
Life Processes-2

Engage: Are these people right or wrong (or a bit of both)?



kotak
Financial Freedom

Jessie says:

All the parts of our bodies are made up of cells.

Some cells have a nucleus.

The nucleus controls the cell.

Our bodies grow because the cells get bigger.



Jane says:

The way we look is determined by the genetic information that we get from our parents.

Egg cells contain 90% of our genetic information and sperm cells contain 10% of our genetic information.



Mrs Gren says that if something is ALIVE, it must be able to do these 7 things:

Move

Run for the bus

Sense things

Give presents at Christmas

Respire (turn food into energy)

Excrete waste

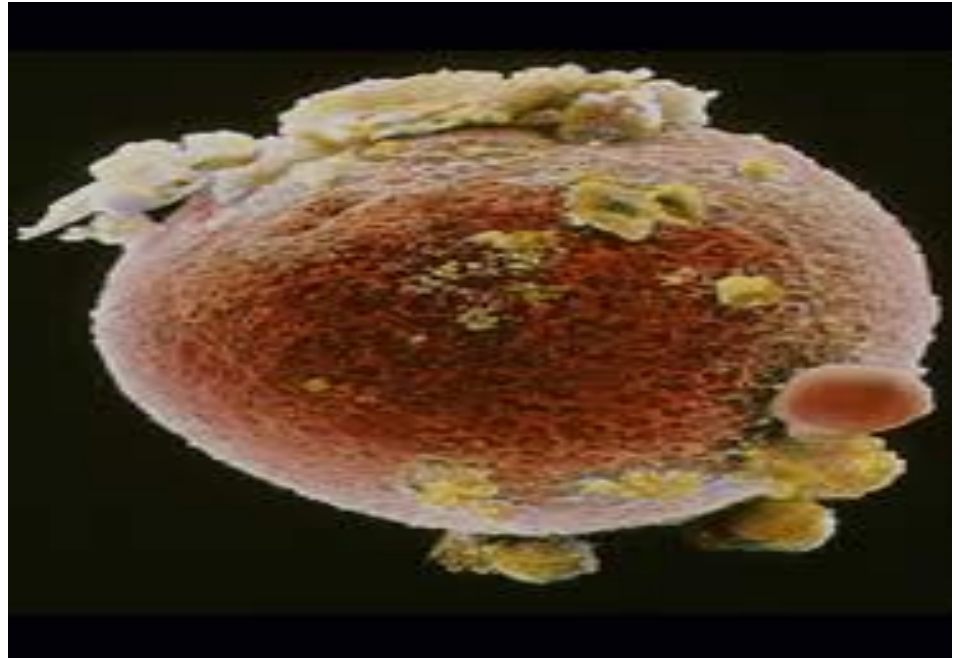
Need nutrition



| | Links |
|---------------------|---|
| Explore | https://kidshealth.org/en/teens/male-repro.html https://kidshealth.org/en/teens/female-repro.html |
| Explain & Elaborate | https://www.visiblebody.com/learn/reproductive https://www.visiblebody.com/learn/reproductive/reproductive-process https://byjus.com/biology/infertility/ |
| Evaluate | https://www.bbc.co.uk/bitesize/guides/z9fgr82/test https://study.com/academy/practice/quiz-worksheet-overview-of-human-reproduction.html#quiz |

The female sex cells are the

EGG CELLS.



