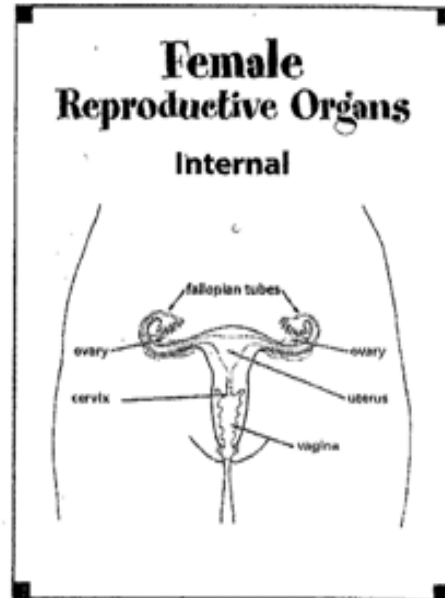


# **THE FEMALE REPRODUCTIVE SYSTEM**

The **female reproductive system** includes the **internal organs** such as the vagina, cervix, uterus, fallopian tubes, and ovaries, as well as the **external organs**, including the vulva, vaginal opening, urinary opening, inner lips, outer lips, and clitoris.

## **Internal Reproductive Organs**

Inside the body, the **vagina** is a muscular tunnel about 3 to 4 inches long. It runs from the vaginal opening (outside the body) to the opening of the uterus (inside the body). The vagina has 3 main functions: it provides a way for menstrual fluid to leave the body, it receives a man's penis during sexual intercourse, and it allows a baby to leave the mother's body during childbirth. This is why the vagina is also called the *birth canal*. The vagina is very elastic: it can adjust to fit a thin tampon to catch menstrual fluid, a penis, or even a baby. A healthy vagina releases fluids that keep it clean and protect it from infection. Normally, the fluid is clear or whitish. It may have a slight odor, but it doesn't smell bad.



The **uterus**, sometimes called the womb, is one of the strongest muscles in the human body. IT provides a safe place where a fertilized ovum (egg) can grown and develop into a baby. In women who aren't pregnant, the uterus is about the size of a fist – about 3 inches long. It is shaped like an upside down pear. During pregnancy, the uterus grows to about 12 inches long, but shrinks again after childbirth.

The **cervix** is the bottom part, or neck, of the uterus that connects to the vagina. In a woman who has never been pregnant, the cervix looks like a shiny, round button with a hole in the center. This opening is about as wide as a pencil point. The opening allows menstrual fluid to flow out of the uterus and is also the way sperm cells get into the uterus. During childbirth, the opening stretches to allow the baby to come out. It can reach 4 inches (10 centimeters) across, and closes up again after childbirth.

The **fallopian tubes** come out of each side of the uterus. They are about 5 inches long and as narrow as a strand of spaghetti. An ovum (egg) travels from the ovary to the uterus through the fallopian tube. The inside of each fallopian tube is lined with tiny hair-like structures called cilia. When an egg enters the tube, the cilia sway together and push the egg along. Unlike sperm, eggs can't swim on their own.

The **ovaries** are small organs, about the size of an almond. There is one ovary on each side of the uterus. Ovaries make the female hormone **estrogen** and **progesterone**. They also hold **eggs**. A girl is born with all of the eggs that she will ever need – more than 300,000. Each egg is covered by a thin capsule, called a follicle that protects it. Starting at puberty, one follicle and its egg starts to ripen at the start of each menstrual cycle.

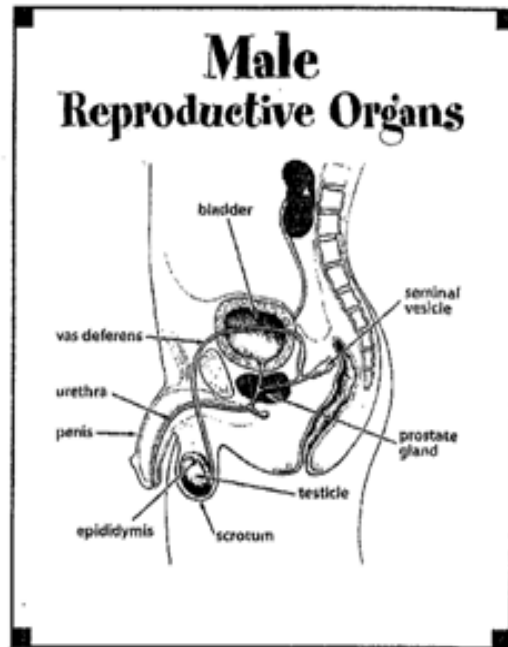
# THE MALE REPRODUCTIVE SYSTEM

## Male Reproductive Organs

The **male reproductive system** includes the penis, urethra, scrotum, seminal vesicles, and prostate gland.

