the location of parts and their functions.

   Method:

   - Photocopy the transparencies of the vulva and the female internal sexual and reproductive organs (see outline at beginning of chapter for reference).
   - Be sure to cover the names of the parts on the transparency as you copy.
   - Handout photocopies to students in groups of three to four.
   - Students will then label and write the definition or function of the body part without using the textbook.
   - Allow 15 minutes to complete.
   - This activity will test the students' current knowledge or lack of it.
   - Instructor then lectures on the information.
   - Upon Completion: Students will have a better understanding of female sexual anatomy and physiology.

2. Large Group Activities

   A) Menstrual Cycle Quiz Game

   Objective: To test the knowledge of students on the menstrual cycle.

   Method:

   - Put students into groups of four or five per group.
   - Instructor reads one piece of information at a time about the phases of the menstrual cycle, such as FSH ripens one or more ova.
   - Instructor may establish a group order to answering the question or to allow whoever raises their hand first to answer.

- Give one point to the group if the answer is correct and take away one point if the answer is wrong.

Upon completion: Students should be able to discuss the correct sequence of the menstrual cycle.

B) Discussion Topics

1. Female Sexual and Reproductive Anatomy

- Discuss at what age students began to name/identify and understand physiological function of female sexual and reproductive anatomy.

- What distinguishes "sexual" and "reproductive" anatomical parts?

- Identify different teaching approaches to this topic. Plumbing lesson vs. Wellness lesson vs. Pleasure lesson. Compare and contrast these approaches, the messages that they send, and which approach is best suited for a college audience.

- Discuss the Pleasure approach to teaching sexual anatomy. Are girls and women in the United States encouraged to understand how their genitals can bring pleasure? Is there high school academic preparation that identifies the G-spot or female ejaculation?

2. Female Genital Mutilation (FGM) vs. Genital Cutting

- Discuss the terms specifically noting implications for changing "mutilation" to "cutting".

- Examine the cultural value of FGM.

- Discuss the Western societal viewpoint of this practice.

- Explore the intersection between an individual's personal rights versus the cultural expectation.

- Compare Genital Cutting to the Western practice of male circumcision.

3. Menarche

- Encourage students to discuss their first menstruation experience. Explore their feelings of excitement, fear, and surprise.

- Ask who educated them on the subject (parents, siblings, peers) and when they were educated (before or after).

- Compare their experiences with those expressed in the boxed material on Celebrating Menarche across Cultures (in the main text).
- Examine why a lack of rituals involving menarche exists in North America.

4. Premenstrual Syndrome (PMS) vs. Menstrual Discomfort and Control (MDC)

- Discuss the terms specifically noting the implications in changing "PMS" to "MDC".
- Have students explain the variety of symptoms they experience and what treatment options they have used.
- Discuss in what ways they would like their significant other to respond.
- Explore the variety of male perspectives on Menstrual Discomfort and Control.

3. Role-Play

A) Let students act out the signs and symptoms of Menstrual Discomfort and Control and menopause. Set up the dramatic presentation before class. Let it be a surprise at the beginning of the class. Have the students perform at their desks or come up front. The instructor will ask what is wrong, and let the actors describe their symptoms. This should stimulate interest and discussion.

4. Case Study

A) Brittany: Breast Size Matters to Her.

- Explore reasons how and why breasts have developed sexual meaning in our society.
- Why does our society believe that bigger is better, or does it?
- Examine the impact on women's self-esteem.
- Discuss the risks associated with breast enlargement surgery.
- Pamela Anderson and Jenny McCarthy have both had their implants removed. What impact might these cases have on the issue?

5. Guest Speakers

   A) Invite a nurse or health educator to demonstrate the techniques of a Breast Self-Exam (BSE). Also, have the person discuss issues related to breast cancer and other breast problems.

   B) Invite a physician to discuss the benefits and risks of hormone replacement therapy.

6. Essays/Papers

   A) Students can identify the five sex-related factors associated with a higher risk for cervical cancer. In short answer format, students should consider their personal risks for each factor and write thoughts, feelings, and steps they are taking to reduce their risk. Male students can complete the assignment via sympathetic critical thinking.

   B) Have students write papers on breast, cervical, uterine, and ovarian cancer. This assignment will increase their knowledge and awareness of these potentially life-threatening diseases.

7. Media

Several films/slides can graphically illustrate the range of individual differences in, for example, the shape or color of the vulva, breasts, and/or hymen

   A) Present if explicit graphic representations are appropriate to your educational setting. (If you're not certain, check it out before showing such materials.)

8. Questionnaires

   The following self-evaluation at the end of the chapter in the main text may help students discover more about themselves as a sexual being.