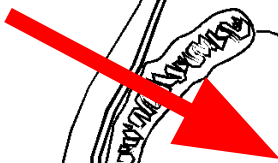
Bladder



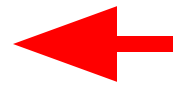
Gland



Testes



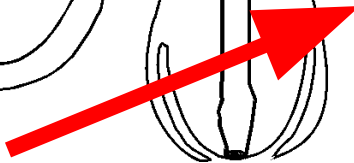
Sperm duct



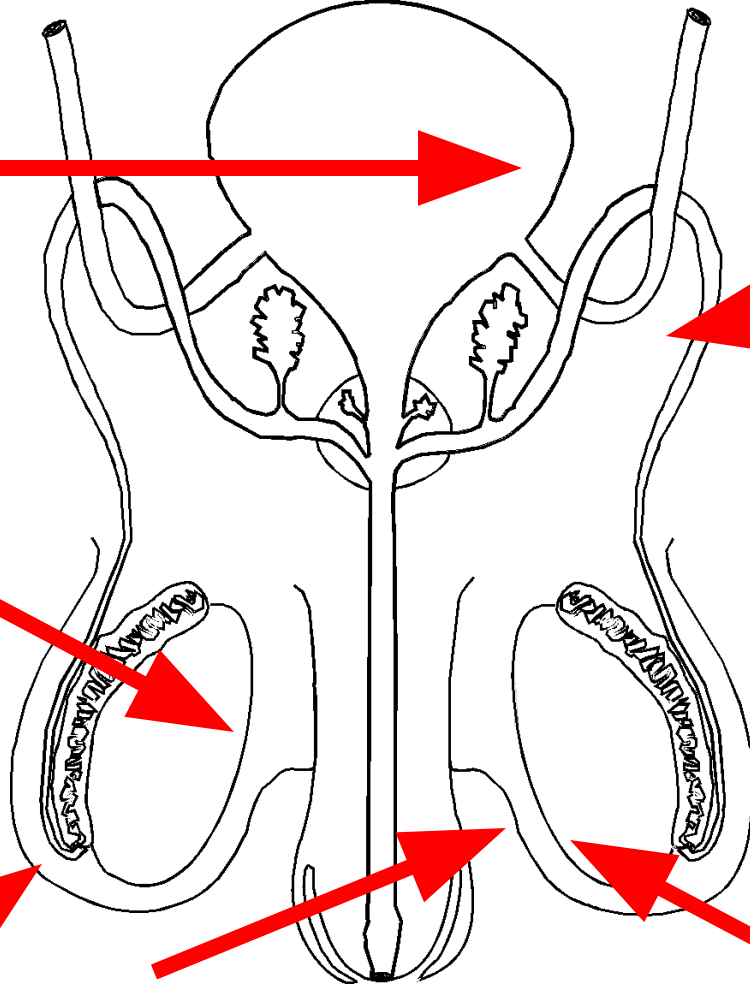
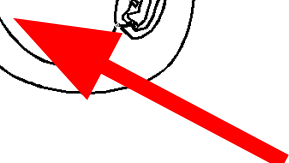
Scrotum



