



UNIT FOUR

Human Reproduction

- ★ **Introduction** 1
(5 minutes)
- ★ **Where Did I Come From: Human Reproduction Review** 2
(45 minutes)
- ★ **Human Reproduction Quiz** 5
(20 minutes)
- ★ **The Real Thing: Preparing for the Construction of Pelvic Models** 9
(15 minutes)  **Preparation Needed** 
- ★ **The Real Thing: Constructing Pelvic Models** 11
(90 minutes)

Introduction to the Unit

On the three-day retreat we introduced *Sam & Sally* and discussed puberty. We also learned about menstruation, spermatogenesis, and fertilization. This unit will review human reproduction in a level of detail that is necessary to build a foundation for future units. In order to understand how birth control methods work, and where and how STI and HIV infections occur, it is essential to understand human reproduction. In addition, having the right language and information to talk about our bodies helps eliminate embarrassment and leads to open and honest communication and allows you as peer educators to give accurate information. This is essential for protecting yourselves and your peers from unintended pregnancy, STIs, and HIV.

Objectives

By the end of this unit, you should be able to:

- Identify the parts of the female reproductive system and how the female/male reproductive system functions
- Identify the parts of the male reproductive system and how the male reproductive system functions
- Understand the processes of spermatogenesis
- Understand the processes of menstruation
- Explain how fertilization occurs

Where Did I Come From? Human Reproduction Review

(45 minutes)



Purpose

To review reproductive systems in preparation for the Pregnancy Prevention unit



Materials Needed

- A copy of *Human Reproduction Quiz* for each peer educator
- A copy of the *Male Reproductive Anatomy* handout and the *Female Reproductive Anatomy* handout for each peer educator



Directions

Step 1

Divide peer educators into pairs. Hand out a copy of *the Human Reproduction Quiz* to each student and give pairs 10 minutes to discuss and answer the questions.

Step 2

Distribute copies of the *Male & Female Reproductive Anatomy* handouts to each peer educator. Review both handouts with students.

Step 3

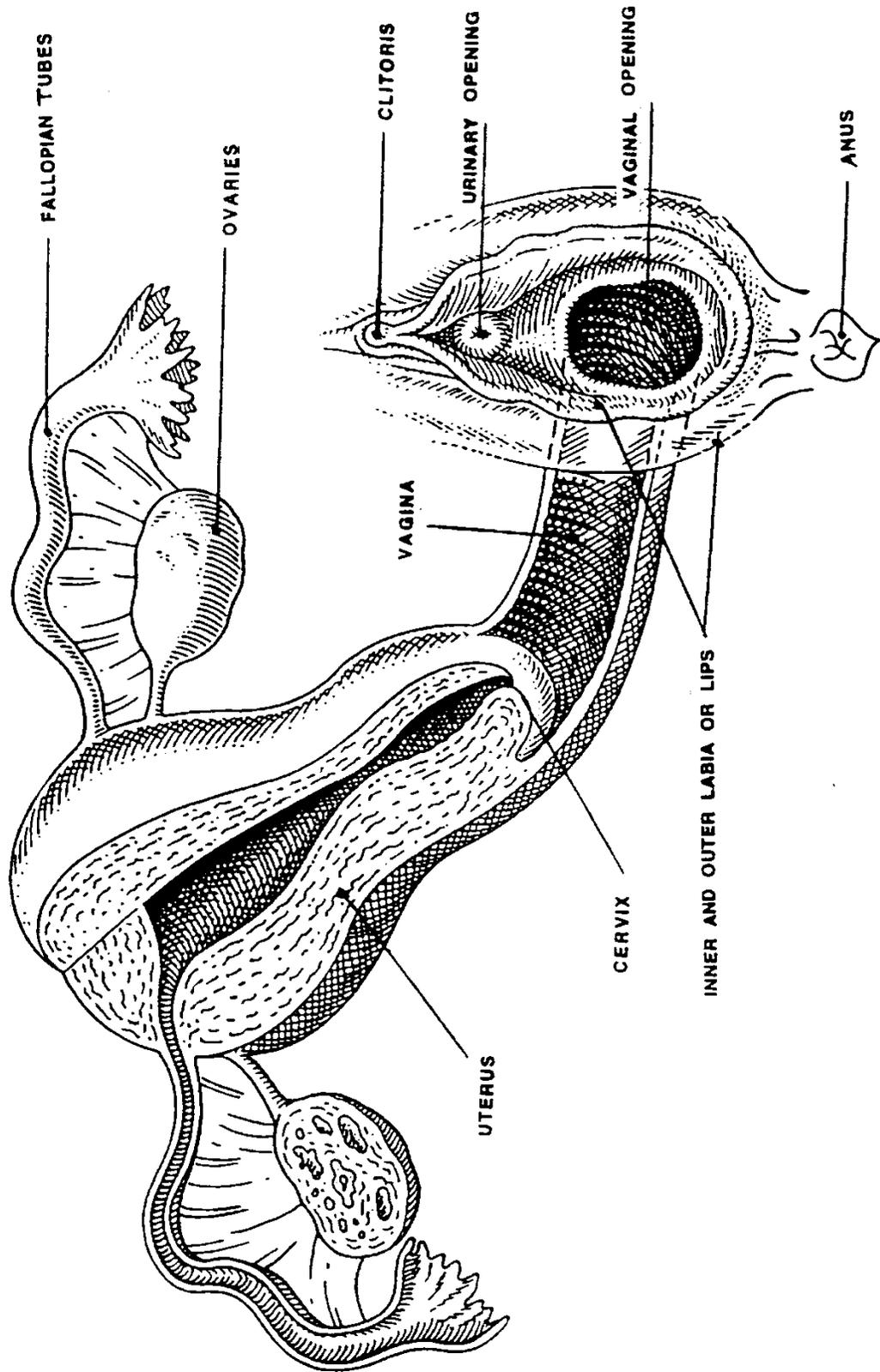
Have peer educators read the questions aloud one at a time. Have students refer to the *Male & Female Reproductive Anatomy* handouts when reviewing the quiz. Use the provided answer key to discuss each answer. Ensure every student understands the correct answers before moving on to the next question.



