

Chapter 1. Anatomy of the Female Reproductive System

MULTIPLE CHOICE

1. A postpartum client who had a vaginal birth asks the nurse, Will my cervix return to its previous shape before I had my baby? Which is the best response by the nurse?

- a. The cervix will now have a slitlike shape.
- b. The cervix will be round and smooth after healing occurs.
- c. The cervix will remain 50% effaced now that you have had a baby.
- d. The cervix will be slightly dilated to 2 cm for about 6 months.

ANS: A

After vaginal birth, the external os has an irregular slitlike shape and may have tags of scar tissue. The external os of a childless woman is round and smooth, but after a vaginal birth it will not be round and smooth. During labor, the cervix effaces (thins) and dilates (opens) to allow passage of the fetus. Once the baby is born, the cervix will close and return to close to 100% effacement.

2. The school nurse is conducting health education classes for a group of adolescents. Which statement best describes a secondary sexual characteristic?

- a. Maturation of ova
- b. Production of sperm
- c. Female breast development
- d. Secretion of gonadotropin-releasing hormone

ANS: C

A secondary sexual characteristic is one not directly related to reproduction, such as development of the characteristic female body form. Maturation of ova is directly related to reproduction and is a primary sexual characteristic. Production of sperm is directly related to reproduction and is a primary sexual characteristic. Secretion of hormones is directly related to reproduction and is a primary sexual characteristic.

3. Which 16-year-old girl may experience secondary amenorrhea?

- a. Jackie, 5 ft 2 in, 130 lb
- b. Karen, 5 ft 9 in, 150 lb
- c. Carol, 5 ft 7 in, 96 lb
- d. Linda, 5 ft 4 in, 120 lb

ANS: C

Because of her height and low body weight, Carol is at risk of developing secondary amenorrhea, which occurs in women who are thin and have a low percentage of body fat. Fat is necessary to make the sex hormones that stimulate ovulation and menstruation. Jackie, Karen, and Linda are of sufficient height and weight to promote sex hormone production.

4. Which describes the levator ani?

- a. Division of the fallopian tube
- b. Collection of three pairs of muscles
- c. Imaginary line that divides the true pelvis and false pelvis
- d. Basin-shaped structure at the lower end of the spine

ANS: B

The levator ani is a collection of three pairs of muscles that support internal pelvic structures and resist increases in intraabdominal pressure. The fallopian tube divisions are the interstitial portion, isthmus, ampulla, and infundibulum. The linea terminalis is the imaginary line that divides the false from the true pelvis. The basin-shaped structure at the lower end of the spine is the bony pelvis.

5. The nurse is describing the size and shape of the nonpregnant uterus to a client. Which is an accurate description?

- a. The nonpregnant uterus is the size and shape of a pear.
- b. The nonpregnant uterus is the size and shape of a cantaloupe.
- c. The nonpregnant uterus is the size and shape of a grapefruit.
- d. The nonpregnant uterus is the size and shape of a large orange.

ANS: A

The nonpregnant uterus is about 7.5 to 2.5 cm, which is close to the size and shape of a pear. A cantaloupe would be too large and is the wrong shape for the uterus. A grapefruit is too large for the nonpregnant uterus; the uterus is larger at the upper end and tapers down. An orange may be the appropriate size, but it is not the appropriate shape.

6. If a woman's menstrual cycle began on June 2, on which date should ovulation most likely have occurred?

- a. June 10
- b. June 16
- c. June 29
- d. July 5

ANS: B

June 16 would be 18 days into the cycle; ovulation should have occurred at this point. June 10 would just be 8 days into the cycle and too early for ovulation. Ovulation occurs about 12 to 14 days after the beginning of the next menstrual period in a 28-day cycle; ovulation normally occurs about 14 days before the beginning of the next period. June 29 is at the end of the cycle. July 5 would be 27 days into the cycle and about time for the next period.

7. A client states, My breasts are so small. I dont think I will be able to breastfeed. Which is the nurses best response?

- a. It may be difficult but you should try anyway.
- b. You can always supplement with formula.
- c. All women have about the same amount of glandular tissue to secrete milk.
- d. The ability to produce breast milk depends on increased levels of estrogen and progesterone.

ANS: C

All women have 15 to 20 lobes arranged around and behind the nipple and areola. These lobes, not the size of the breast, are responsible for milk production. The size of the breasts does not ensure success or failure in breastfeeding. Supplementation decreases the production of breast milk by decreasing stimulation. Stimulation of the breast, not the size of the breast, brings about milk production. Increased levels of estrogen decrease the production of milk by affecting prolactin.

8. The nurse is explaining the function of the males cremaster muscle to a group of nursing students. Which statement accurately describes the function of the cremaster muscle?

