

SEXUAL EDUCATION

Female Reproductive System

Structure and Function

The reproductive cells in females are called eggs or ova (singular, ovum).

The functions of the female reproductive system are

- to produce sex hormones
- to produce eggs
- to provide a nourishing environment in which a fertilized egg can develop into a baby

Ovaries

The reproductive glands in which eggs are produced are called **ovaries**.

The sex hormone estrogen activates certain physical changes at puberty.

Progesterone activates changes to a woman's reproductive system before and during pregnancy.

Once puberty begins, one of the ovaries releases a ripened egg about once every month in a process called ovulation.

Fallopian Tubes

Fallopian tubes (fuh LOH pee un) are passageways that carry eggs away from the ovaries.

When the ovary releases an egg during ovulation, the fingerlike ends of the fallopian tube draw the egg into the tube.

The fallopian tubes are where fertilization usually occurs.

Uterus

The **uterus** is a hollow, muscular, pear-shaped organ.

In the uterus, a fertilized egg can develop and grow.

When a baby is ready to be born, the cervix expands to allow the baby to pass through.

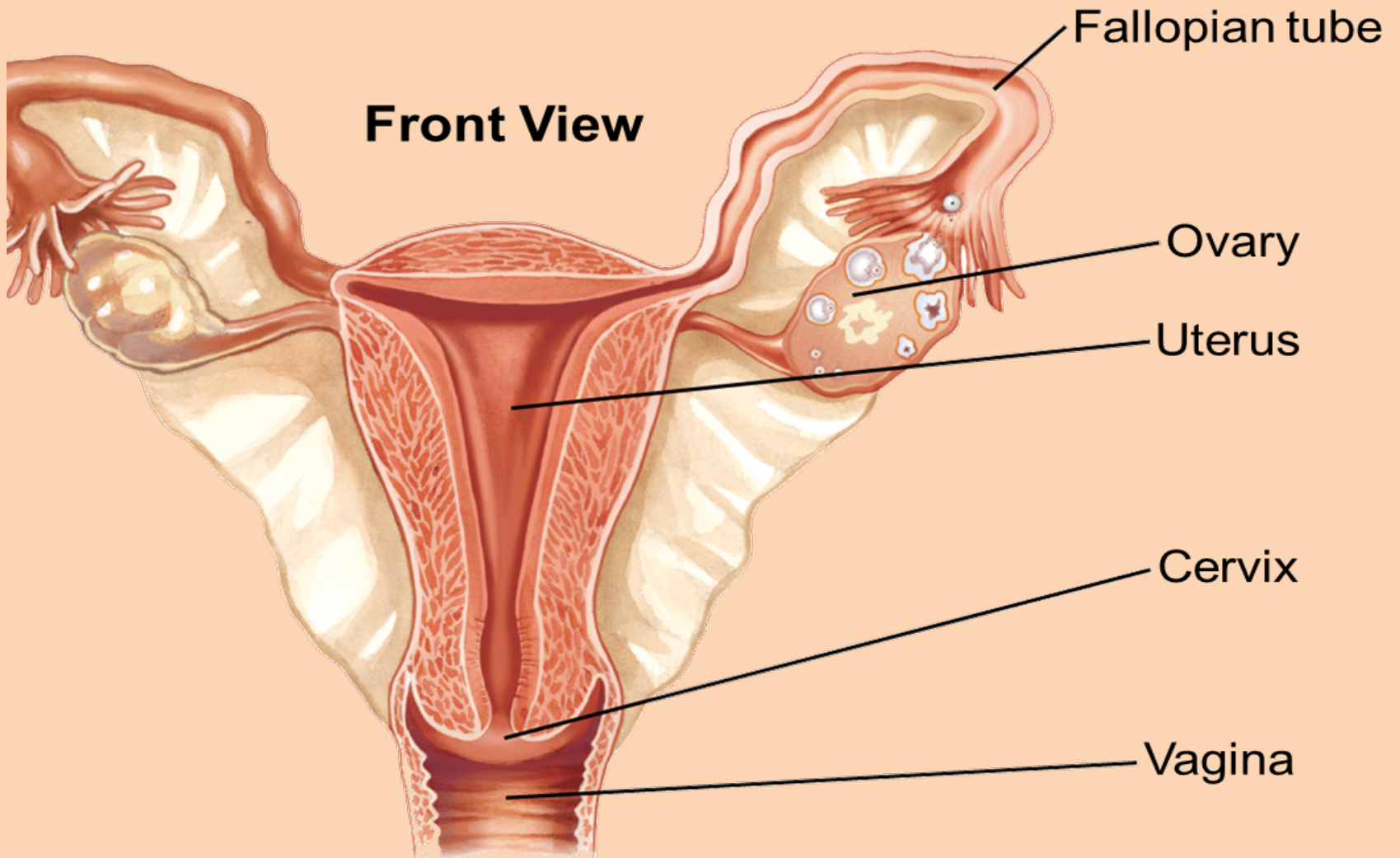
Vagina

The **vagina**, or birth canal, is a hollow, muscular passage leading from the uterus to the outside of the body.

Sperm enter a woman's body through the vagina.

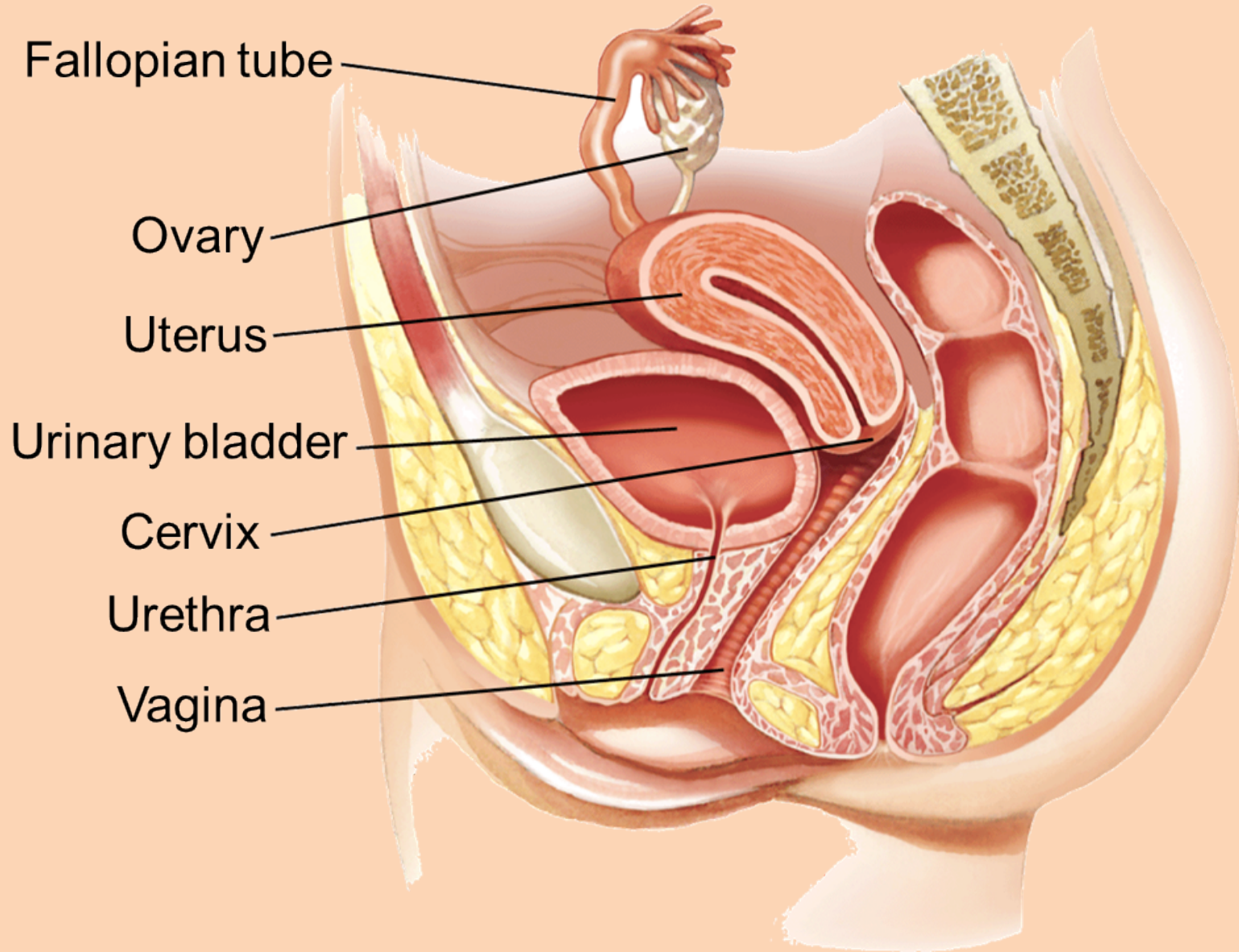
The walls of the vagina are very elastic, which allows it to expand dramatically during childbirth.

