



SUBJECT: BIOLOGY

CHAPTER: 8

CHAPTER NAME: HOW DO ORGANISMS REPRODUCE?

PERIOD-4

CHANGING YOUR TOMORROW

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PUBERTY

- Human beings are complex animals and hence there is a distinct phase in their life cycle which marks the onset and attainment of sexual maturity. This period is called puberty. It usually starts at around 10 – 11 years of age in girls and at around 12 – 13 years of age in boys. It usually ends at around 18th year of age in girls and at around 19th year of age in boys. Since the years during puberty end in 'teens'; hence this phase is also called teenage.

Changes in Boys during Puberty:

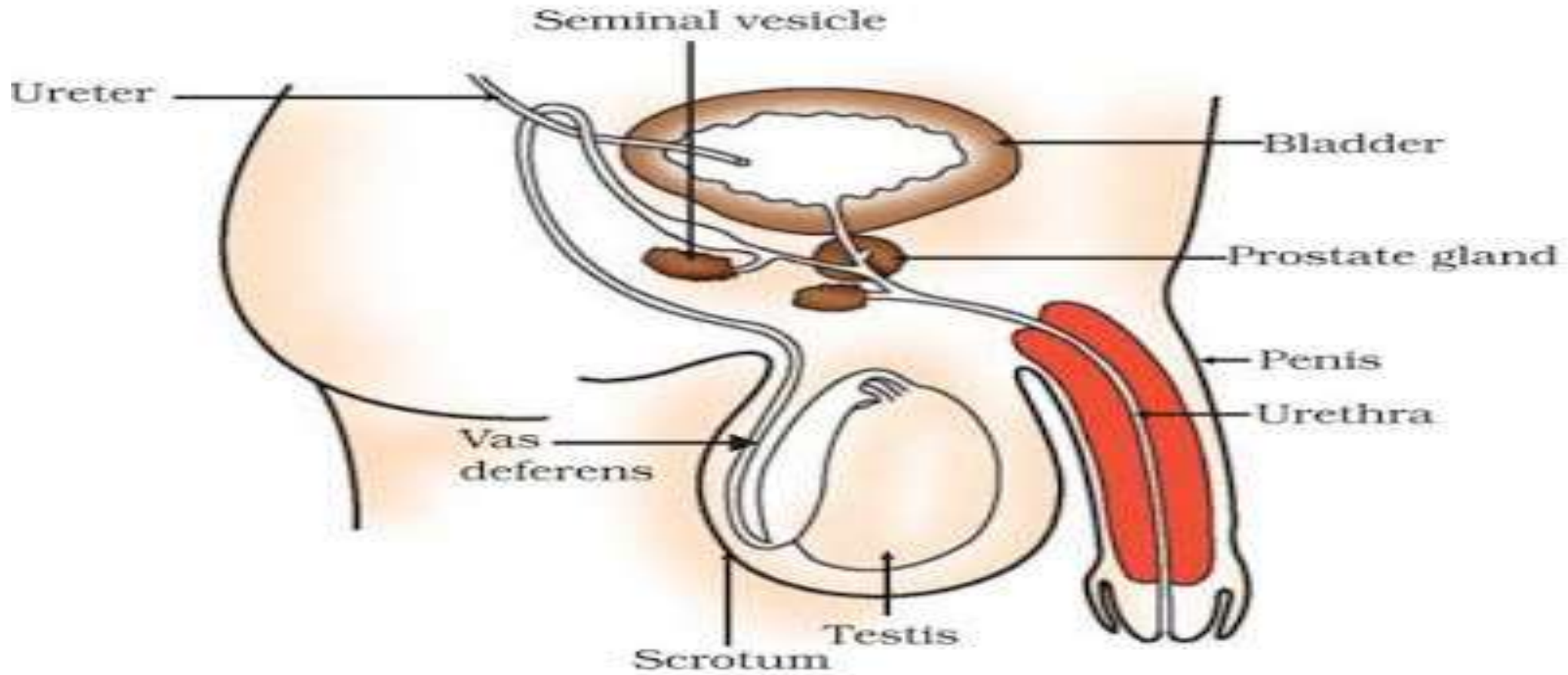
- The boys suddenly grow in height dramatically. Voice becomes deep and the Adam's apple becomes prominent. Shoulders become broad and body becomes muscular. Facial hairs begin to grow. Hairs also grow under the armpit and in the pubic region.

