

Coverage Of Biology



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المزيد من مادة
أحياء:

إعداد: Elhddad Ahmed .Mr

التواصل الاجتماعي بحسب الصف التاسع المتقدم



صفحة المناهج
الإماراتية على
فيسبوك

الرياضيات

اللغة الانجليزية

اللغة العربية

التربية الاسلامية

المواد على تلغرام

المزيد من الملفات بحسب الصف التاسع المتقدم والمادة أحياء في الفصل الثالث

مراجعة هيكل الامتحان 2026م

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(يَرْفَعُ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ)

Coverage Of Biology

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معهد رواد التعليمية
و
مركز النخبة المتميزة

Mr. Ahmed Elhddad

لجميع المعلمين
03-06-2026
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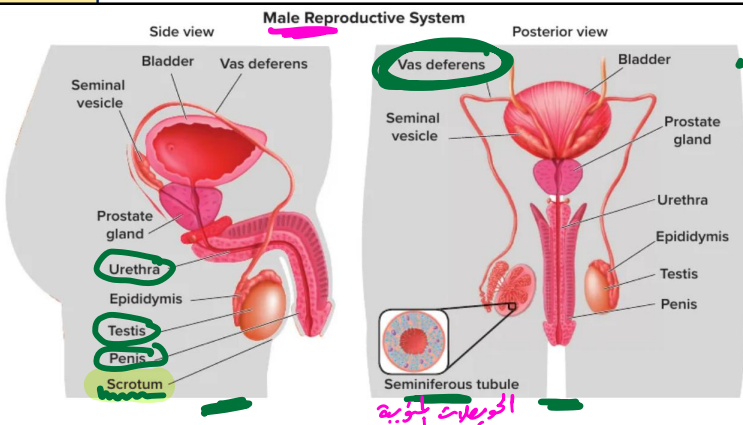


معهد رواد التعليمية
و
مركز النخبة المتميزة

Mr. Ahmed Elhddad

2025-2026
Mr. Ahmed Elhddad
"the first Bio – Sci teacher" 2025 – 2026

BIO.3.1.01.118 Identify the main functions of the human reproductive system: to reproduce and continue the existence of humans, to produce the next generations, and to produce egg and sperm cells



The main function of the human reproductive system is to produce offspring and ensure the survival of the species.

Core Functions

- ✓ 1- **Gamete production**: Creating sperm in males and eggs (ova) in females.
- ✓ 2- **Hormone secretion**: Releasing **testosterone**, estrogen, and progesterone to regulate development.
- ✓ 3- **Fertilization**: Enabling the fusion of male and female gametes.
- ✓ 4- **Nurturing development**: Sustaining a fetus during pregnancy (female-specific function).

Male-Specific Functions

- **Sperm production**: Generating male gametes within the testes.
- **Sperm transport**: Delivering sperm into the female reproductive tract.

✓ Q1: Which of the following describes the primary overarching functions of the human reproductive system?

- A) To ensure the continuation of the human species, produce the next generations, and generate egg and sperm cells.
- B) To regulate the body's internal fluid balance, filter toxins, and maintain core blood pressure.
- C) To produce mechanical energy for movement and maintain physical bone density.
- D) To secrete digestive enzymes that facilitate nutrient breakdown and absorption.

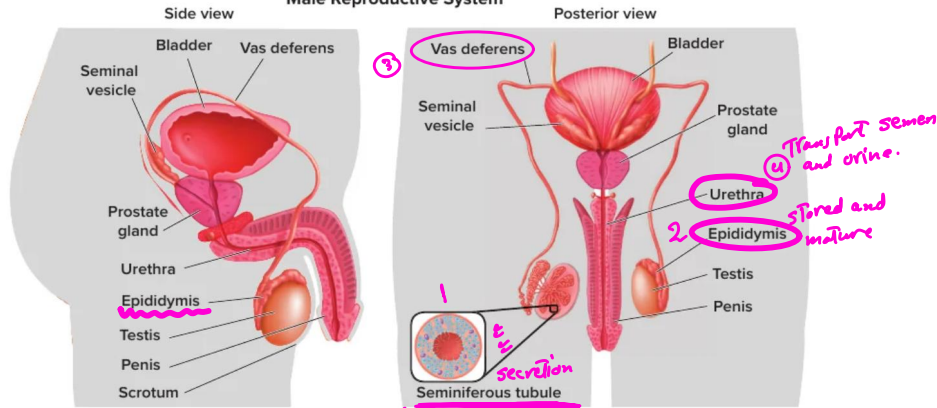
✓ Q2: According to Figure, and the accompanying description, what is the biological significance of the scrotum being positioned outside the main body cavity?