Female Reproductive System



Female Reproductive System

Side View



The Menstrual Cycle

Women usually produce only one mature egg cell each month during a process called the **menstrual cycle** (MEN stroo ul).

During the menstrual cycle, an ovary releases a mature egg.

The egg travels to the uterus.

If the egg is not fertilized, the uterine lining is shed and a new cycle begins.

Factors Affecting the Menstrual Cycle

On average, a woman's menstrual cycle lasts 28 days.

Factors such as diet, stress, exercise, and weight gain or loss also affect the menstrual cycle.

The menstrual cycle may be irregular at times, especially during puberty.

During **menopause**, the ovaries slow down their hormone production and no longer release mature eggs.

The Menstrual Cycle

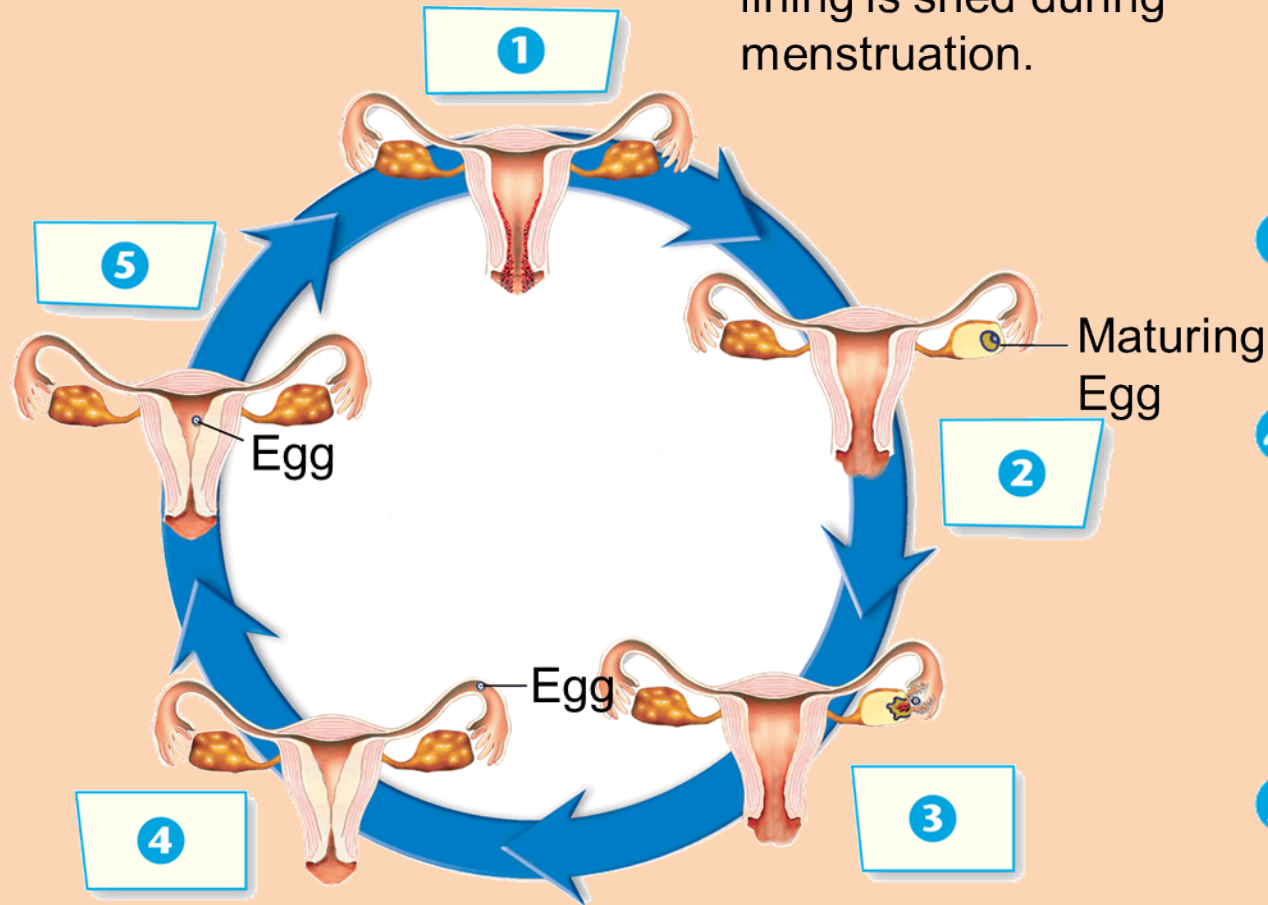
1 Days 1–4 The uterine lining is shed during menstruation.