The **penis** is made up of spongy tissue. Most of the time it is soft and limp. But when a man becomes sexually excited, the tissue of the penis fills with blood and it becomes firm and erect. This happens during sexual intercourse, but can also happen naturally during sleep.

The **testicles** are located inside the **scrotum**, which hangs below the penis. Men have 2 testicles, which are about the same size and shape as small plums. The testicles make the male hormone testosterone and produce sperm, the microscopic male reproductive cells. Every day, a healthy male produces several hundred million sperm. They are stored in the **epididymis**. Sperm that aren't ejaculated get broken down by the body and reabsorbed.



The testicles make sperm best at a few degrees cooler than normal body temperature. The testicles hang outside the body in the scrotum to keep the sperm cool. If the testicles get cold, the scrotum is pulled towards the body to warm them up to the best temperature for making sperm. If the testicles get too warm, the scrotum hangs lower from the body to cool them down.

The **urethra** is the tube that carries sperm outside the body through the penis. It is also the tube through which urine leaves the body. Urine and semen never travel through the urethra at the same time.

As the new sperm are produced in the testicles, they pass through a tube called the **sperm duct** (also called the vas deferens). The **seminal vesicles** are glands that produce a fluid that gives sperm energy and helps them move. The sperm continue to move through the sperm duct to the **prostate gland**. The prostate gland makes fluid that mixes with the sperm to form a substance called **semen**. Semen contains millions of sperm. It is released (ejaculated) from the penis during sexual intercourse.

## Circumcision

In newborn boys, a flap of skin called the foreskin covers the tip of the penis. Sometimes the foreskin is removed in an operation called **circumcision**. Circumcision is performed for religious and cultural reasons. It has no effect on penis size, how the penis works, and hygiene.

# THE MENSTRUAL CYCLE

**Menstruation**, or having periods, begins during puberty. For most girls, periods start sometime between ages 9 and 16. The average age to start is 12 to 13.

The **menstrual cycle** is the monthly cycle of changes that happens in the female reproductive system. During the menstrual cycle, an egg develops in an ovary. At the same time, the uterus prepares for the arrival of a fertilized egg. Because each body is different, the time it takes to complete one menstrual cycle is different between different women. Cycles vary from 20-40 days. The average cycle is 28 days.

The menstrual cycle has 4 main stages:

## Stage 1: Menstruation

This is the time of bleeding, or the **period**. The inner lining of the uterus (the endometrium) flows out of the body through the vagina. Periods usually last between 3 to 7 days. About 4 tablespoons of fluid leaves the uterus during a period. The first day of a woman's period is considered "Day 1" of her menstrual cycle.

## Stage 2: Egg Ripening and Uterus Lining Buildup

This phase begins when the period is over. As the egg matures, the lining of the uterus gets thicker. This takes 6 to 12 days.

## Stage 3: Ovulation

This is the midpoint of the menstrual cycle. Hormones cause the chamber around the egg (called the follicle) to break open and release the mature egg into the fallopian tube. This is called **ovulation**. Now the woman can become pregnant. Ovulation usually occurs on Day 14 of a woman's menstrual cycle. Some women experience slight discomfort, such as cramps, during ovulation.

## Stage 4: Egg Travels to Uterus

This is the most stable part of the menstrual cycle. It last about 14 days for most women. During this stage, the uterus is ready to receive a fertilized egg. The egg usually takes 3 to 4 days to reach the uterus. If the egg has been fertilized by a sperm cell, it attaches to the thick, blood-filled lining of the uterus. This is the start of **pregnancy**. If an egg is not fertilized, the egg and the lining of the uterus breaks down. The extra blood and tissue of the uterus begins to pass out of her body through the vagina, and the woman begins her period.

