

# ANATOMY & PHYSIOLOGY

## Lesson 3<sup>1</sup>

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### LEARNER OUTCOME<sup>2</sup> W-5.3:

Identify the basic components of the human reproductive system, and describe the basic functions of the various components; e.g., fertilization, conception.



#### MATERIALS:

1. POSTERS: Female Anatomy Definitions
2. CARDS: Female Anatomy
3. HANDOUT: Female Reproductive System
4. ANSWER KEY: Female Reproductive System
5. OVERHEAD: Female Reproductive System
6. OVERHEAD: The Menstrual Cycle



#### INTRODUCTION:

This lesson provides students with information about the female reproductive system.



#### APPROACHES/STRATEGIES:

#### NOTES:

##### A. Ground Rules

(5 min)

Ensure ground rules are established before beginning this lesson. For classes that have already established ground rules, quickly reviewing them can promote a successful lesson.

##### B. Female Anatomy Matching Game<sup>3</sup>

(30 min)

*Students identify the basic components of the female human reproductive system, and can describe the basic functions of the various components*

1. Display the Female Anatomy Definitions posters around the room.
2. Divide students into two teams.
3. Distribute the Female Anatomy cards to each team. (Each set should be on a different color paper.)

4. Have teams decide under which definition each word belongs and post the words on the appropriate poster.
5. Distribute the Female Reproductive System handout and ask the students to fill in the blanks for each component of the reproductive system during the review.
6. Review each team's responses referring to the Female Reproductive System answer key and the following guidelines:

### External Genitals:

#### ***Vulva***

- The outer folded skin at the entrance to the vagina.
- Also called the labia majora and the labia minora.
- It protects the internal sex organs.

#### ***Clitoris***

- The female sex organ that becomes larger and firmer during sexual arousal.
- Located above the urethra.

### Three Openings:

#### ***Urethra***

- The tube through which urine passes from the body.
- It is the opening between the clitoris and the vagina.
- It is not part of the reproductive system, but the urinary system.

#### ***Vagina***

- The passageway leading from the uterus to the outside of the female body.
- Blood from the uterus passes through the vagina during menstruation.
- The baby passes from the uterus through the vagina during childbirth.
- It is not used for urination. The opening just above the vagina, the urethra, is used for this purpose.
- A thin membrane called the ***hymen*** surrounds the vaginal opening. It may not be noticeable.
- Once puberty begins, a girl may notice some discharge from her vagina on her underwear or on toilet paper. It varies from whitish and pasty to clear and slippery. This means a girl's body is starting to mature and her period will be starting. It is normal and keeps the vagina clean and healthy. If the discharge smells bad or the area is itchy, it could signal infection and require medical treatment.



Students may have different views regarding female circumcision. In different cultures, male circumcision may be practiced for religious reasons or by custom. There is controversy regarding the social and sexual advantages and disadvantages of male circumcision. Few well-conducted studies exist to support a strong position for or against the practice. On the other hand, female circumcision, the partial or total removal of the female's external genitalia, is associated with a high risk of long term illness or dysfunction and with a risk of death for both girls and women. While this is so, it is a practice valued by some cultures as a religious requirement, and is considered by these cultures as a necessary rite of passage to womanhood, an assurance of cleanliness or improved marriage prospects, a means of preventing promiscuity, an enhancement of male sexuality, or a facilitation of childbirth.<sup>4</sup>

### **Anus**

- The opening at the end of the digestive tract where feces or stool leaves the body.
- It is not part of the reproductive system, but is part of the digestive system.

### **Internal Reproductive Components:**

#### ***Cervix***

- The bottom of the uterus that opens into the vagina.

#### ***Uterus***

- The place in a woman's body where a baby can grow.
- Also called the womb.
- It is very low in the pelvis (nowhere near the stomach).
- It is about the size of a fist.
- It is the uterus that enlarges during pregnancy, not the stomach.
- Encourage students to make a fist and place it against the lower part of their abdomen (pelvis). This is where the uterus is in a female.
- During the menstrual cycle, the uterus grows a lining of blood that would nourish a growing fetus if conception and fertilization occur. This lining sheds approximately once a month if conception and fertilization do not occur.

#### ***Fallopian Tubes***

- These are narrow tubes that connect the ovaries to the uterus.
- The ovum travels through one of the tubes after ovulation.
- It is in the fallopian tubes that fertilization may occur.

#### ***Ovaries***

- The female ovum-producing glands.
- These glands contain all of the ovum from birth, and start releasing them once puberty starts.

#### ***Bladder***

- The sac that holds the urine produced by the kidney.
- It is not part of the reproductive system, but the urinary system.



Many cultures consider the rupture of the hymen during first vaginal intercourse to be an important milestone – particularly where bleeding at first intercourse is considered a sign of virginity. However, a woman may be born without a hymen or with a partial hymen. In addition, an intact hymen may not bleed at first intercourse, or the hymen can rupture during activities other than sexual intercourse such as sporting activities.<sup>4</sup>

## **How the Reproductive System Functions:**

### ***Ovum***

- The ovum is produced in the ovaries.
- The ovum is a cell which, when fertilized (united with a male sperm cell), can create a baby.
- Each ovary contains about 250,000 ova from birth.
- An ovum is released once a month after puberty begins. Occasionally two or more ova are released.
- The ovum travel down the fallopian tubes to reach the uterus.
- If the ovum is not fertilized in a day or so, it dissolves.