- A) It keeps the testes several degrees cooler than the average body temperature of 37°C. **34° - 35°**
- B) It allows the testes to maintain a temperature much higher than 37°C.
- C) It directly connects the seminiferous tubules to the urinary bladder.
- D) It prevents the vas deferens from looping over the bladder.

✓ Q3: Looking at the detailed inset labeled "Seminiferous tubule" at the bottom of the diagram, what crucial biological process takes place within these microscopic structures?

- A) The actual production and development of sperm cells.
- B) The filtration of metabolic waste from the semen.
- C) The synthesis of fluids that form the majority of semen volume.
- D) The storage of fully mature, motile sperm before ejaculation.

Male Reproductive System



Q4: Trace the pathway of sperm delivery using the provided diagrams. After sperm cells leave the epididymis, through which long duct must they travel to eventually reach the urethra?

- A) Vas deferens
- B) Seminal vesicle
- C) Scrotum
- D) Prostate gland

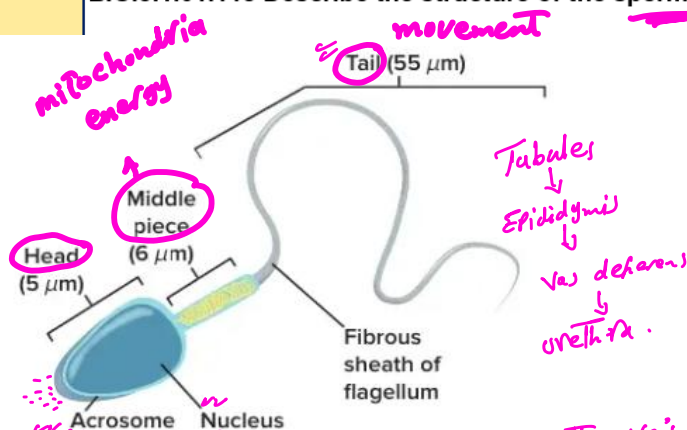
Q5: Based on the provided anatomical diagram of the Male Reproductive System, which structure is responsible for storing sperm cells as they mature?

- A) Epididymis
- B) Bladder
- C) Prostate gland
- D) Seminal vesicle

Q6: A medical researcher is studying factors that affect fertility. During an assessment, a patient is found to have a condition where the testes fail to descend into the scrotum and instead remain inside the abdominal body cavity.

Based on the provided textbook text, what is the most likely consequence of this condition regarding sperm development?

- A) Sperm development will be severely impaired because the temperature inside the body cavity is too high.
- B) Sperm production will increase significantly due to the protective warmth of the internal organs.
- C) Sperm will develop normally, but they will be unable to travel through the vas deferens.
- D) The prostate gland will completely stop secreting fluids because of the abdominal location.



Part	Size	Components / Features
Head	5 μm	Contains the Acrosome (front tip) and the Nucleus .
Middle piece	6 μm	The central connecting segment.
Tail	55 μm	Consists of a Fibrous sheath of flagellum used for movement (swimming).

- Sperm cells are the male reproductive cells.
- The testes produce about 100–200 million sperm cells every single day.
- They need a nourishing fluid known as **semen** to survive long enough to fertilize an egg.