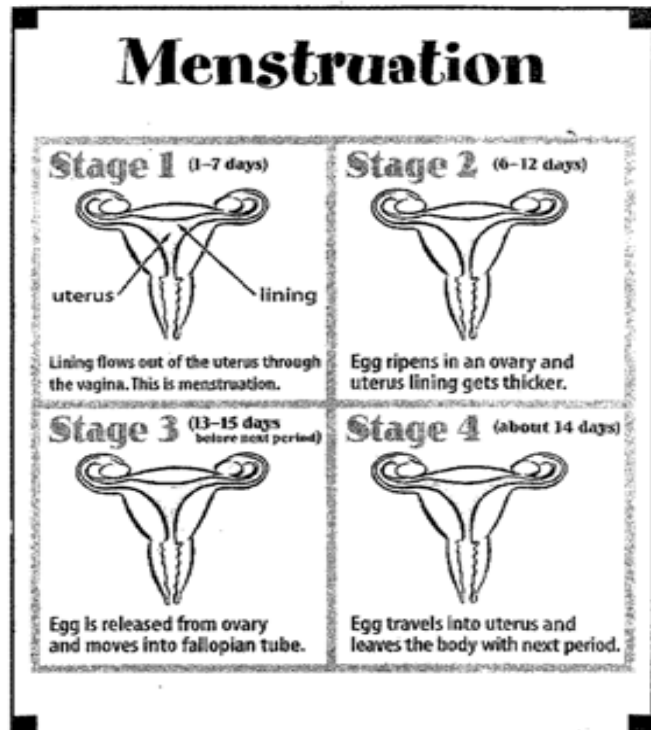
## Menopause

A woman's menstrual cycle continues during the years that she can reproduce, except during pregnancy, when she has no periods. This is because the uterus lining must stay thick and healthy for 9 months while the fetus is developing inside it. Menstrual cycles eventually stop, usually between the ages of 45 and 55. When her periods stop, a woman has reached a stage called **menopause**.

## Staying Healthy

Menstruation is a normal, healthy part of a woman's life. Girls can do everything they usually do while they are menstruating, such as exercise, swim, and bathe. Here are some tips to stay healthy:

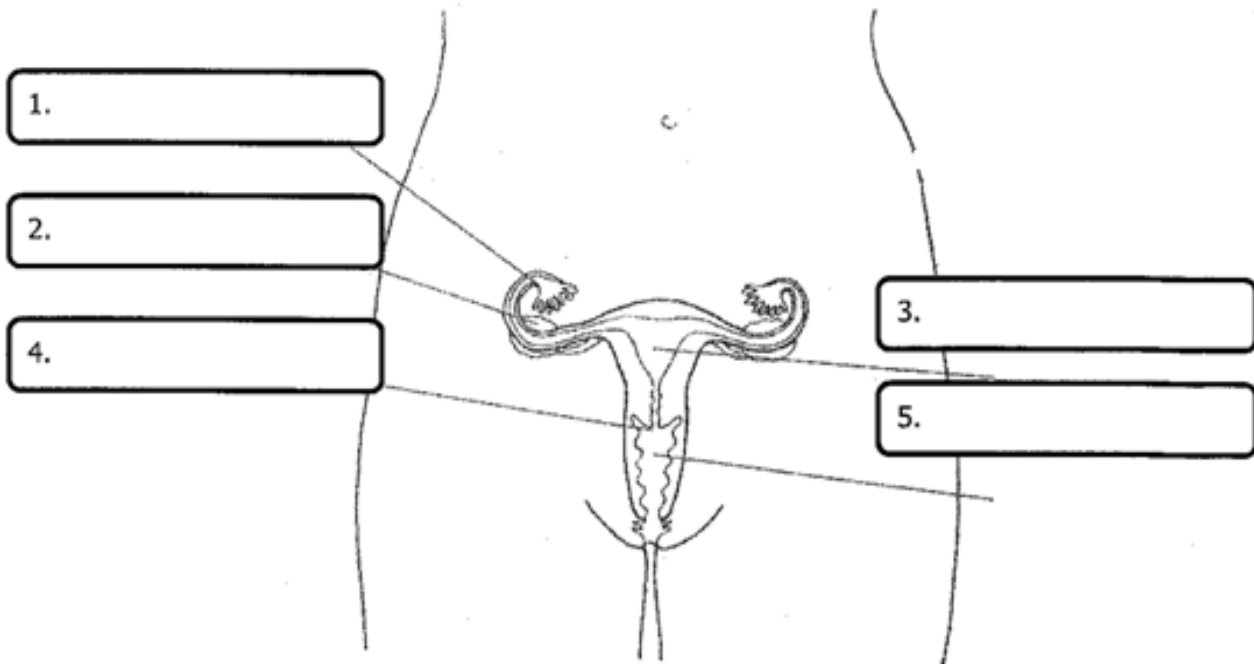
- Some girls and woman experience cramps the first day of their periods. These can be dull, achy pains in the stomach area. They can also be sharp and painful.
- You can prevent or minimize cramps by exercising regularly, eating a well-balanced diet, and getting enough sleep. Using a heating pad on your stomach area and taking some regular pain reliever medications can also help. If cramps are severe, see your doctor.
- If you use tampons when you are menstruating, change it every 3-4 hours. If it is more comfortable, consider wearing a pad at night.
- Practice good hygiene by showering or bathing daily with mild soap.