2 Days 5–13 An egg matures in one of the ovaries, and the uterine lining starts to thicken.

3 Days 14–15 The ovary releases the mature egg during ovulation.

4 Days 16–22 The egg travels through the fallopian tube to the uterus, and the uterine lining continues to thicken.

5 Days 23–28 The unfertilized egg enters the uterus.



Stages of the Menstrual Cycle

During the first half of the cycle, an egg matures inside one of the ovaries.

At about the middle of the cycle ovulation occurs.

If the egg has not been fertilized by the time it reaches the uterus, the uterine lining breaks down.

The blood and tissue of the thickened lining pass out of the body through the vagina in a process called menstruation.

Menstrual Discomfort

Cramps are caused by contractions of the uterus.

Premenstrual syndrome, or PMS, is marked by nervous tension, mood swings, headaches, bloating, and irritability.

The dramatic change in hormone levels that occurs before menstruation begins may cause PMS.

Menstrual cramps ? Try this . . .

- Engage in moderate **exercise**.
- Take a **warm bath**.
- Apply a **heating pad** to the abdomen.
- Take **aspirin or ibuprofen** with doctor's approval.

Toxic Shock Syndrome

This syndrome is caused by a bacterial infection.

Symptoms of toxic shock syndrome include

- a sudden high fever
- A rash
- Vomiting
- Diarrhea
- Dizziness

To decrease the risk of toxic shock syndrome, women should use tampons with the lowest possible absorbency for their needs and change tampons often.

Keeping Healthy

Caring for the female reproductive system involves

- cleanliness
- sexual abstinence
- prompt treatment for infections
- self-exams
- regular medical checkups

Cleanliness

One important health habit is cleanliness, including daily washing of the external vaginal area.

Cleanliness is especially important during menstruation, as is the regular changing of sanitary pads or tampons.

Sexual Abstinence

A number of serious infections can result from sexual contact.

The only way to eliminate your risk of sexually transmitted infections is to abstain from sexual activity.

Prompt Treatment for Infections

Many women experience vaginitis, a vaginal infection caused by yeast, bacteria, or other microorganisms.

Symptoms include:

- a thick discharge
- odors
- vaginal itching
- a burning sensation during urination

Self-Exams

Symptoms of vaginitis, sores on the genitals, or any unusual pain in the abdomen require a medical exam.

A woman should consult a doctor

- if she notices heavier bleeding than normal during menstruation
- if her periods stop completely
- if she notices bleeding at times between her regular periods

For the early detection of breast cancer, all women, including teens, should perform a monthly breast self-examination.

Medical Checkups

In a **Pap smear**, a sample of cells is taken from the cervix and examined under a microscope.

A **mammogram** is an X-ray of the breast that can help detect breast cancer.

Ovarian cysts Ovarian cysts are growths on the ovary.