Urethra



Penis



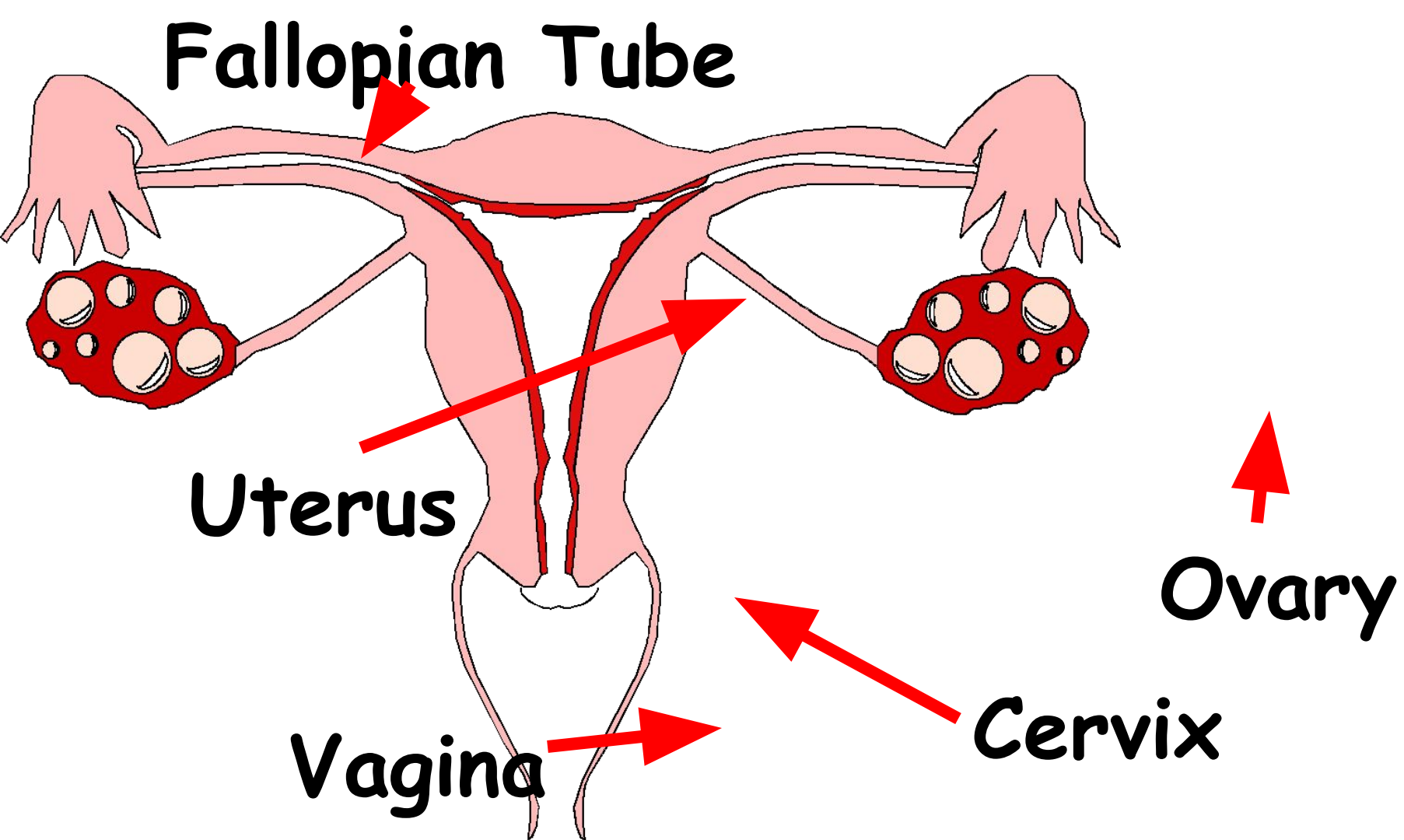
How many *SCIENTIFIC* words of three letters or more can you make from the phrase;

REPRODUCTIVE SYSTEM

Reproductive Organs

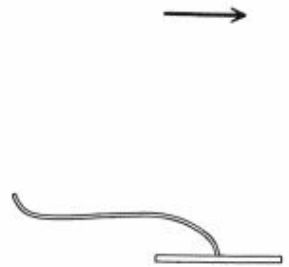
Sexual REPRODUCTION needs a male sex cell to join with a FEMALE sex cell.

The REPRODUCTIVE organs make sex CELLS (gametes) and allow reproduction to take place



Eggs are released from the
OVARIES once every 28 days.

They are wafted down the
FALLOPIAN TUBE by cilia
(hairs)



The **UTERUS** is where a fertilised egg can grow into a baby.