Note!

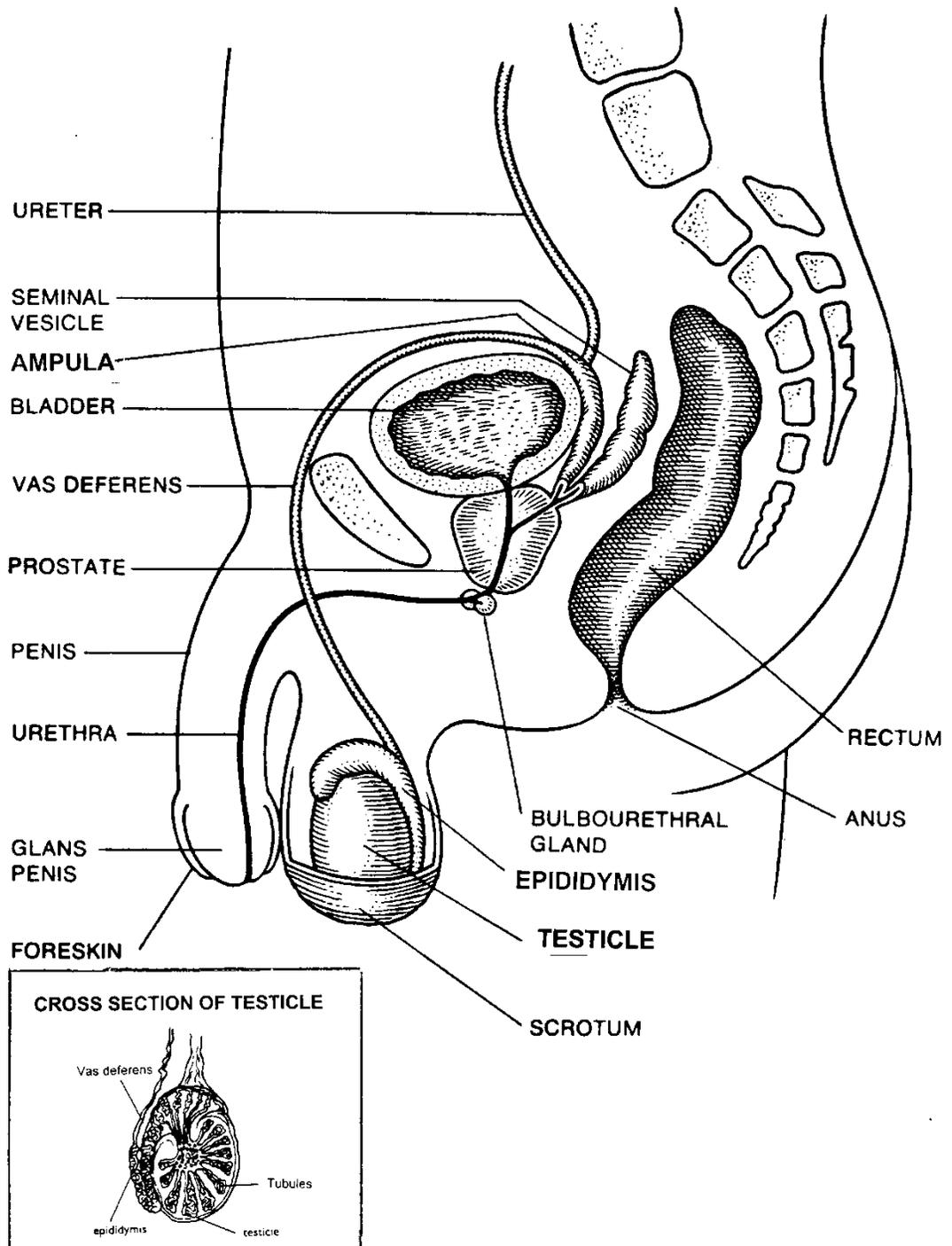
This content was presented on the retreat. Review pages 15-16 in the *Retreat Packet*.