Endometriosis This is a condition in which tissue from the lining of the uterus—the endometrium—grows outside the uterus, in the pelvic cavity.

Infertility Causes of infertility in women include blocked fallopian tubes and problems with ovulation.

SEXUAL EDUCATION

Male Reproductive System

Structure and Function

In males, the reproductive cells are called sperm.

The functions of the male reproductive system are

- to produce sex hormones
- to produce and store sperm
- to deliver sperm to the female reproductive system

There, a sperm cell may join with an egg, in a process called fertilization

Testes

The testes (TES teeZ) are the male reproductive glands.

The testes (singular, testis) have two major functions—the production of testosterone and the production of sperm.

The sex hormone testosterone affects the production of sperm and signals certain physical changes at puberty.

The testes, also called testicles, hang outside the body within a sac of skin called the scrotum.

Penis

The penis is the external sexual organ through which sperm leave the body.

The tip of the penis is covered with loose skin, called the foreskin.

In some males the foreskin is removed shortly after birth.

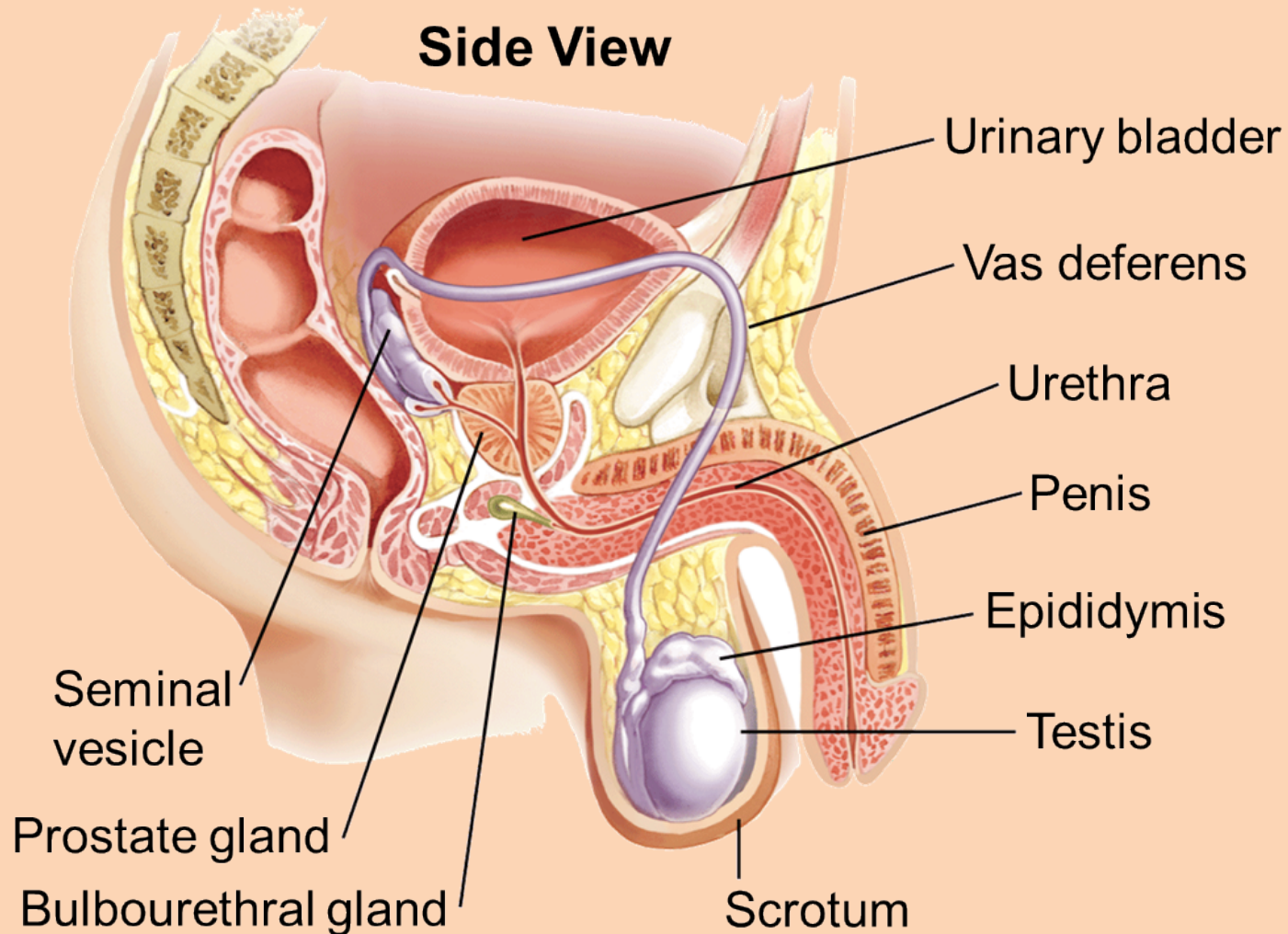
Sperm Production

Sperm production begins when the hypothalamus signals the pituitary gland to release two hormones—luteinizing hormone (LH) and follicle-stimulating hormone (FSH).

LH signals the testes to begin making testosterone.

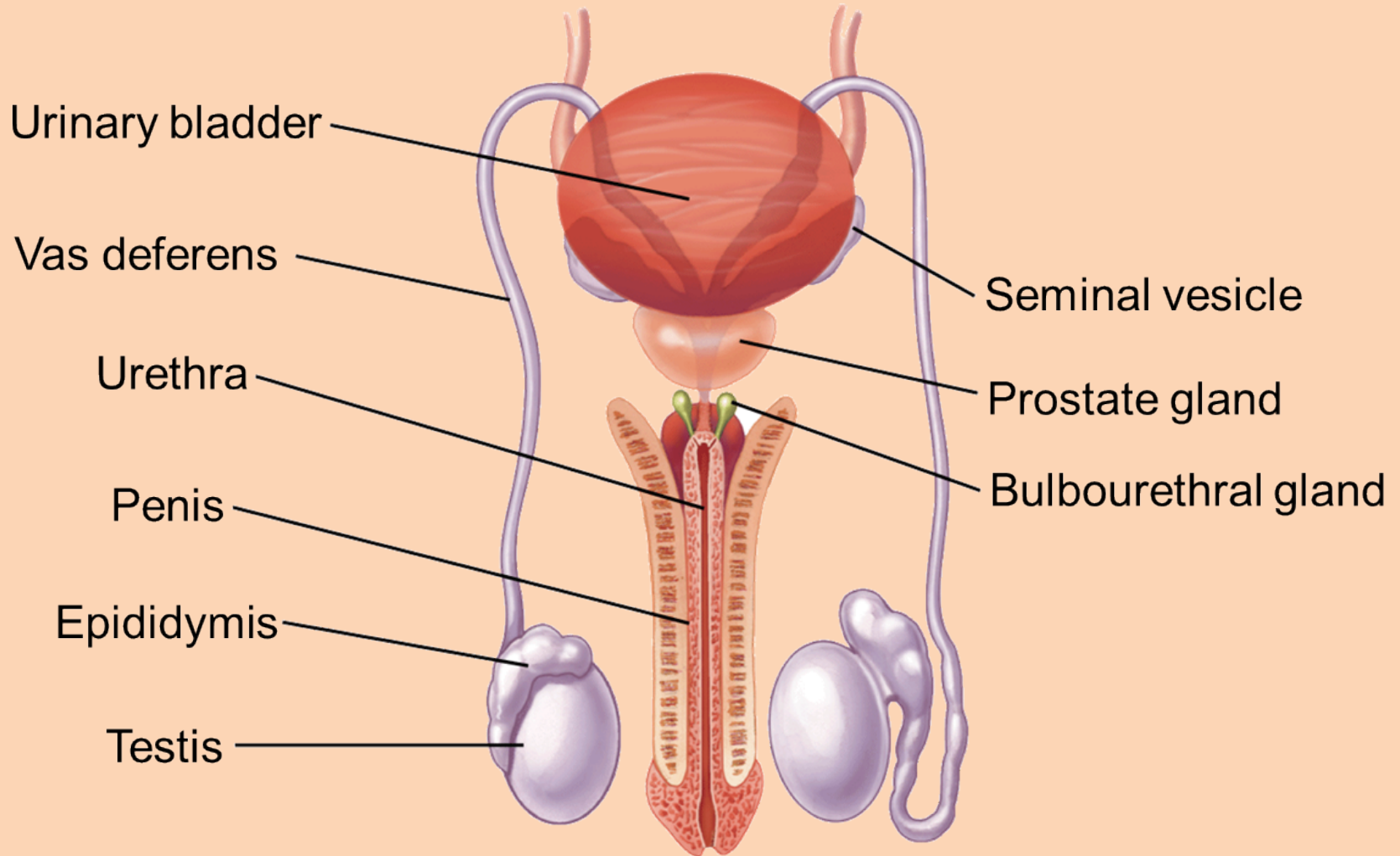
Testosterone and FSH then signal the production of sperm.