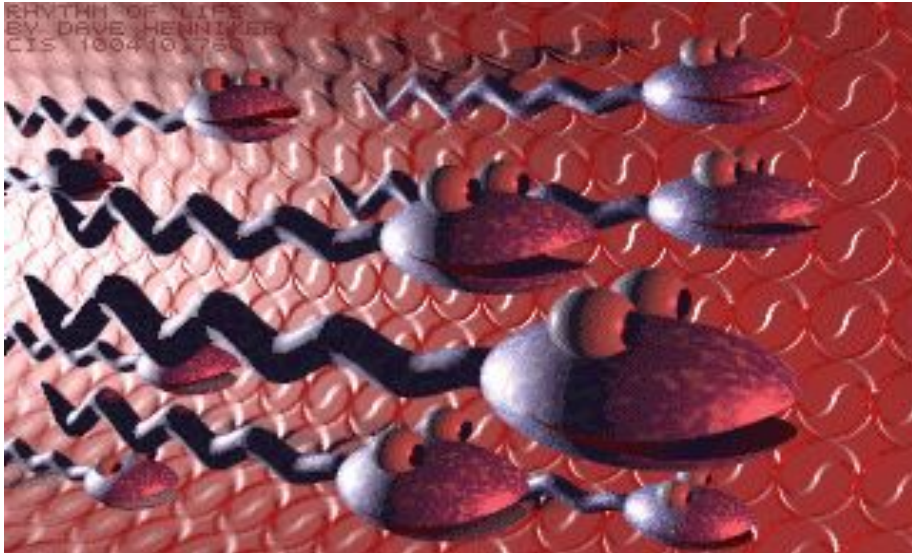
It has strong **MUSCULAR** walls and a soft lining.

The **CERVIX** holds the baby in place during pregnancy.

The cervix opens into the **VAGINA**.



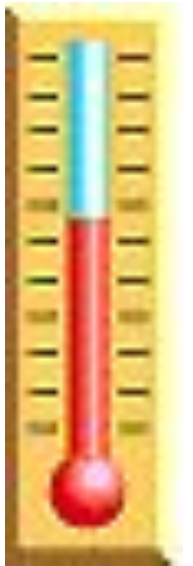
The male sex cells are the **SPERM CELLS**.



Sperm cells are made in the

The testes are held outside the body
in a bag of skin called the
SCROTUM.

This keeps the sperm at the right
TEMPERATURE.