   A) You and Your Body

9. SexSource Video Bank

The SexSource video bank provides an excellent array of short videos that may serve as discussion starters. In order to elicit the best responses, it is advisable to pair students in groups of two for "pair sharing." Give them the initial starter questions below, and then show the videos after some initial discussion. Instructors should preview videos for time and content. Additionally, you may want to download clips prior to class to ensure they are ready for viewing regardless of network connectivity. All video clips may be found at:
http://www.mhhe.com/sexsource

A) *Breasts* video clip – Ask paired students: How big are the average woman's breasts? What size is attractive? How do breasts change over a woman's life? Does size affect sexual stimulation? Once students have been given some time to share their initial answers, show the *Breasts* video clip and continue discussion. Be aware that the clip is graphic and shows full frontal nudity. It is advisable to show the video clip *Male Anatomy* during the same class. (*See Chapter 3 of the Instructor's Manual*). Additionally, this is an excellent activity for brining in issues on cultural attractiveness and societal norms.

B) *The Ovaries* video clip – Ask paired students: What do the ovaries look like? What color are they? Where are they? How many eggs do they contain and when do they form? If time permits, ask two or more pairs of students to come draw the ovaries on the whiteboard or chalkboard. This activity can be both engaging and humorous for students, as many will have little knowledge of the ovaries. Afterward, show the *Ovaries* video clip and take this opportunity to cover the ovaries in detail. This is an excellent starter for the female anatomy.

GLOSSARY

acute urethral syndrome: infection or irritation of the urethra.

areola (a-REE-a-la): darkened, circular area of skin surrounding the nipple of the breast.

Bartholin's glands (BAR-tha-lenz): small glands located in the opening through the minor lips that produce some secretion during sexual arousal.

cervical intraepithelial neoplasia (CIN) (ep-uh-THEE-lee-al nee-oh-PLAY-zhee-uh): abnormal, precancerous cells sometimes identified in a Papanicolaou (Pap) smear.

cervix (SERV-ix): lower "neck" of the uterus that extends into the back part of the vagina.

cilia: microscopic, hairlike projections that help move the ovum through the fallopian tube.

circumcision (SIR-kuhm-sizh-uhn): of clitoris—surgical procedure that cuts the prepuce, exposing the clitoral shaft.

clitoridectomy (klit-er-i-DEK-tuh-mee): surgical removal of the clitoris; practiced routinely in some cultures.

clitoris (KLIT-er-is): sexually sensitive organ found in the female vulva; it becomes engorged with blood during arousal.

corpus luteum: cell cluster of the follicle that remains after the ovum is released, secreting hormones that help regulate the menstrual cycle.

cystitis (si-STAHY-tis): a nonsexually transmitted infection of the urinary bladder.

diethylstilbestrol (DES) (dahy-eth-uhl-stil-BES-trol): synthetic estrogen compound once given to mothers whose pregnancies were at high risk of miscarrying.

dysmenorrhea (dis-men-uh-REE-uh): painful menstruation.

E. **coli**: bacteria naturally living in the human colon, which often cause urinary tract infection.

endometrial hyperplasia (hahy-per-PLAY-zhuh): excessive growth of the inner lining of the uterus (endometrium).

endometriosis (en-doh-mee-tree-O-sis): growth of the endometrium out of the uterus into surrounding organs.

endometrium: interior lining of the uterus, innermost of three layers.

estrogen (ES-troh-jen): hormone produced abundantly by the ovaries; it plays an important role in the menstrual cycle.

fallopian tubes: structures that are connected to the uterus and that lead the ovum from an ovary to the inner cavity of the uterus.

fibroid tumors: non-malignant growths that commonly grow in uterine tissues, often interfering with uterine function.

fibrous hymen: condition in which the hymen is composed of unnaturally thick, tough tissue.

follicles: capsules of cells in which an ovum matures.

follicle-stimulating hormone (FSH): pituitary hormone that stimulates the ovaries or testes.

fundus: the broad top portion of the uterus.

glans: sensitive head of the female clitoris, visible between the upper folds of the minor lips.

gonadotropin-releasing hormone (GnRH) (go-nad-uh-TROH-pin): hormone from the hypothalamus that stimulates the release of FSH and LH by the pituitary.

hormone replacement therapy (HRT): treatment of the physical changes of menopause by administering dosages of the hormones estrogen and progesterone.

hot flash: a flushed, sweaty feeling in the skin caused by dilated blood vessels; often associated with menopause.

hymen: membranous tissue that can cover part of the vaginal opening.

hysterectomy: surgical removal of all or part of the uterus.

imperforate hymen: lack of any openings in the hymen.

infibulation (in-fib-yuh-LAY-shun): surgical procedure, performed in some cultures, which seals the opening of the vagina.

interstitial cystitis (IC): a chronic bladder inflammation that can cause debilitating discomfort and interfere with sexual enjoyment.

introitus (in-TROID-us): the outer opening of the vagina.

