

# UPDAAN



## 2025

### How Do organisms Reproduce ?

Biology

Lecture - 07

By - SAMRIDHI SHARMA Ma'am



# Topics to be covered

1 Introduction to human reproduction ✓

2 Male reproductive system ✓

2 MCQ practice and Homework ✓ ✓







## Human reproduction



\*students

**AAKHIR VO DIN AA HI GAYA**

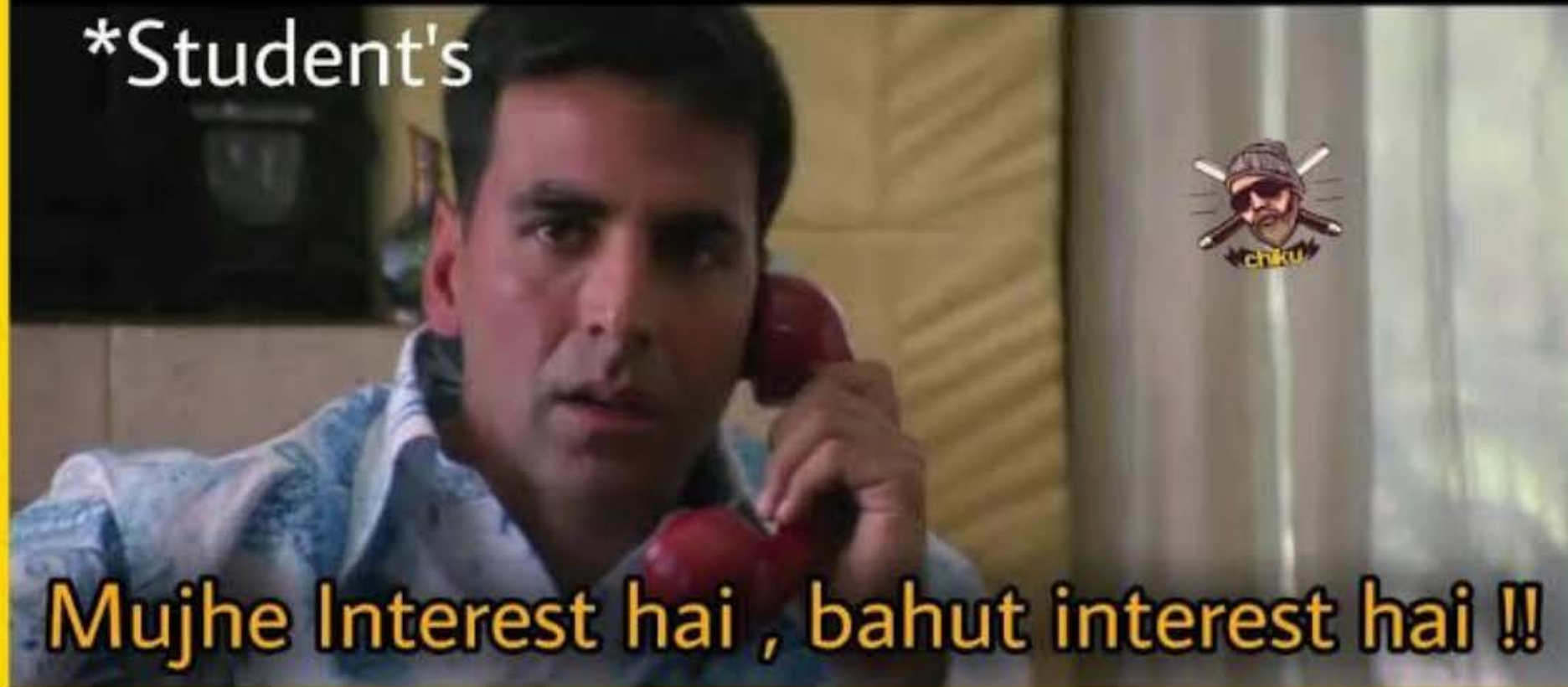


# Human reproduction



Biology mam : Today we will discuss about  
Human Reproduction

\*Student's



Mujhe Interest hai , bahut interest hai !!





# Human reproduction

Jr. Samosa

4 year X



- \* Puberty
- \* Changes in body
- \* {11 - 16 years}



Changes

- ✓ Physical Change
- ✓ Mental Change
- ✓ Emotional Change

Samosa Singh Sr.



24 year ✓

Sexually Mature

Become Capable of Sexual Reproduction



# What HAPPENS during puberty?



## Physical Changes

- ↑ Growth spurt
- ✓ Facial hair growth
- ✓ Deepening of voice
- ✓ Increase in lean muscle mass
- ✓ Underarm & pubic hair growth
- ✓ Enlargement of genitals



Begins  
**11-14**  
yrs old

Begins  
**11-12**  
yrs old

## Emotional Changes

- ✓ Mood swings
- ✓ Being more sensitive
- ✓ Feeling self-conscious about physical changes
- ✓ Feeling differently about peers



## Physical Changes



- ✓ Growth spurt ↑
- ✓ Breast development
- ✓ Underarm & pubic hair growth
- ✓ First period (Menarche)
- ✓ Increase in fat mass

BBB



## Changes during puberty

#Ch!