Changes in Girls during Puberty:

- The voice becomes thin. Shoulders and hip become rounded. Breasts get enlarged. Hairs grow under the armpit and in the pubic region.

MALE REPRODUCTIVE SYSTEM

- Scrotum
- Testis
- Vas deferens
- Seminal vesicles
- Prostate gland
- Cowper's gland
- Penis



Human-male reproductive system

Scrotum

- Scrotum is suspended outside the body; below the abdominal cavity. This helps in maintaining the temperature of testes below the body temperature. This is necessary for optimum sperm production. Testis primarily serves the function of sperm production.

Testis:

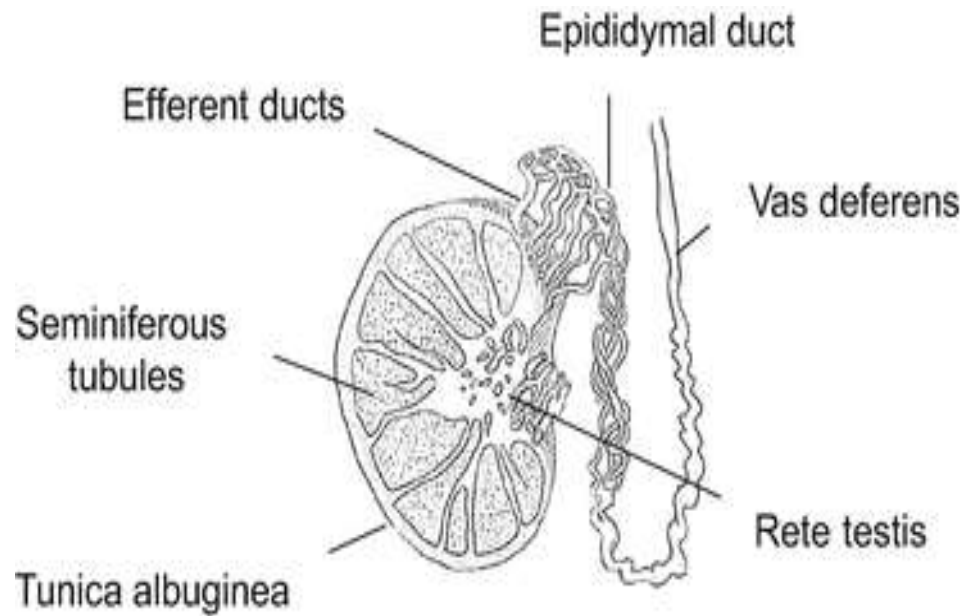
- There is a pair of **testes**; which lie in a skin pouch; called **scrotum**.
- Scrotum is suspended outside the body; below the abdominal cavity.
- This helps in maintaining the temperature of testes below the body temperature.
- This is necessary for optimum **sperm** production.
- **Sperms** are the **male gametes**.
- Apart from that, testis also produces **testosterone**.
- Testosterone is also called the male hormone, as it is responsible for developing certain secondary sexual characters in boys.

epididymis

- It is highly coiled structure found on the upper side of the testes.
- i- site of sperm maturation : about 10-14 days are required for the sperm to mature.
- ii- store mature sperm: sperms may remain in storage for up to 4 weeks .After that they are expelled from the epididymis or reabsorbed.

Vas Deferens:

- Vas deferens is the tube which carries sperms to the seminal vesicle.



Seminal Vesicle:

- This is the place where sperms are stored.
- it provide alkaline substances which contains carbohydrate, proteins and hormones
- Carbohydrates provides the energy source for the sperms
- Protein helps in sperm coagulation.
- Alkaline nature of the fluid protect the sperm from acidic condition.

Prostate gland

- It is a single gland that surrounds the urethra
- It secretes milky substances which helps the sperm to swim and motility

Cowper's glands

- It is located under the prostate gland
- It secretes the mucus which lubricates the end of the penis during sexual intercourse.

semen

- Semen is a mixture of sperm and the secretions of seminal vesicles, prostate gland ,and Cowper's gland
- It is a milky white fluid.
- A single ejaculation contains 2-3 ml semen.
- A single ejaculation contains 20,000,000 – 40,000,000 sperms.

Penis

- It is a muscular organ which serves the genitor-urinary functions. The urethra works as the common passage for urine as well as for sperms.

THANKING YOU
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