invasive cancer of the cervix (ICC): advanced and dangerous malignancy requiring prompt treatment.

isthmus: narrowed portion of the uterus just above the cervix.

labia majora (LAY-bee-uh muh-JOR-uh): two outer folds of skin covering the minor lips, clitoris, urinary meatus, and vaginal opening.

labia minora (LAY-bee-uh mih-NOR-uh): two inner folds of skin that join above the clitoris and extend along the sides of the vaginal and urethral openings.

lactation: production of milk by the milk glands of the breasts.

lumpectomy: surgical removal of a breast lump along with a small amount of surrounding tissue.

luteinizing hormone (LH) (LOO-tee-uh-nahyz-ing): pituitary hormone that triggers ovulation in the ovaries and that stimulates sperm production in the testes.

mammography: sensitive X-ray technique used to discover small breast tumors.

mastectomy: surgical removal of all or part of a breast.

menarche (muh-NAHR-kee): onset of menstruation at puberty.

menopause (MEN-uh-pawz): time in midlife when menstruation ceases.

menstrual cycle: the hormonal interactions that prepare a woman's body for possible pregnancy at roughly monthly intervals.

menstruation (men-stroo-AY-shun): phase of menstrual cycle in which the inner uterine lining breaks down and sloughs off; the tissue, along with some blood, flows out through the vagina; also called the "period".

mons: cushion of fatty tissue located over the female's pubic bone.

myometrium: middle, muscular layer of the uterine wall.

oocytes (OH-a-sites): cells that mature to become ova.

os: opening in the cervix that leads into the hollow interior of the uterus.

osteoporosis (ah-stee-o-puh-ROH-sis): disease caused by loss of calcium from the bones in postmenopausal women, leading to brittle bones and stooped posture.

ova: egg cells produced in the ovary. A single cell is called an ovum; in reproduction, it is fertilized by a sperm cell.

ovaries: a pair of female gonads, located in the abdominal cavity, that mature ova and produce female hormones.

ovulation: release of a mature ovum through the wall of an ovary.

oxytocin (ok-si-TOH-suhn): pituitary hormone that plays a role in lactation and in uterine contractions.

Papanicolaou (Pap) smear: medical test that examines a smear of cervical cells to detect any cellular abnormalities.

perimenopause: the time of a woman's life surrounding menopause, characterized by symptoms resulting from reduced estrogen levels.

perimetrium: outer covering of the uterus.

polycystic ovary syndrome (PCOS) (PAH-lee-SIS-tick): a disorder of the ovaries that can produce a variety of unpleasant physical symptoms often because of elevated testosterone levels.

premenstrual dysphoric disorder (PMDD): severe emotional symptoms such as anxiety or depression around the time of menstruation.

premenstrual syndrome (PMS): symptoms of physical discomfort, moodiness, and emotional tensions that occur in some women for a few days prior to menstruation.

prepuce (PREE-peus): in the female, tissue of the upper vulva that covers the clitoral shaft.

progesterone (pro-JES-tuh-rohn): ovarian hormone that causes the uterine lining to thicken.

prolactin: pituitary hormone that stimulates the process of lactation.

prolapse of the uterus: weakening of the supportive ligaments of the uterus, causing it to protrude into the vagina.

prostaglandin: hormonelike chemical whose concentrations increase in a woman's body just prior to menstruation.

pubococcygeus (PC) muscle (pyub-o-kox-a-JEE-us): part of the supporting musculature of the vagina that is involved in orgasmic response and over which a woman can exert some control.

shaft: in the female, the longer body of the clitoris, containing erectile tissue.

smegma: thick, oily substance that may accumulate under the prepuce of the clitoris or penis.

urinary meatus (mee-AY-tuhs): opening through which urine passes from the urethra to the outside of the body.

uterus (YOO-ter-uhs): muscular organ of the female reproductive system; a fertilized egg implants itself within the uterus.

vagina (vuh-JAHY-nuh): muscular canal in the female that is responsive to sexual arousal; it receives semen during heterosexual intercourse for reproduction.

vaginal atresia (uh-TREE-zhuh): birth defect in which the vagina is absent or closed.

vaginal atrophy: shrinking and deterioration of vaginal lining, usually the result of low estrogen levels during aging.

vaginal fistulae (FIS-choo-luh ***or*** -lie): abnormal channels that can develop between the vagina and other internal organs.

vaginismus (vaj-uh-NIZ-muhs): involuntary spasm of the outer vaginal musculature making penetration of the vagina difficult or impossible.

varicose veins: overexpanded blood vessels; can occur in veins surrounding the vagina.

vulva: external sex organs of the female, including the mons, major and minor lips, clitoris, and opening of the vagina.

vulvar vestibulitis: one form of vulvodynia that often interferes with sexual penetration of the vagina.

vulvodynia: a medical condition characterized by pain and burning in the vulva and outer vagina.