### Males

- Facial hair growth
- Underarm and pubic hair growth
- Deepening of voice
- Increase in lean muscle mass
- Enlargement of genitals (Penis size)
- Sperm production ✓
- Growth spurt

### Females

- Breast development
- Underarm and pubic hair growth
- Increase in fat mass of hips and thighs
- Menstruation cycles start
- Growth spurt

→ Release of egg cell

→ Increased activity of oil & sebaceous glands

↓  
oily skin

→ pimples





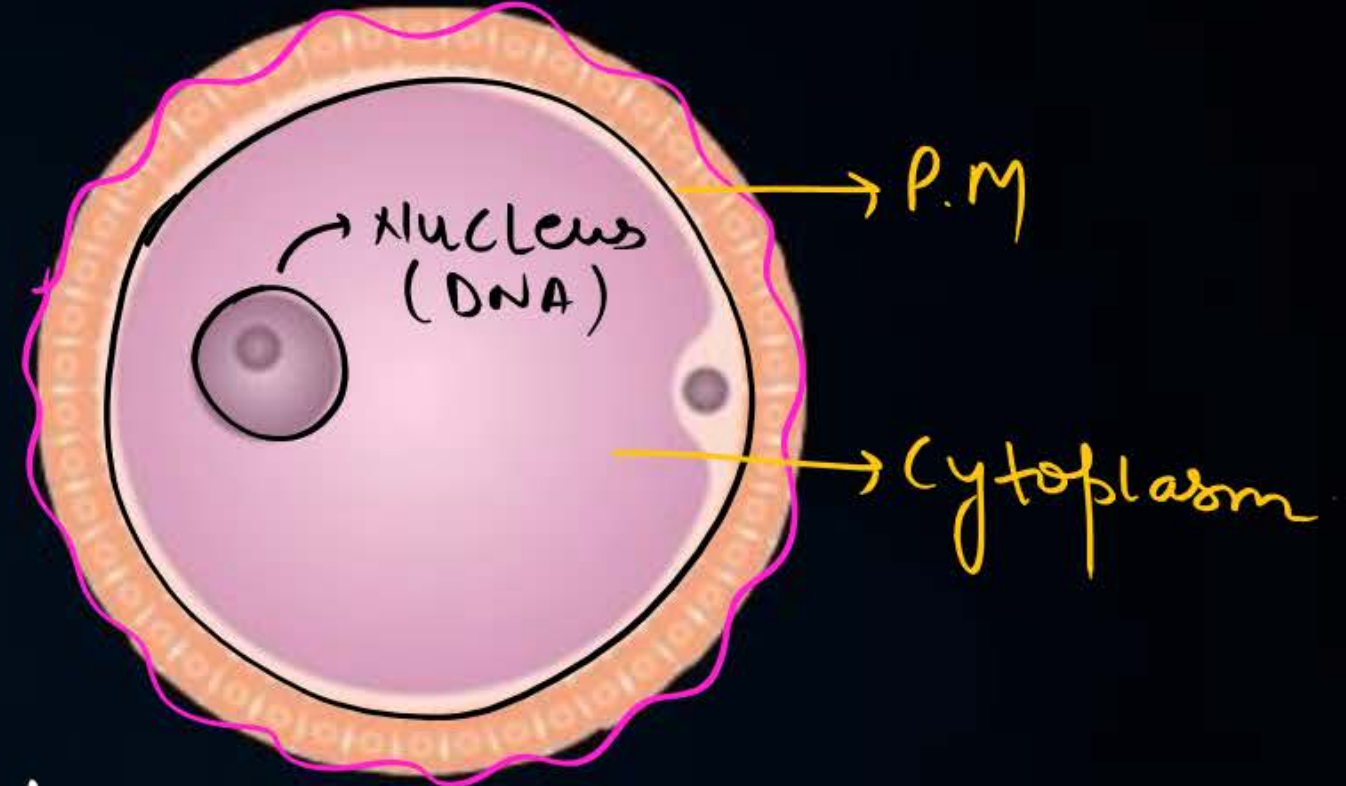


# Comparison of male and female gamete



Male gamete →

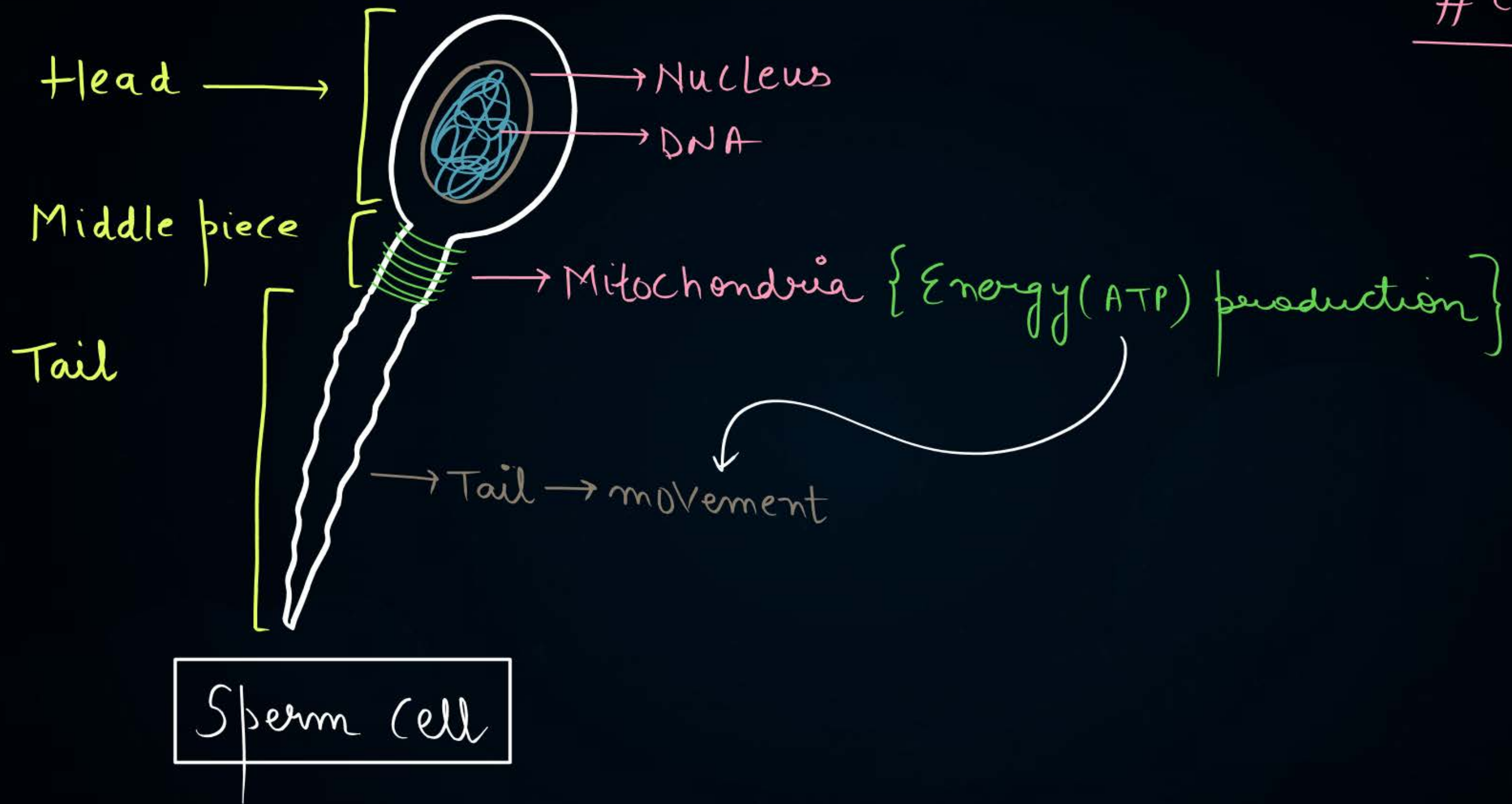
- Sperm Cell
- Smallest Cell in human body
- Motile



Female gamete →

- Egg Cell / Ovum
- Largest Cell in human body
- Non-motile







# Comparison of male and female gamete



#Ch

Features	Male gamete (Sperm)	Female gamete (Ovum)
1. Size	Smaller ✓	Larger than sperm ✓
2. Mobility	✓ Motile (Swim using tails)	Non motile ✓
3. Location	Produced in testes	Produced in ovary
4. Number	Produced in <u>Large numbers</u>	Only one is released per month ✗✗✗
5. Formation Process	Formed by the process of ✓ spermatogenesis	Formed by the process of oogenesis ✓