- a. Assists with transporting sperm
- b. Aids in temperature control of the testicles
- c. Aids in voluntary control of excretion of urine
- d. Entraps blood in the penis to produce an erection

ANS: B

A cremaster muscle is attached to each testicle. Its function is to bring the testicle closer to the body to warm it or allow it to fall away from the body to cool it, thus promoting normal sperm production. Seminal fluid assists with transporting sperm. The urinary meatus aids in controlling the excretion of urine. Entrapment of the blood in the penis is caused by its spongy tissue.

9. A newly pregnant client asks the nurse, What is the false pelvis? Which is a correct statement that the nurse should give the client?

- a. It is the total anterior portion of the pelvis.
- b. It is considered to be the lower portion of the pelvis.

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- c. It provides support for the internal organs and the upper part of the body.
 - d. It is the narrowest part of the pelvis through which a fetus will pass during birth.
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ANS: C

The linea terminalis, also called the *pelvic brim* or *ileopectineal line*, is an imaginary line that divides the upper, or false, pelvis from the lower, or true, pelvis. The false pelvis provides support for the internal organs and upper part of the body. The false pelvis is the upper portion, not the total anterior portion. The lower portion of the pelvis is the true pelvis, which is most important during childbirth because it has the narrowest portion through which the fetus will pass during childbirth.

10. Which hormone is responsible for milk production after the birth of the placenta?

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- a. Pitocin
 - b. Prolactin
 - c. Estrogen
 - d. Progesterone
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ANS: B

During pregnancy, high levels of estrogen and progesterone produced by the placenta stimulate growth of the alveoli and ductal system to prepare them for lactation. Prolactin secretion by the anterior pituitary gland stimulates milk production during pregnancy, but this effect is inhibited by estrogen and progesterone produced by the placenta. Inhibiting effects of estrogen and progesterone stop when the placenta is expelled after birth, and active milk production occurs in response to the infants suckling while breastfeeding. Pitocin is the hormone that causes the let-down reflex during breastfeeding.

11. Which hormonal effect is noted during the menstrual cycle?

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- a. LH and FSH secretion rise during the ovulatory phase.
 - b. A negative feedback mechanism is exhibited by the anterior pituitary gland and ovaries.
 - c. The posterior pituitary gland secretes LH.
 - d. Estrogen secretion enhances FSH secretion.
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ANS: A

Levels of LH and FSH rise dramatically during the ovulatory phase and are known as the LH surge prior to ovulation. A positive feedback mechanism occurs with regard to the menstrual cycle. The anterior pituitary gland secretes LH. Estrogen secretion minimizes FSH secretion.

12. To evaluate an individual's progression through puberty, which assessment tool would be used during the assessment phase of the nursing process?

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- a. Bishop score
 - b. Tanner staging
 - c. Braden score
 - d. SOFA score
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ANS: B

Tanner staging provides a gender-based criteria approach that defines the physical findings of primary and secondary sex characteristics for children and adolescents during puberty. The Bishop score would be used to evaluate whether a labor client is ready for the induction of labor. The Braden score provides documentation of skin condition relative to potential breakdown and/or complications. The SOFA score is used to evaluate critical care clients who are at risk to develop SIRS or MODS.

13. A female client who has gone through puberty and started menstruating without any problems now has cessation of periods after 2 years of normal cycles. Which of the following would indicate a possible cause for this occurrence?

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- a. Lag in development of secondary sexual characteristics
 - b. Overproduction of androgenic hormones
 - c. Negative pregnancy test
 - d. Clinical diagnosis of primary amenorrhea
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ANS: B

An overproduction of androgenic hormones can cause the development of secondary amenorrhea. This client has progressed through puberty, which would indicate that there is no problem with the development of secondary sexual characteristics. If the client had a positive pregnancy test, then menstruation would stop. The signs and symptoms identify the occurrence of secondary amenorrhea.

14. On speculum examination of the cervix, it is found to be round and smooth. These findings suggest that the client:

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- a. is a multipara.
 - b. has had vaginal deliveries.
 - c. is a nulliparous.
 - d. is a gravida 1, para 0.
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ANS: C

These findings indicate that the client has never been pregnant and she would be classified as nulliparous. The options indicating that the client is a multipara, has had vaginal deliveries, or is a gravida 1, para 0 are incorrect because they refer to a client with a history of pregnancy.

15. Which of the following statements is incorrect with regard to reproductive anatomy and physiology?

- a. Female clients who are past puberty and sexually active can become pregnant even if they have not had a menstrual cycle.
- b. Puberty symptoms are more prominent in males than females.
- c. Females enter puberty earlier than their male counterparts.
- d. Secondary sexual characteristics develop during puberty.