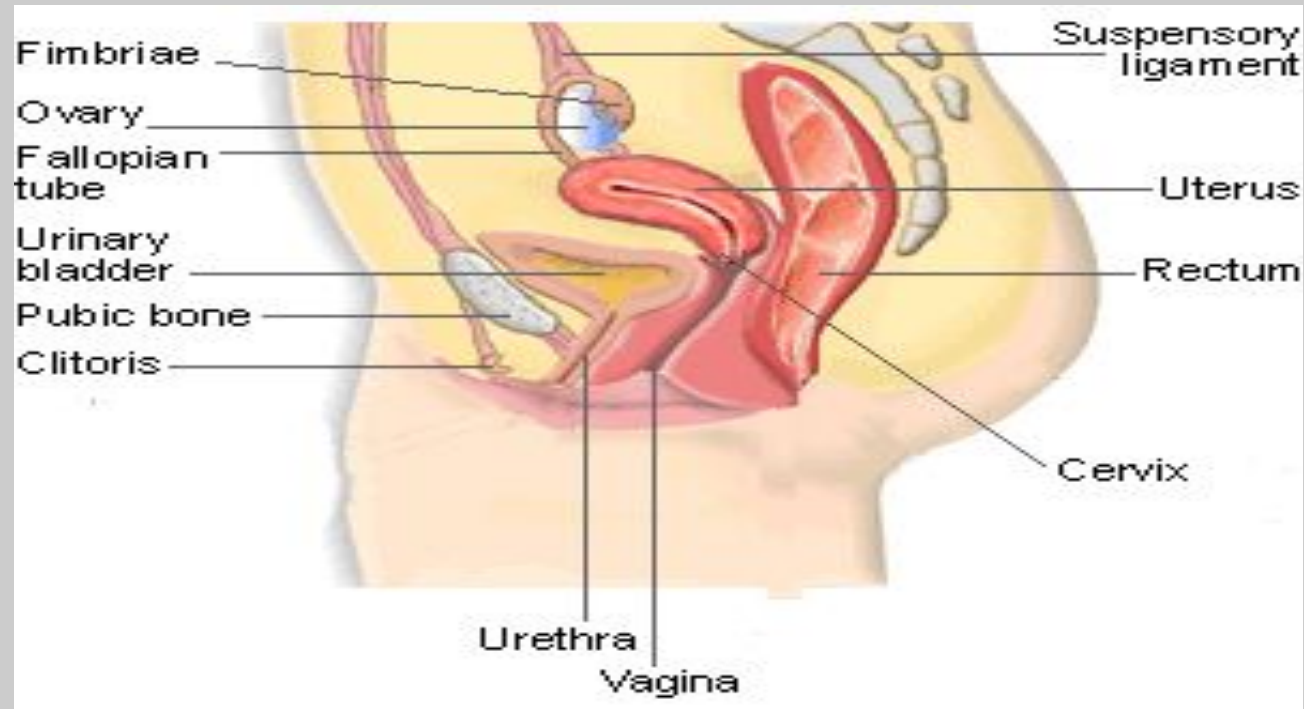


Sperm travel up the **SPERM DUCTS** where liquids are added from the **GLANDS**.

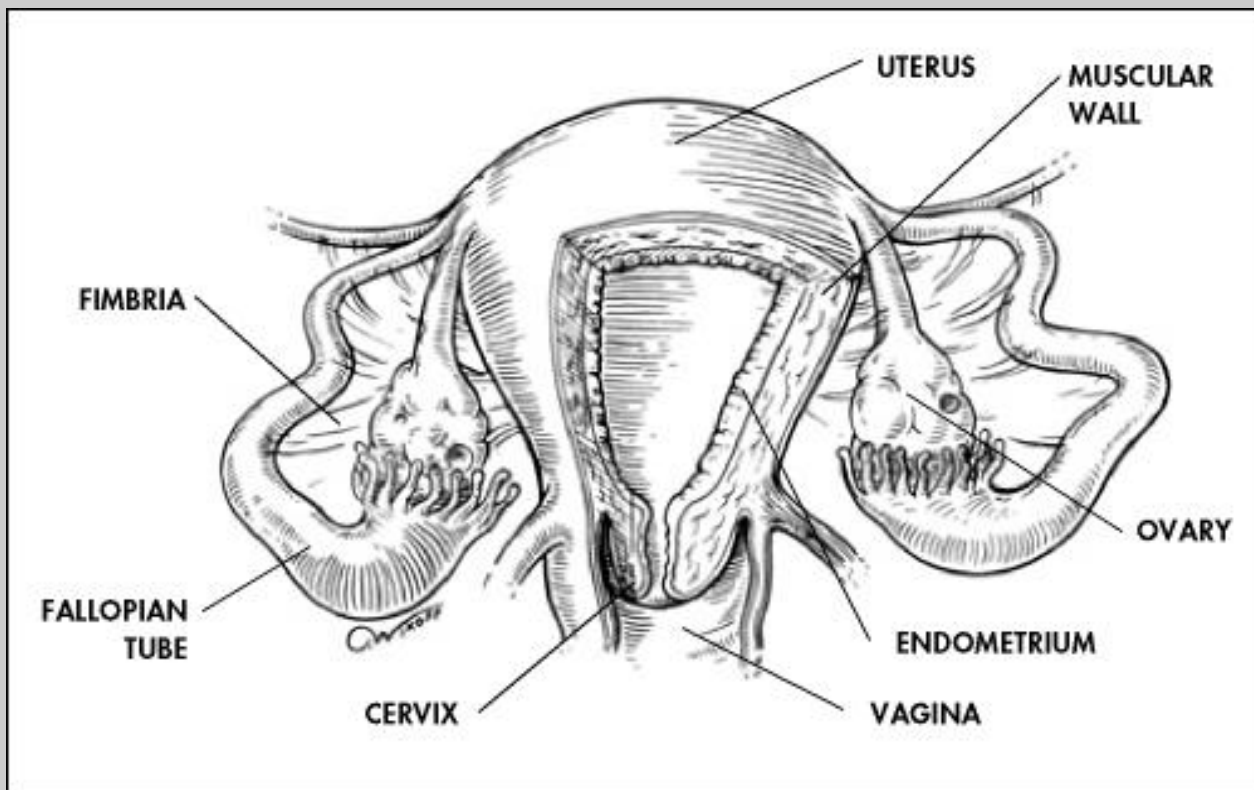
This mixture is called **SEMEN**.