# Gametes are formed by process of 'Meiosis'

(A) True ✓✓

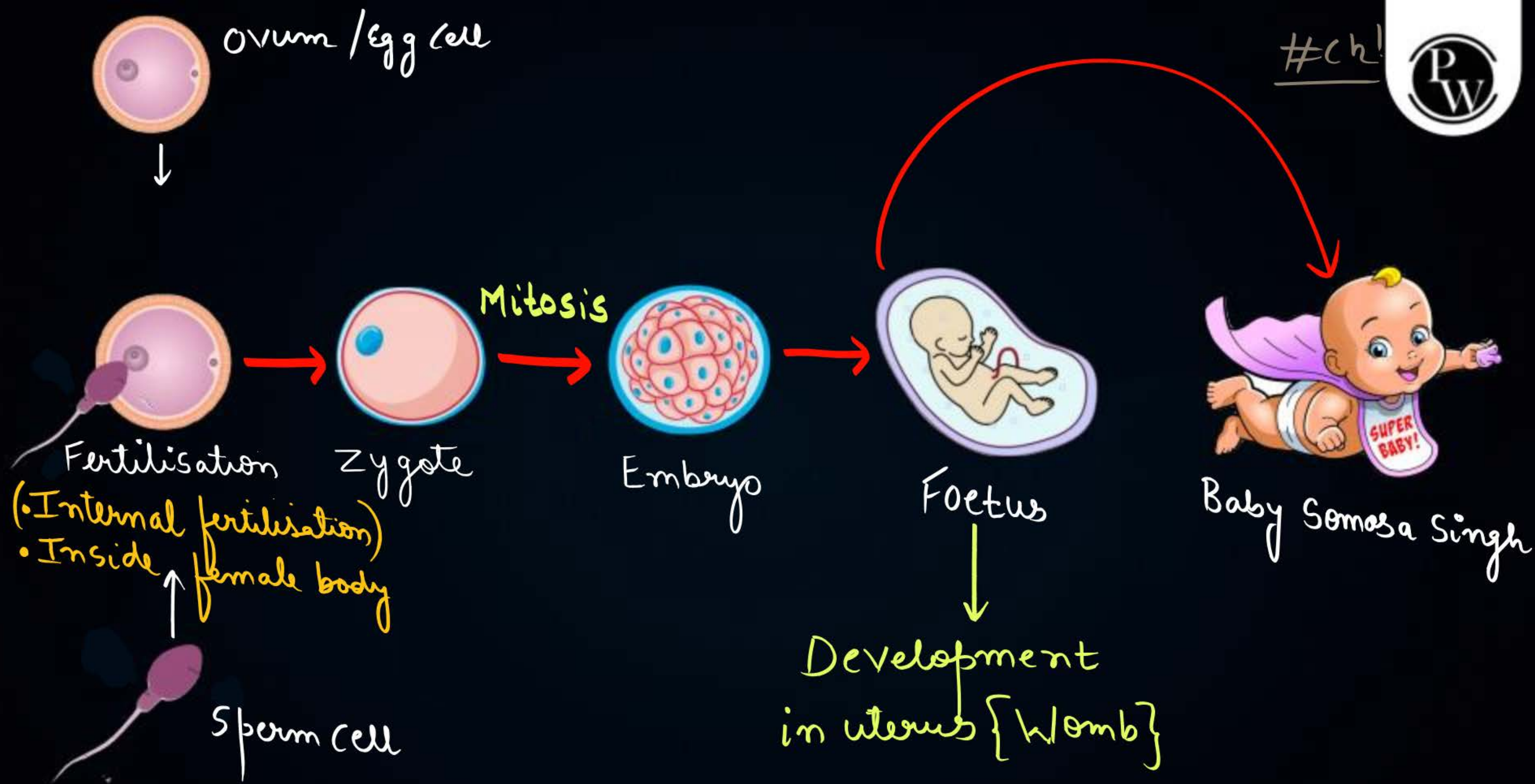
↓  
Reductional division

↓  
Gametogenesis (B) False

↓  
Spermatogenesis

↓  
Oogenesis

#ch!