The Female Reproductive Anatomy



From *Education for Sexuality, Concepts and Programs for Teaching*, by Burt and Meeks, 198

The Male Reproductive Anatomy



From *Education for Sexuality, Concepts and Programs for Teaching*, by Burt and Meeks, 1989

Human Reproduction Quiz

Name: _____

Date: _____

Fill in the blank or circle the correct answer for each question.

1. The primary hormone that causes changes of puberty in a male is called _____.
2. The primary hormone that causes changes of puberty in a female is called _____.
3. The average menstrual **cycle** lasts _____ days.
4. The average menstrual **period** lasts _____ days.
5. It is common for teenagers to have irregular menstrual periods. **True / False**
6. Menstrual cramps are related to prostaglandin release and can be relieved by medication.
True / False
7. During the female menstrual cycle, when an egg is released from an ovary, it is called _____ . This usually occurs in the **Beginning / Middle / End** of the cycle.
8. Most of the time, 1 egg is released each month. **True / False**
9. Sperm are made in the _____, located in a sac called the _____.
10. Testicles are located on the outside of the body because sperm cannot be produced at body temperature. **True / False**
11. New sperm are made every week. **True / False**
12. During vaginal intercourse the male deposits sperm into the female's _____.

13. The sperm then travels through the opening to the uterus which is called the _____.
14. The amount of semen expelled in one ejaculation is about _____.
15. There are about _____ sperm in each ejaculation.
16. The number of sperm it takes to get someone pregnant is _____.
17. Every month, a sexually active woman has a chance to get pregnant if she is not using a reliable form of birth control. **True / False**
18. If a woman does not get pregnant the lining of the uterus is not needed and is shed as her menstrual period. **True / False**
19. If the sperm and the egg meet, it is called _____, which occurs in the _____.
20. After fertilization the fertilized egg implants in the _____.
21. If a woman gets pregnant, she still has a period every month. **True / False**
22. The average pregnancy lasts _____.
23. Fraternal twins can occur when a woman releases two eggs during ovulation and they are fertilized by two different sperm. **True / False**
24. Identical twins can occur when one egg is fertilized by one sperm and then it splits in two. **True / False**
25. In a normal birth, the baby comes out of the _____.
26. Under some circumstances a baby needs to be born through a surgical procedure called a _____.

Human Reproduction Quiz

Answer Key

Fill in the blank or select true/false for each of the following questions.

1. The primary hormone that causes changes of puberty in a male is called **testosterone**.
2. The primary hormone that causes changes of puberty in a female is called **estrogen**.
3. The average menstrual **cycle** lasts **28** days.
While the average cycle is 28 days long, many women have cycles longer or shorter than 28 days.
4. The average menstrual **period** lasts **4-7** days.
Some women have heavy longer periods, while others have shorter, lighter periods. It varies from woman to woman.
5. It is common for teenagers to have irregular menstrual periods. **True**
If a teenager has irregular periods, it does not mean there is something wrong. This is common during the teenage years. If someone feels very concerned, they can see a doctor.
6. Menstrual cramps are related to prostaglandin release and can be relieved by medication. **True**
Medications that contain ibuprofen are effective in relieving cramps. Ibuprofen (such as Advil or Motrin) is a prostaglandin inhibitor.
7. During the female menstrual cycle, when an egg is released from an ovary, it is called **ovulation**. This usually occurs in the **Middle** of the cycle.
In an average 28 day cycle, ovulation occurs on day 14.
8. Most of the time, 1 egg is released each month. **True**
9. Sperm are made in the **testicles**, located in a sac called the **scrotum**.
10. Testicles are located on the outside of the body because sperm cannot be produced at body temperature. **True**
11. New sperm are made every week. **False**
New sperm are made every day in the testicles.
12. During vaginal intercourse the male deposits sperm into the female's **vagina**.