Male Reproductive System



Male Reproductive System

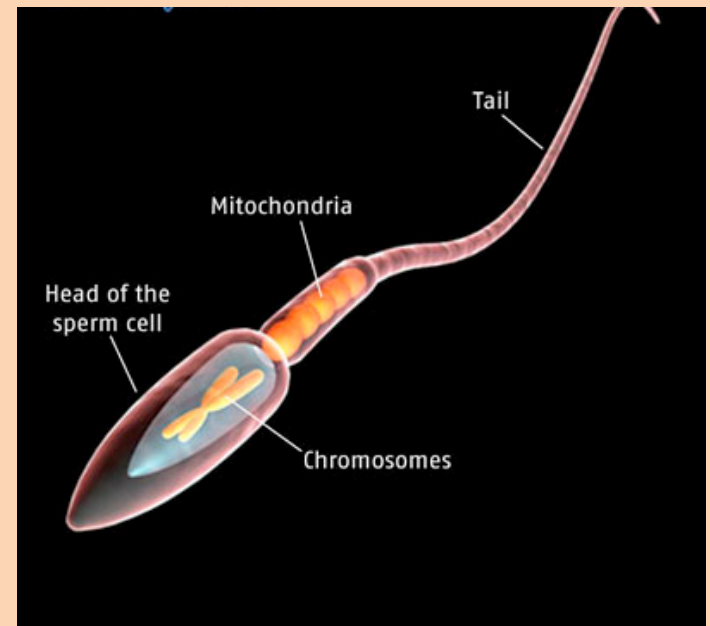
Front View



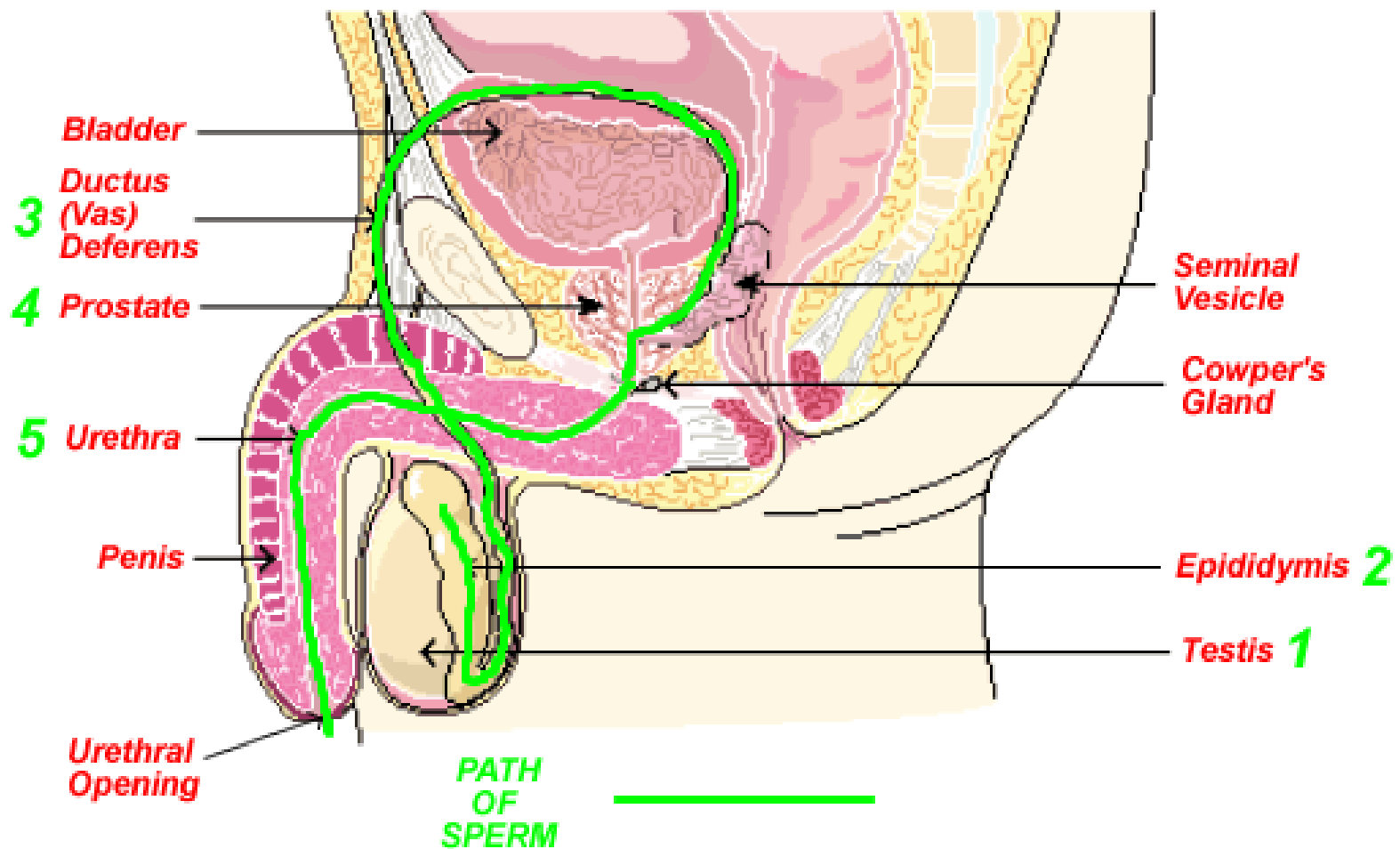
The Pathway of Sperm

During their passage through the male reproductive system, sperm cells mix with fluids produced by the prostate and two other glands.

The mixture of sperm cells and these fluids is called semen (SEE mun).



Path of Sperm



Testes --> Epididymis --> Ductus Deferens --> Prostate --> Urethra

Release of Sperm

The ejection of semen from the penis is called ejaculation.

Ejaculation occurs when muscles in the male reproductive system and at the base of the bladder contract, forcing semen through the urethra.

Several million sperm cells are released during one ejaculation.

Ejaculation can occur when the penis is in an erect state.

Keeping Healthy

Caring for the male reproductive system involves

- cleanliness
- sexual abstinence
- prompt treatment for infections
- self-exams
- regular medical checkups

Cleanliness

It is important to thoroughly clean the external organs—the penis and scrotum—daily, preferably during a shower or bath.

Drying the groin area well after showering can prevent fungal infections that can cause jock itch

Sexual Abstinence

A number of serious infections of the reproductive system and other body systems can result from sexual contact.

The only way to eliminate your risk of sexually transmitted infections is to abstain or refrain from sexual activity.

Protection From Trauma

During athletic activities, males should wear a protector, also called a “cup,” or supporter.

Tight clothing should be avoided.

Males should be careful when lifting heavy objects.

Self-Exams

It is important for males to monitor their own bodies for any signs of possible medical problems.

Pain when urinating, unusual discharges, or sores on the genitals require a medical examination.

Males should examine their testes for signs of testicular cancer.

Using your thumb and fore finger in a rolling motion.
Looking for lumps, changes in size or texture.

Medical Checkups

Medical exams throughout life can help ensure reproductive health.

In many older men, the prostate becomes enlarged or develops cancer.

Another condition a doctor can diagnose is infertility—the condition of being unable to reproduce.

In males, infertility is marked by the inability to produce healthy sperm or the production of too few sperm.