Semen flows out of the **PENIS** through a tube called the **URETHRA**

Female Anatomy



Front View



- Two solid egg-shaped structures
- They are attached to the uterus by ligaments. They are the counterpart of the male testicles.
- Ovaries have two main functions:

#1-store and release the ova or female egg cell. Some of the ova disappear; others are dormant until each is ripened and released after puberty.

#2-produce female sex hormones ESTROGEN and
PROGESTERONE

Ova

- The female reproductive cell.
- They are the largest cells in the female body. (about the size of a grain of sand.)
- The female baby is born with all the ova she will ever have (about 200,000 in each ovary).
- About 400-500 ova mature and are released over a lifetime

Estrogen:

- Estrogen is responsible for the secondary sex characteristics. It spurs the onset of puberty and is responsible for OVULATION.

Progesterone:

Progesterone builds up the lining of the uterus called the endometrium in preparation for the fertilized ovum.

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Ovulation

- When the egg is released from the ovary.
- At the age of puberty
- The ovum moves to the surface of the ovary in bursts out
- The ova falls into the fallopian tube and waits for fertilization
- This happens every 28 days
- It happens at about the 14th day of the cycle

Fallopian Tubes (Oviducts)

- Two tubes attached on either side of the uterus.
- They are about four inches long and $\frac{3}{16}$ inch in diameter (the size of a cooked spaghetti noodle).
- The oviducts carry egg cells toward the uterus and sperm cells toward the egg cell.
- Fertilization takes place in the upper third of the oviduct.

Uterus:

A hollow, muscular organ (shaped somewhat like an upside-down pear, about the size of a fist).

- The uterus is lined with endometrium (a blood lining.)
 - The uterus has one main function—to protect and nourish a fetus
 - The walls of the uterus have the ability to stretch to the size of a small watermelon.
 - After childbirth the uterus shrinks back to the original shape in 6-8 weeks, but it can take up to nine months for the uterus to fully recover.

Cervix

- The neck or opening of the uterus.
- A normal healthy cervix is the strongest muscle in the body.
- It dips down about half an inch into the vagina.
- It is normally plugged by mucus. It stays tightly closed during pregnancy, but thins and opens for the delivery of the baby.
- How big does it need to dilate to for birth?

Vagina

- It is an empty passageway leading from the vaginal opening to the uterus.
- It is only 3-4 inches long, but will lengthen during arousal.
- The vaginal walls are made of many small folds of membrane that stretch greatly to accommodate a baby during birth.
- The vaginal wall also secretes a fluid that helps to make intercourse easier.