## **REVIEW - THE FEMALE REPRODUCTIVE SYSTEM**

**Part 1:** Look at the diagram below and label the body parts by writing the correct term from the word bank in the blank space.

Word Bank				
Ovary	Fallopian tube	Uterus	Cervix	Vagina



**Part 2:** Match the definition from Column 2 with the organ it describes in Column 1.

### **Reproductive Organs**

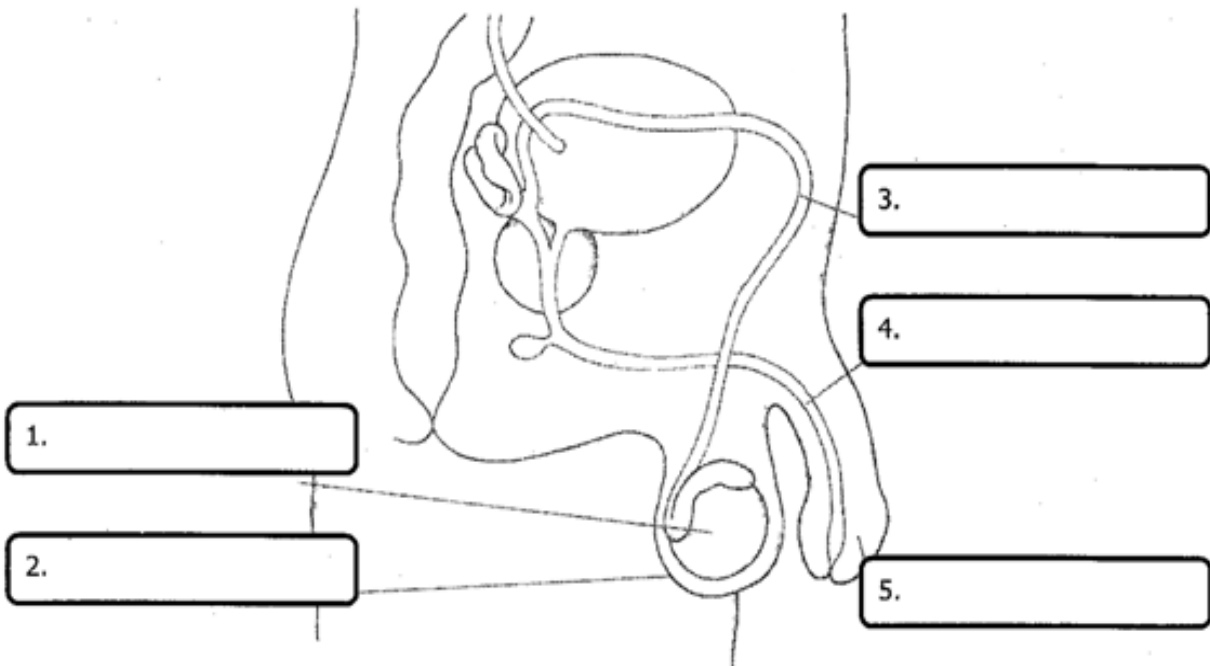
### **Definitions**

- |                        |   |
|------------------------|---|
| 1. ____ Cervix         | A. Pear-shaped organ in which the fetus grows and develops until birth.   |
| 2. ____ Vagina         | B. Tubes through which a female's eggs travel on their way to the uterus; the place where eggs are fertilized by sperm. |
| 3. ____ Uterus         | C. Passage that leads from the uterus to outside the body.  |
| 4. ____ Fallopian Tube | D. Narrow end of the uterus that opens into the vagina. It stretches to allow a baby to be born.                        |
| 5. ____ Ovary          | E. Female primary sex organ in which egg cells and sex hormones are produced.   |