## Terminologies related to reproduction in human beings



# Copulation → Act of Sexual intercourse.



# Male reproductive system

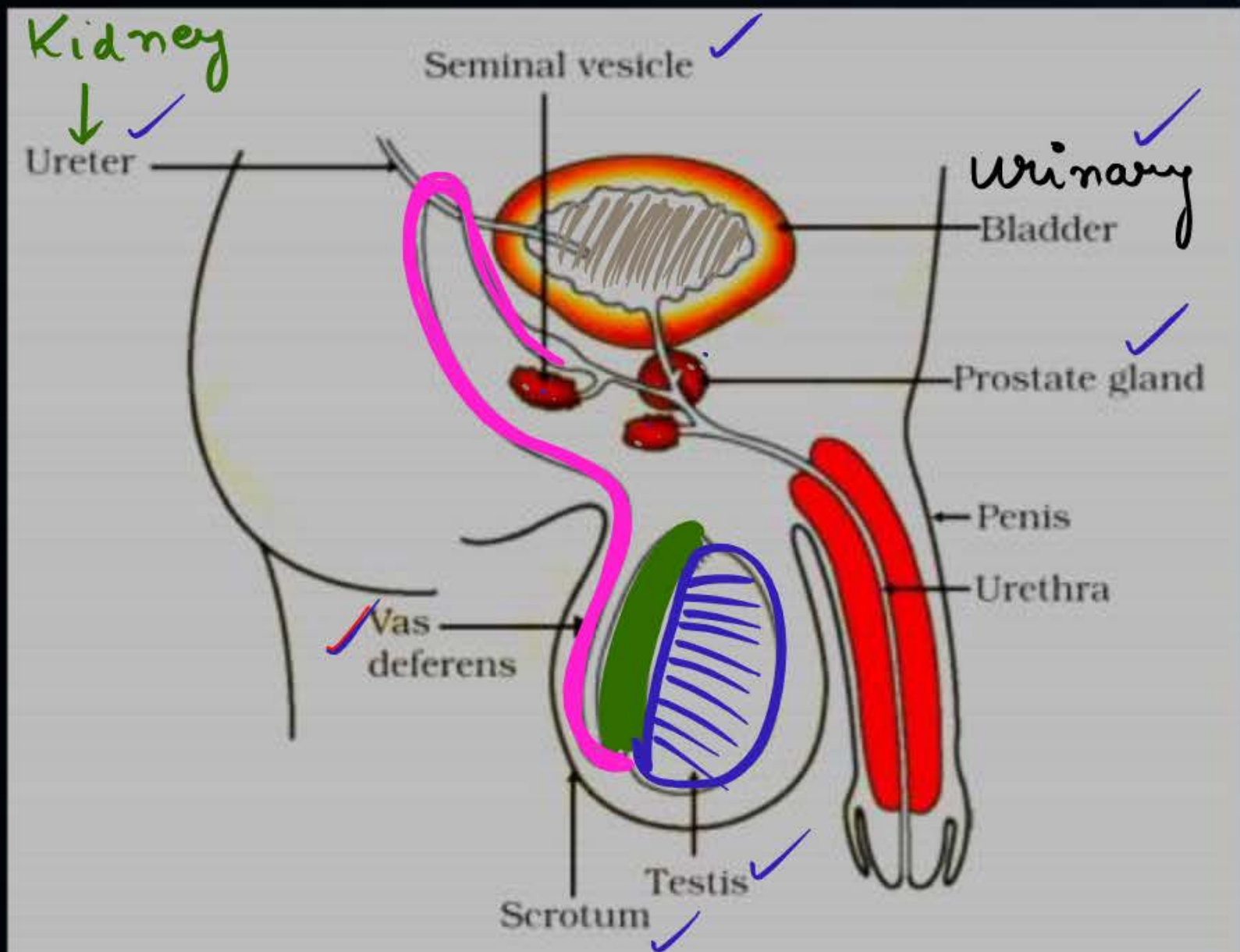
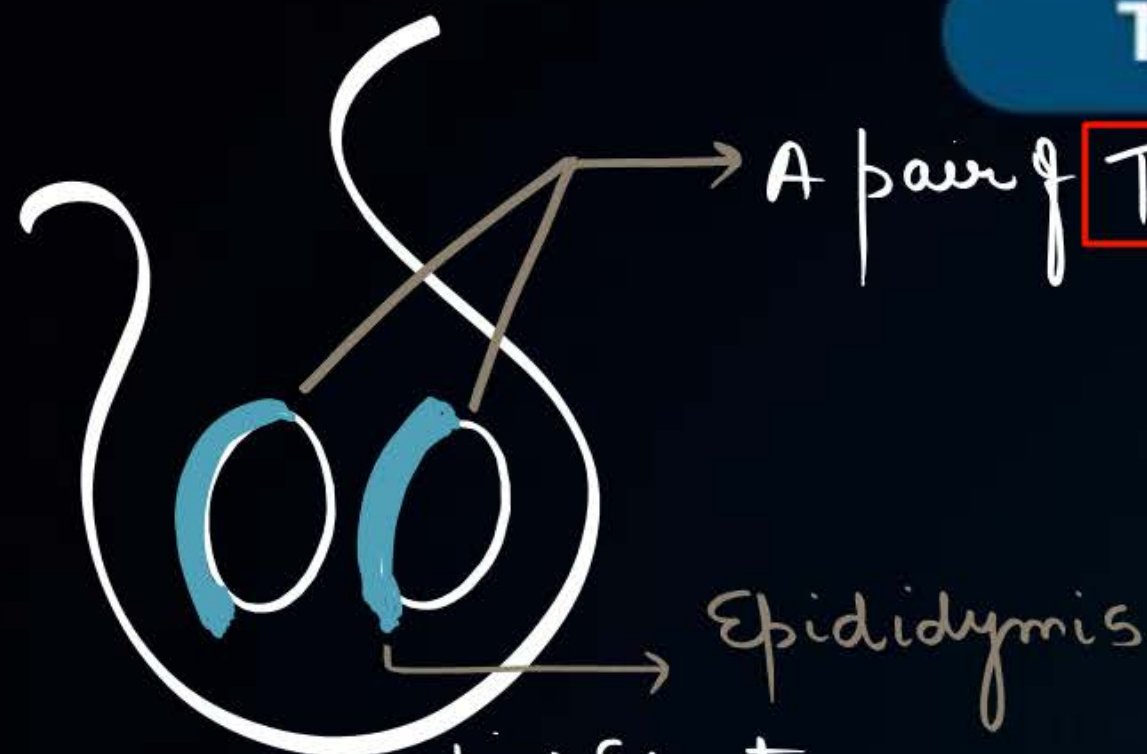


Figure 8.10 Human-male reproductive system



# TESTIS (s) / TESTES (pl)



Scrotum  
{ Sac/pouch }  
like structure

Testis

• Length :

• Width :

• Temp is 2-2.5°C  
Less than normal  
body temp.