13. The sperm then travels through the opening to the uterus which is called the **cervix**.
14. The amount of semen expelled in one ejaculation is about **1.5 to 5 milliliters**. (*About 1/3 to 1 teaspoon.*)
15. There are about **300-500 million** sperm in each ejaculation (*20-150 million sperm per milliliter of semen*).
16. The number of sperm it takes to get someone pregnant is **1**.
17. Every month, a sexually active woman has a chance to get pregnant if she is not using a reliable form of birth control. **True**
If a woman is having sex with a man and not using protection, she is at risk for pregnancy as well as sexually transmitted infections.
18. If a woman does not get pregnant the lining of the uterus is not needed and is shed as her menstrual period. **True**
19. If the sperm and the egg meet, it is called **fertilization**, which occurs in the **fallopian tubes**.
20. After fertilization the fertilized egg implants in the **uterus**.
21. If a woman gets pregnant, she still has a period every month. **False**
While some pregnant women may have spotting, they do not have a period. A menstrual period sheds the lining of the uterus. In a pregnant woman, the lining of the uterus stays intact and the fetus grows in the uterus.
22. The average pregnancy lasts **9 months**.
23. Fraternal twins can occur when a woman releases two eggs during ovulation and they are fertilized by two different sperm. **True**
24. Identical twins can occur when one egg is fertilized by one sperm and then it splits in two. **True**
25. In a normal birth, the baby comes out of the **vagina**.
26. Under some circumstances a baby needs to be born through a surgical procedure called a **caesarian section**.

The Real Thing: Preparing for the Construction of Pelvic Models

(15 minutes)



Purpose

To plan for constructing pelvic models during the following class period



Materials Needed

- A copy of the *Constructing Pelvic Models* handout for each peer educator
- Human reproduction video (see note below)



Directions

Step 1

Divide the class into 4 small groups. Assign two groups each to construct a male or female pelvic model. Explain that the models should be close to life-size and may be free standing or attached to a large piece of paper or cardboard.

Step 2 Homework

Give each student a copy of *Constructing Pelvic Models* handout. Allow 10 minutes for groups to discuss ideas for constructing their assigned model and what materials each student will bring from home.

Step 3 Preparation Needed

Show students the video you selected to illustrate the reproductive process.

Note!

During this unit you will play a video that shows human reproduction. Possible choices are *The Miracle of Life* and PBS's *Life's Greatest Miracle*, Chapters 2 & 3.

The Real Thing: Constructing Pelvic Models



Directions

The next time class meets, you will be building a 3D pelvic models in your assigned group. As a team, you have been assigned to create either a male or female model that is to scale. Your model must include the following parts, which should be clearly labeled:

- **Male Model:**

Penis, testicles, scrotum, urethra, anus, vas deferens, epididymis, ampulla

- **Female Model:**

Vulva, clitoris, vagina, cervix, uterus, fallopian tubes, ovaries, urethra

Your group will present their model, point out the reproductive organs, describe their function, and explain how a pregnancy could occur. Work together as a team to come up with materials you will each bring in from home to help construct these models. Refer to the sample list of possible materials, or use your creativity to come up with your own.

Possible materials:

- Large piece of cardboard
- Colored paper
- Scissors
- Tape
- Glue
- Yarn
- Fur
- Cloth
- Styrofoam balls
- Dried beans
- Pipe cleaners
- Noodles
- Almonds
- Rice
- Buttons
- Straws
- Pipe cleaners
- Balloons
- Foil
- Baggies

Adapted from Center for Family Life Education, PPGNNJ, Positive Images: A New Approach to Contraceptive Education, Brick and Cooperman, 1987.

The Real Thing: Constructing Pelvic Models

(90 minutes)



Purpose

To demonstrate an understanding of the process of reproduction in preparation for the pregnancy prevention unit



Materials Needed

- A set of labels for each group
- Glue, scissors, colored paper, and markers for each group



Directions

Step 1

Have peer educators retrieve their *Male & Female Reproductive Anatomy* handouts. Ask students to name the male and female reproductive organs using the handout as a guide.

Step 2

Have peer educators break into the groups they were assigned during the last session. Give groups 30 minutes to construct their 3D pelvic models using the materials they were assigned to bring in from home.

Step 3

Each group will present their model, naming all of the parts and describing the functions.

Step 4

Ask for one volunteer each from the male models and female models to describe how fertilization takes place.

Step 5

Discuss the following questions.

1. Why is it important to understand how the reproduction system works? (*Understanding how a pregnancy can occur can help us understand how to avoid an unintended pregnancy.*)
2. How will understanding reproduction help us when we learn about the birth control methods? (*If we understand how pregnancy can occur, we will be able to understand how the different methods work to prevent pregnancy.*)
3. Some birth control methods, like the condom, are called barrier methods. What does the condom form a barrier between? (*The sperm and the egg*)
4. Some birth control methods are called hormonal methods. What part of the reproduction system do you think those methods affect? (*The ovaries*)

Note!

Keep the models and refer to them during the Pregnancy Prevention Unit, asking students to show how various methods work on their models.