## **REVIEW - THE MALE REPRODUCTIVE SYSTEM**

**Part 1:** Look at the diagram below and label the body parts by writing the correct term from the word bank in the blank space.

Word Bank				
Penis	Urethra	Scrotum	Testicle	Sperm duct



**Part 2:** Match the definition from Column 2 with the organ it describes in Column 1.

### **Reproductive Organs**

\_\_\_\_\_ 1. Penis

\_\_\_\_\_ 2. Urethra

\_\_\_\_\_ 3. Scrotum

\_\_\_\_\_ 4. Testicle

\_\_\_\_\_ 5. Sperm duct

### **Definitions**

- A. The primary male sex organ where sperm and sex hormones are produced.
- B. The duct (tube) which urine and semen are let out of the body, though not at the same time.
- C. The tube that carries sperm cells from the testicles.
- D. Male organ that allows a male to pass urine and semen from his body.
- E. The pouch of skin that contains the testicles and holds them outside of the body.

## REVIEW - THE MENSTRUAL CYCLE

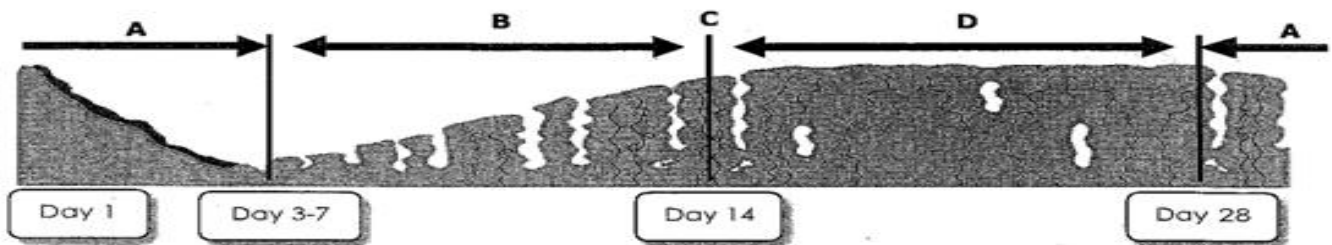
Word Bank				
menstrual cycle	uterus	fertilized	cervix	egg
___ days	ovary	blood vessels	menstruation	period

### 1. Fill In The Blanks

In the menstrual cycle, the \_\_\_\_\_ releases an \_\_\_\_\_ every \_\_\_\_\_. Each time an egg is released, the \_\_\_\_\_ must prepare itself for a fertilized egg. A thick lining full of \_\_\_\_\_ slowly develops. If the egg is fertilized, it passes into the uterus and attaches itself to the uterus wall. If the ovum is not fertilized, it passes out of the uterus. The uterus lining will begin to break down and exit through the vagina. This process is called \_\_\_\_\_, otherwise known as a "\_\_\_\_\_". The menstrual cycle allows the uterus to grow a fresh lining every time a(n) \_\_\_\_\_ is released to provide fresh and healthy conditions for the growing embryo.

### 2. Interpreting A Diagram

Look at the diagram. For each sentence below it, write the matching letter from the diagram in the box.



Description of Events
The uterus lining is thick and waiting for a fertilized egg.
The uterus lining begins to gradually thicken up again.
The egg is released by the ovary (ovulation).
The released egg is traveling down the fallopian tube to be fertilized.
The thick lining of the uterus breaks down and flows out slowly.
(Challenge) A woman is fertile during this period only

Letter

### 3. Short Answer Questions

1. What starts on Day 1 of the menstrual cycle?

2. Approximately how long does it take the uterus lining to build up again after menstruation?

3. Why is it necessary to build up the uterus lining every month, again and again?


4. Why do you think it is a good thing that a woman's menstrual cycle stops around the ages of 45-55 (called menopause) and she can no longer produce children?