{ Temperature Regulation }  
for sperm formation

A pair of **Testis**

Leydig Cells

• Formation of male sex hormone i.e.  
Testosterone → help!

Seminiferous tubules

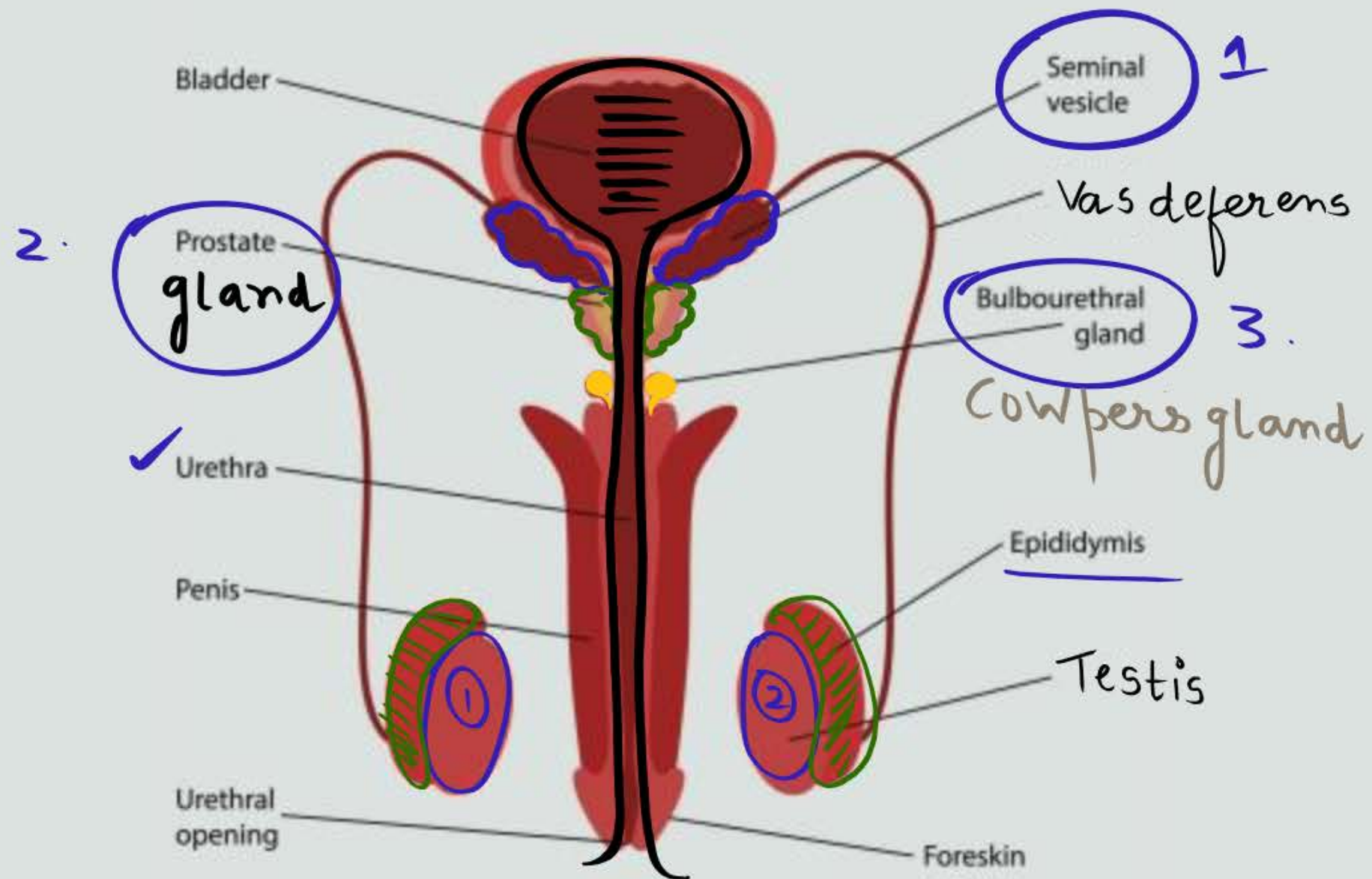
• Formation of immature Sperm Cell

\* Epididymis

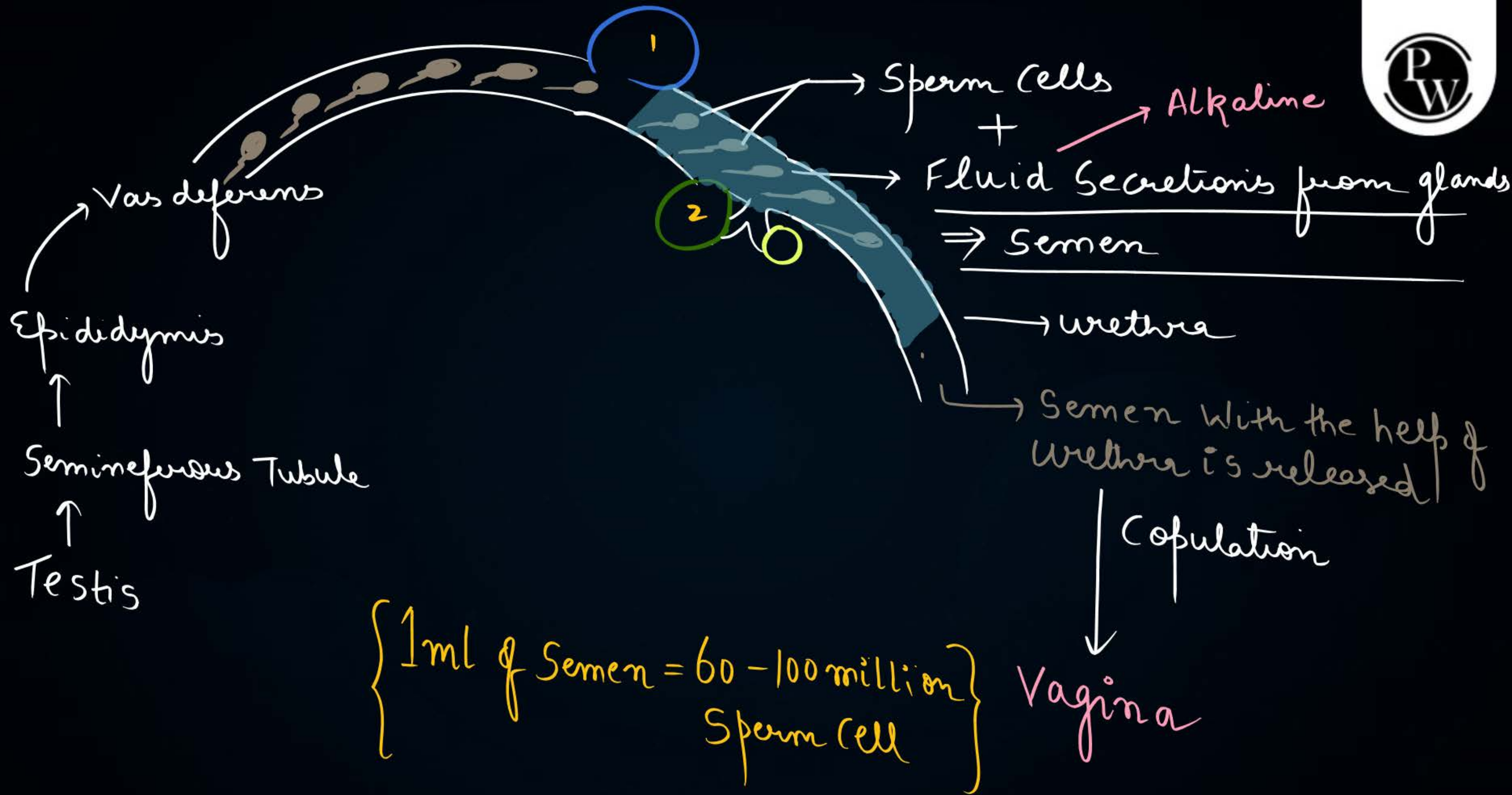
• Maturation & Storage of Sperm Cell



# Male reproductive system

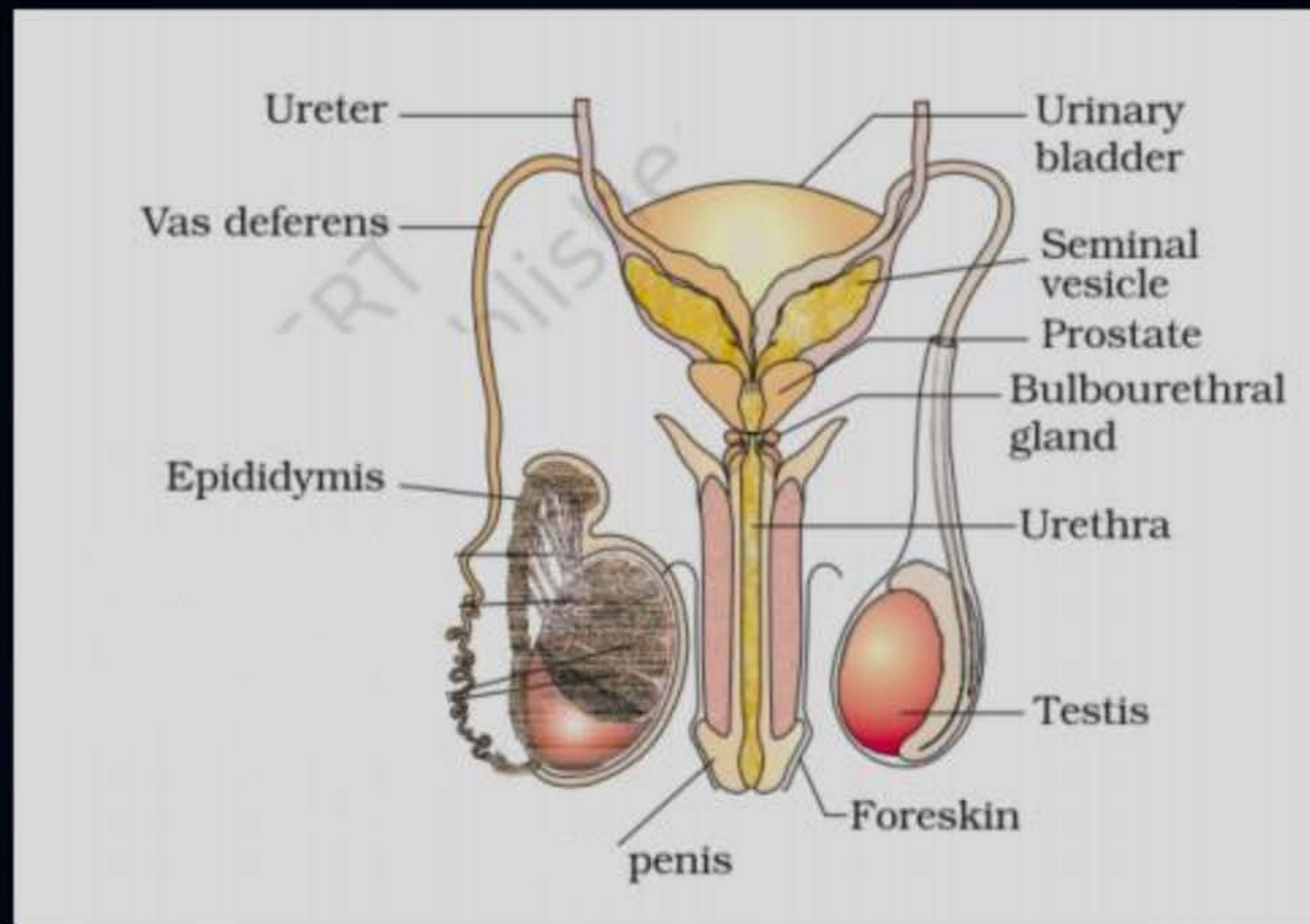








# Male reproductive system







# Male reproductive system



Structure	Function
Scrotum	Maintain the low temperature of the testes (2–2.5° C lower than the normal internal body temperature) necessary for spermatogenesis
Testes	<ul style="list-style-type: none"><li>• Produce sperm cells</li><li>• Produce the hormone testosterone</li></ul>
Seminiferous tubules	<ul style="list-style-type: none"><li>• Produce immature sperm cells</li></ul>