ANS: B

Puberty symptoms are usually more subtle in males than females. The other statements are correct.

16. The nurse is reviewing normal female development with a mother of a 10-year-old daughter. The mother states, I noticed that my daughter developed breast buds about a year ago. When do you think she will start her menstrual cycle? What is the nurses best response?

- a. In about a year.
- b. Likely any time now.
- c. Does your daughter know what to expect?
- d. It is impossible to predict when she will start her cycle.

ANS: A

Menarche occurs about 2 to 2.5 years after breast development. Asking the mother if her daughter knows what to expect does not answer the mothers question.

17. The middle school nurse is reviewing the phases of the endometrial cycle with a group of female students. Which student statement will the nurse need to correct?

- a. The proliferative phase occurs when the ovum is maturing.
- b. The expulsion phase occurs when the ovum is discharged from the ovary.
- c. The secretory phase occurs during the second half of the menstrual cycle.
- d. The menstrual phase occurs after the levels of estrogen and progesterone fall.

ANS: B

The menstrual cycle has only three phasesproliferative, secretory, and menstrual. Occurrences of each of the three phases have been described. There is no expulsion phase in the menstrual cycle.

18. The clinic nurse is reviewing breastfeeding with a pregnant client. Which hormone will the nurse include in the patient's teaching plan as the one primarily responsible for lactation after birth?

- a. Prolactin
- b. Estrogen
- c. Luteinizing
- d. Progesterone

ANS: A

Prolactin is secreted by the anterior pituitary gland. Secretion of prolactin is suppressed by estrogen and progesterone produced by the placenta. When the placenta separates after birth, the effects of the estrogen and progesterone stop and milk is produced with infant suckling.

Luteinizing hormone is present in the ovulatory cycle.

MULTIPLE RESPONSE

19. A young female client comes to the health unit at school to discuss her irregular periods. In providing education regarding the female reproductive cycle, the nurse describes the regular and recurrent changes related to the ovaries and the *uterine endometrium*. Although this is generally referred to as the *menstrual cycle*, the ovarian cycle includes which phases? (Select all that apply.)

- a. Follicular
- b. Ovulatory
- c. Luteal
- d. Proliferative
- e. Secretory

ANS: A, B, C

The follicular phase is the period during which the ovum matures. It begins on day 1 and ends around day 14. The ovulatory phase occurs near the middle of the cycle, about 2 days before ovulation. After ovulation and under the influence of the luteinizing hormone, the luteal phase corresponds with the last 12 days of the menstrual cycle. The proliferative and secretory phases are part of the *endometrial cycle*. The proliferative phase takes place during the first half of the ovarian cycle, when the ovum matures. The secretory phase occurs during the second half of the cycle, when the uterus is prepared to accept the fertilized ovum. These are followed by the menstrual phase if fertilization does not occur.

20. The school nurse is conducting health education classes for a group of adolescent girls.

Which are the actions of the estrogen hormone on the female body? (*Select all that apply.*)

- a. Stimulates contractions during birth
- b. Relaxes pelvic ligaments during pregnancy
- c. Stimulates the endometrium before ovulation
- d. Stimulates growth of uterus during pregnancy
- e. Stimulates the let-down reflex during breastfeeding

ANS: B, C, D

The hormone estrogen relaxes pelvic ligaments during pregnancy, stimulates the endometrium before ovulation, and stimulates the growth of the uterus during pregnancy. Oxytocin stimulates contractions during pregnancy and stimulates the let-down reflex during breastfeeding.

MATCHING

Match each term with the correct definition.

- a. Ovulation marks the beginning of this stage and occurs about 14 days before the next menstrual period.
- b. The period in which an ovum matures begins with the first day of menstruation and ends about 14 days later.
- c. This occurs as the ovum matures and is released during the first half of the ovarian cycle.

21. Follicular phase of the female reproductive cycle

22. Luteal phase of the female reproductive cycle

23. Proliferative phase of the female reproductive cycle

NOT: Ovulation marks the beginning of the luteal phase of the female reproductive cycle and occurs about 14 days before the next menstrual period. The follicular phase is the period during which an ovum matures. It begins with the first day of menstruation and ends about 14 days later in a 28-day cycle. The proliferative phase occurs as the ovum matures and is released during the first half of the ovarian cycle.

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SHORT ANSWER

24. Delayed onset of menstruation or primary amenorrhea is considered if the girls periods have not begun by which age in years? Record your answer in a whole number.

ANS:

16

Delayed onset of menstruation is called *primary amenorrhea* if the girls periods have not begun within 2 years after the onset of breast development or by age 16, or if the girl is more than 1 year older than her mother or sisters were when their menarche occurred.