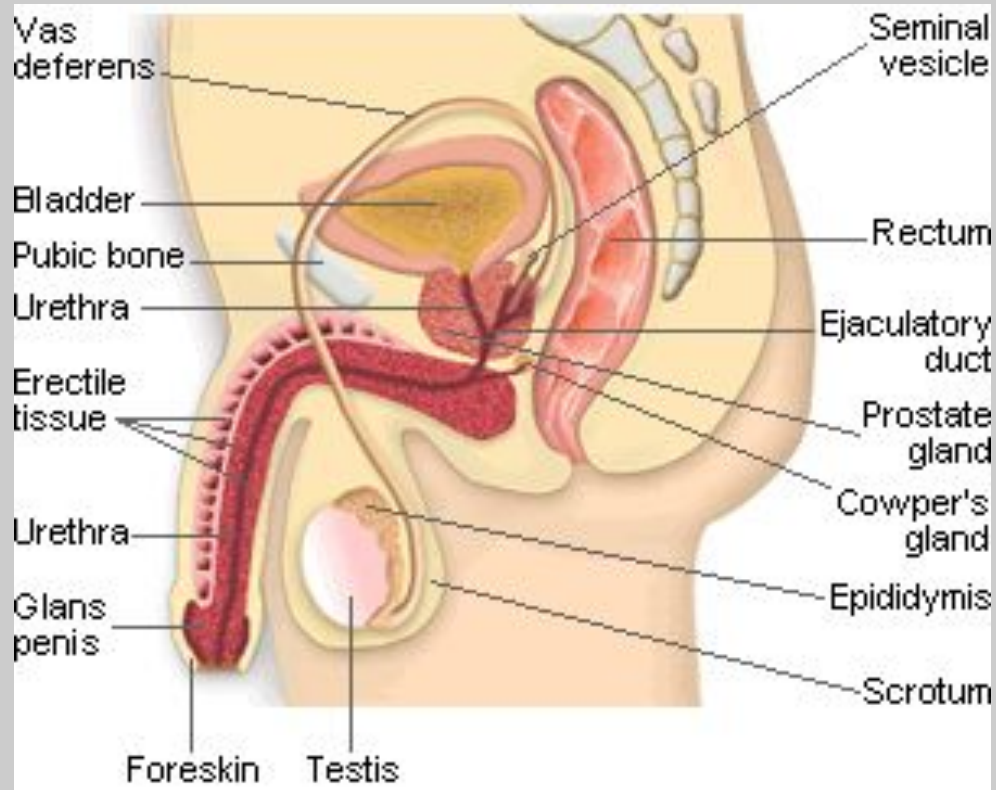
Urethra

- The opening to the bladder

Women's Cycle

- Day 1 – Menstruation begins (bleeding)
- Day 5 – Menstruation is usually ended
- Day 14 – Ovum has matured and bursts out of the ovary
- Day 15 – After 24 hours the egg is done
- Day 26 – In the absence of fertilization, estrogen/progesterone levels drop and the endometrium lining breaks down
- Day 28 – Menstruation begins again.

Male Anatomy



Scrotum:

- A sac-like pouch located behind the penis that holds each testes and helps regulate temperature for sperm production.

Testosterone:

- the male reproductive hormone made by the testicles which causes the changes of puberty.
- This hormone causes secondary sex characteristics, production of sperm and sexual urge.
- It is produced in the testicles and enters the bloodstream at a fairly constant rate.

Sperm:

- The microscopic cells produced by the male's testicles which can fertilize the female's ovum.
- They are tiny, living cells 100 times smaller than a pencil dot. (the smallest cell in a man's body)
- Enough sperm would fit on the head of a pin to re-populate the earth if each sperm fertilized an egg.
- It is destroyed by warm body temperature, acidic environment.
- It can survive in a women's body for 5-8 days.
- Any sperm not ejaculated are passed in the urine.

Epididymis:

- the structure that forms a mass over the back and upper part of each testes.
- Sperm are stored there for as long as six weeks while they ripen to maturity.

Cowper's Gland

- two small pea-sized glands located beneath the prostate gland on both sides of the base of the penis.
- They secrete a clear, sticky fluid that helps to neutralize the acidity of the urethra.



Vas Deferens

- two long, thin tubes that serve as a passageway for sperm and a place for sperm storage.
- The contraction of the vas deferens along with the action of the cilia help transport the sperm through the vas deferens.

Seminal Vesicles

- two small glands that secrete a fluid that nourishes and enables the sperm to move.
- surround the urethra beneath the bladder. The gland secretes an alkaline fluid that neutralizes the acid found in the male urethra and the female reproductive tract.
- Without the action of the secretions of the prostate gland, many sperm would die and fertilization of an ovum would be impossible.



Urethra

- A dual purpose tube that both semen and urine pass through to leave the body. Semen and urine never mix.
- Special muscles or sphincters surround the urethra.
- During urination, one sphincter will relax so that the pressure from the bladder will push urine out from the body.
- During ejaculation, another sphincter will relax so that semen can flow through the urethra to the outside of the body.

Penis:

- The reproductive purpose of the penis is to deposit semen in the vagina during sexual intercourse.
- The head of the penis or glans contains many nerve endings. At birth the glans is covered by a loosely fitting skin called the foreskin.
- When the penis is erect it is 5-7 inches long An erection occurs when the sponge-like chambers in the penis fill with blood.