Epididymis	<ul style="list-style-type: none"><li>• Matures and stores sperm cells</li></ul>
Vas deferens	<ul style="list-style-type: none"><li>• Carries sperm from the epididymis towards urethra</li></ul>





# Male reproductive system



Structure	Function
Seminal vesicle ①	<ul style="list-style-type: none"><li>Secretes fructose into the semen, which provides energy for the sperm ↳ Sugar → Carbohydrate → Energy ✓</li></ul>
Prostate gland ②	<ul style="list-style-type: none"><li>Secretes an <u>alkaline</u> buffer into the semen to protect the sperm from the <u>acidic</u> environment of the <u>vagina</u> ↳ PH {3.5-4.5}</li></ul>
Bulbourethral gland (Cowper's gland) ③	<ul style="list-style-type: none"><li>Secretes <u>mucus-rich</u> fluids into the semen that may protect the sperm from <u>acids</u> in the <u>urethra</u></li></ul>







# Male reproductive system



Structure	Function
Urethra ✓	• Common passage for both semen (sperm) and urine
Penis	• Deposits <u>sperm</u> into the <u>vagina</u> during insemination

→ • Copulatory organ

→ Involved in Copulation { Sexual intercourse }



Testosterone is responsible for

- ☒ A Production of sperm cells ✓
- ☐ B Development of breasts
- ☐ C Fertilisation
- ☐ D Menstruation



Semen is \_\_\_\_\_

- ☐ A Sperm cells+ egg cell
- ☐ B Group of sperm cell
- ☒ C Sperm cells + Secretion of seminal vesicle, Prostate gland, cowper's gland
- ☐ D None of these

Common passage for urine and semen

- ☒ A Urethra ✓✓
- ☐ B Ureter
- ☐ C Vas deferens
- ☐ D Fallopian tube



Human  
Physiology



Genetics



Human Reproduction



#Ch1



#DNA } ✓  
#NCERT }

THANK  
YOU