### ***Ovulation***

- Once ovaries start producing hormones, messages are sent to the pituitary gland in the brain, which sends a message to the ovaries to release one ovum, once a month from one ovary.
- Ovulation usually alternates from one ovary to the other each month.
- Usually a girl cannot feel this happening. Some girls experience a slight twinge or pain from the ovary during ovulation.

### ***Menstruation*** (Display the overhead Menstrual Cycle)

- The uterus must prepare for growth of a baby if fertilization occurs.
- Hormones from ovaries send a message to the uterus to grow a thick, soft lining of tissue and blood.
- This lining contains nutrients that would be needed to nourish the fertilized ovum.
- If the egg is not fertilized in the fallopian tube, the lining is not needed to nourish the baby, so the uterus will shed the lining.
- It takes 2 to 7 days to shed the lining. Five days is the average. This is called menstruation or having a period.
- Menstruation usually occurs approximately once a month. Bloody discharge flows out of the body through the vagina. It is usually  $\frac{1}{4}$  cup of blood lost during each period. It may be heavier or brighter the first day or two. It may also be more of a browner colour later in the period.
- Once the lining is completely shed, a new lining begins to grow.
- Soon another ovum is released, and if fertilization does not occur, the egg dissolves and the lining is shed. This happens over and over again, which is why we call it the menstrual cycle.

- A cycle of 28 days is most common; however it can vary from 20-40 days. For the first year or two, periods can be very irregular.
- Menstruation is a normal part of puberty. It is something to be proud of. It is not dirty or bad.
- Some females experience cramping during menstruation which can be relieved using a hot water bottle, exercise, etc.. If cramping is extreme, it may be helpful to see a doctor.
- Menstruation is not a sickness. Participation in regular daily activities such as physical education, gymnastics and soccer is encouraged.
- Personal hygiene is even more important during menstruation because oil secretions from hair and skin can increase and menstrual blood flow may get dried in pubic hair.
- Sanitary pads or tampons are used to absorb menstrual fluid. (Teachers may consider using the Elementary Puberty Kit to demonstrate these products.)
- Always wipe from front to back to help prevent infection.



Some cultures have ceremonies to celebrate the onset of menstruation. Gifts are given and rituals are performed.

### C. Class Discussion

(10 min)

*Students review their knowledge of the female reproductive system, develop resiliency skills around female anatomy issues, and identify support people.*

1. What are some of the good things about being a female?
  - Encourage students to provide appropriate comments.
2. How does a girl know when she will get her first period?
  - Menstruation can begin as early as 8 or as late as 16. Every girl has her own internal clock.
  - Generally, a girl can expect her first period about 2 years after her breasts first start to develop, and soon after there is some hair under the arms and in the pubic area.
  - Vaginal discharge is a sign that menstruation may begin soon.
3. What are some of the things that might worry a female about menstruation?
  - Cramps
  - Blood
  - Smelling different
  - Premenstrual syndrome (PMS)

4. What are some ways to cope with menstruation?
  - Use pads. Various sizes are available. Best to use unscented ones.
  - Change pads frequently (every 3-4 hours)
  - Check with an adult before using tampons for the first time and be sure to read the directions. Need to be changed every 3-4 hours.
  - Wash your hands after handling pads and tampons.
  - Use remedies such as a hot water bottle or moderate exercise to relieve cramps. If severe cramps persist, it may be helpful to see a doctor.
  - PMS can occur any time in the two weeks before menstruation. It can make a female feel moody, irritable or have tender breasts or bloating. Exercising and avoiding caffeine and salt can minimize the symptoms of PMS.
  
5. If you have questions about the female anatomy, who can you ask?
  - Parent
  - Trusted adult
  - Nurse
  - Doctor



### **QUESTION BOX:**

**(10 min)**

If time permits, address student questions.



### **SELF REFLECTION:**

- During the lesson, were:
- Ground rules being followed?
  - Good practices established regarding group work and discussion?

What will you change for future classes with this group?

What will you change for future use of this lesson?



### **STUDENT ASSESSMENT:**

During the lesson, did students:

- Knowledge:**
- Identify the basic components of the female human reproductive system?
  - Become familiarized with appropriate terms for female reproductive anatomy?

- Describe the basic functions of the various components of the female reproductive system?
- Skills:**
- Participate in class discussion and exemplify listening and appropriate speaking skills?
  - Develop coping skills around female puberty issues?
  - *Identify support people?*
- Attitudes:**
- Demonstrate awareness and understanding of the changes that occur during puberty?

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<sup>1</sup> Adapted from: Canadian Federation for Sexual Health. (2005). Beyond the basics: A sourcebook on sexuality and reproductive health education. Ottawa: Author

<sup>2</sup> Alberta Learning (2002). Health and life skills, Kinergarden to grade 9. Retrieved July 4, 2007 from: [http://www.education.gov.ab.ca/K\\_12/curriculum/bysubject/healthpls/healthgi.asp](http://www.education.gov.ab.ca/K_12/curriculum/bysubject/healthpls/healthgi.asp)

<sup>3</sup> Adapted from: Planned Parenthood Southeastern Pennsylvania. (1999). Steps toward adolescence.

<sup>4</sup> EngenderHealth. (2005). Sexuality and Sexual Health Online Mini-Course, Chapter 3, Module 6. Retrieved 08/08/2007 from: [www.engenderhealth.org/res/onc/sexuality/anatomy/pg5.html](http://www.engenderhealth.org/res/onc/sexuality/anatomy/pg5.html)