The Female Reproductive System

Guide to Reading

- Building Vocabulary
  The uterus is also called the womb. The word *womb* can mean “a protective space.” Relate this meaning to the definition in the text.
  - ovaries (p. 378)
  - uterus (p. 378)
  - ovulation (p. 379)
  - menstruation (p. 379)
  - fertilization (p. 380)
  - gynecologist (p. 382)

- Focusing on the Main Ideas
  In this lesson, you will learn to
  - describe the function of the female reproductive system.
  - identify the organs and structures of the female reproductive system.
  - explain how to care for the female reproductive system.
  - apply the skill of advocacy to promote breast self-examinations.

- Reading Strategy
  Predicting Before you read this lesson, take a look at the major headings, figures, and photo captions. Then write down two questions that you think might be answered by reading this lesson.

Quick Write

Why is it important to know about the reproductive system?

Parts of the Female Reproductive System

One of the important jobs of the female reproductive system is to produce mature eggs. Eggs are the female reproductive cells. The *ovaries* are the female endocrine glands that release mature eggs and produce the hormones estrogen and progesterone. These hormones control female sexual development and the other organs in the female reproductive system.

The female reproductive system also includes the uterus. The *uterus* is a pear-shaped organ, located within the pelvis, in which the developing baby is nourished and protected. **Figure 12.5** lists the parts of the female reproductive system and describes what they do.

The Menstrual Cycle

You may have heard of a female having a “period.” This refers to her menstrual cycle. The menstrual cycle is the series of events that prepares the female reproductive system for reproduction. Menstrual cycles begin when a female’s hormone production increases and she reaches full puberty. Most complete menstrual cycles last about 28 days. However, the length of a menstrual cycle varies from female to female. For the first year or two, menstrual cycles are often irregular.
During the menstrual cycle, hormones cause the lining of the uterus to build up with a cushion of blood, tissue, and fluid. Next, the level of the hormone estrogen reaches its highest point during the cycle. This causes **ovulation**, the process by which the ovaries release mature eggs, usually one each menstrual cycle. The egg is released from the ovary. It travels through the fallopian tube toward the uterus.

If the egg is not fertilized, the lining of the uterus begins to break down. **Menstruation** is the flow from the body of blood, tissues, and fluids that results from the breakdown of the lining of the uterus. The period of time in which menstruation takes place is called the menstrual period. It can last from three to seven days. When menstruation occurs, the cycle begins again. The lining of the uterus once again begins to thicken. A complete menstrual cycle is shown in **Figure 12.6** on page 380.
Advocacy

Promoting Breast Self-Examinations
Doctors usually examine a female’s breasts for lumps or signs of breast cancer. Breast cancer can grow and spread very quickly if not detected early. Females can detect signs of cancer by doing a breast self-examination every month. It should be done about seven days after menstruation.

On Your Own
Go to the library or use the Internet to find instructions for how to do a breast self-examination. Make a brochure that features these instructions. In your brochure, include a list of at least four signs of breast cancer to watch out for.

- **Vaginitis** is an infection of the vagina. The female may have itching, discharge, and sometimes pain. Vaginitis is treated with medication.

- **Toxic shock syndrome** (TSS) is a rare bacterial infection. Some studies show that it can be caused by using a single tampon for more than 24 hours. TSS can lead to death if it is not treated. Signs of TSS include high fever, a rash, and vomiting. TSS can be prevented. Females who use tampons must read the directions that come with the package and follow them very carefully. A female should change her tampon every 4 to 6 hours.

- **Cancer** can occur in the breasts, ovaries, uterus, and cervix. It is caused by uncontrolled cell growth in the tissues of these organs. Early detection is the best way to prevent the serious complications of cancer. This is done by having regular health screenings. Many kinds of cancer can be treated through surgery, radiation, or chemotherapy. Fortunately, cancer involving the reproductive system is rare among teens.

- **Sterility** is the inability to produce children. Sterility can be caused by many factors, including untreated STDs and hormone imbalances caused by stress, diet, and overexertion, as well as aging. Some types of sterility can be treated by medicine or surgery. Infertility is a reduced ability to produce children. It can be caused by some of the same factors that cause sterility, including untreated STDs.

▼ By keeping track of her menstrual cycle, a female can better monitor her health. **How long is a typical menstrual cycle?**

Lesson 4: The Female Reproductive System
The Menstrual Cycle

The menstrual cycle ranges from 25–30 days. This can differ for some females, especially during the first two years of menstruation. **How long does a menstrual period usually last?**

![Diagram of the menstrual cycle](image)

**Fertilization**

**Fertilization** is the joining of a male sperm cell and a female egg cell to form a fertilized egg. An egg that travels to the uterus and is not fertilized eventually dissolves. If sperm enter the vagina and travel to the fallopian tubes shortly after ovulation, one sperm can meet the egg cell and fertilize it. When the egg and sperm cell unite, the egg develops a film which prevents more sperm cells from entering the egg. The fertilized egg then travels to the uterus where it becomes implanted in the lining. The female is now pregnant. She does not menstruate or ovulate again until after the pregnancy is over. Inside the uterus the fertilized egg begins to grow. It is nourished and protected by the lining of the uterus. Eventually, the fertilized egg develops into a baby.

**Female Health Problems**

Many problems can affect the female reproductive system. Fortunately, many of them can be prevented and treated. Here are some common problems and their treatment.

- **A yeast infection** is an infection of the vagina. It is caused by changes in the amounts of bacteria and fungi that normally live in the vagina. As a result, the female experiences itching as well as a discharge. The infection is usually brought on by hormone changes, certain medicines, and tight clothing. It can be treated with medicine.
Caring for the Female Reproductive System

Here are some steps females can take to keep their reproductive systems healthy.

- Do a breast self-examination every month.
- Shower or bathe daily.
- Keep track of your menstrual cycle. It may be irregular for the first year or two. If a menstrual period is missed for several months, or if there is severe pain or a very heavy menstrual flow, see a doctor.
- See a health care provider if you experience premenstrual syndrome (PMS). PMS occurs just before menstruation. It can include headaches, breast tenderness, fatigue, irritability, acne, and abdominal cramps.
- Visit a gynecologist for regular checkups. A gynecologist is a doctor who specializes in the female reproductive system.

Reading Check
List What are four ways to care for the female reproductive system?

Lesson 4 Review

After You Read
Review this lesson for new terms, major headings, and Reading Checks.

What I Learned

1. **Vocabulary** Define fertilization, and use it in a sentence.

2. **Explain** What happens to the lining of the uterus if fertilization does not occur after ovulation?

3. **List** What are three symptoms of PMS?

4. **Explain** Where does the egg go after ovulation has occurred?

Thinking Critically

5. **Synthesize** What parts of the female reproductive system are also part of the endocrine system? What hormones do they produce?

6. **Analyze** How does fertilization affect the menstrual cycle?

Applying Health Skills

7. **Communication Skills** Molly is 18 years old and not sexually active. She feels that she does not have time to go to a gynecologist and that since she isn’t sexually active, she doesn’t have to worry about her reproductive system. How would you explain to Molly why it is important that she have a yearly checkup? What health concerns might she prevent by visiting a gynecologist?