• **A sperm cell develops and travels through the body in the following order:**

1. Seminiferous Tubules: Located inside the testes, this is where sperm cells are initially produced and developed.

2. Epididymis: A structure sitting on top of each testis where sperm cells mature and are stored.

3. Vas Deferens: A duct leading away from each testis. There are two vas deferens that eventually join together.

4. Urethra: The final tube through which sperm (as part of semen) and urine leave the body through the penis.

Q1: Based on the sperm cell structure, which of the following correctly pairs a specific region of the cell with its biological measurement or component?

- A) Head containing the nucleus and acrosome.
- B) Middle piece containing the fibrous sheath. *Mitochondria*
- C) Tail responsible for genetic storage. *motion*
- D) Acrosome containing the flagellum. *fertilization.*

Q2: A fertility clinic analyzes a semen sample and discovers that the sperm cells are completely immobile (cannot swim), although they have normal heads and normal genetic material.

Based on the structure of the sperm cell, a defect or malformation in which specific part is most likely causing this lack of motility?

- A) The acrosome
- B) The tail (flagellum)
- C) The nucleus
- D) The seminiferous tubules



Q3: what is the correct sequential pathway that sperm cells follow as they develop and make their way out of the male body?

- A) Epididymis - Urethra - Seminiferous tubules - Vas deferens
- B) Seminiferous tubules - Epididymis - Vas deferens - Urethra
- C) Vas deferens - Seminiferous tubules - Urethra - Epididymis
- D) Urethra - Vas deferens - Epididymis - Seminiferous tubules

Q4: A lab report shows that a patient's semen has an extremely low concentration of sugar (fructose), causing the sperm cells to rapidly run out of energy. which specific glands contribute over half of the semen volume and secrete this necessary sugar?

- A) Prostate glands
- B) Bulbourethral glands
- C) Seminal vesicles
- D) Seminiferous tubules

→ secreted a base to maintain the acidity of female reproductive sys.

Q5: The sperm encounter acidic environments both inside the male urethra and within the female reproductive tract.

Which structures contribute an alkaline solution to neutralize these hazardous acidic conditions?

- A) The seminal vesicles and the epididymis
- B) The prostate gland and the bulbourethral glands
- C) The seminiferous tubules and the vas deferens
- D) The nucleus and the acrosome

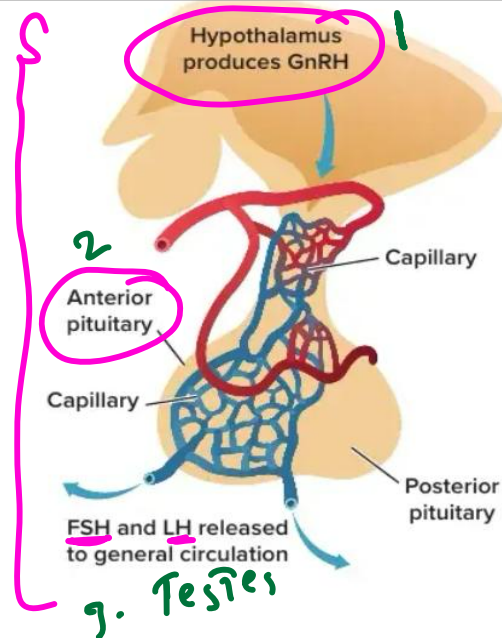
Q6: What is the specific biological function of the epididymis?

- A) It is the site where sperm cells are initially produced at a rate of millions per day.
- B) It is the tube that directly carries both semen and urine outside the penis.
- C) It is a structure located on top of each testis where sperm mature and are stored.
- D) It secretes an alkaline solution to protect sperm from acidic pathways.

BIO.3.1.01.058 Explain how hormones regulate the male reproductive system to include: testosterone, GnRH, FSH and LH

Figure 3

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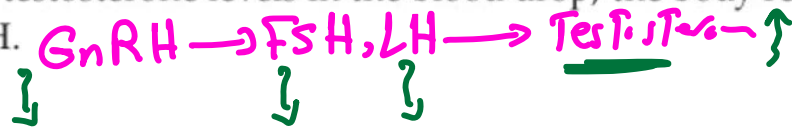


Male hormones

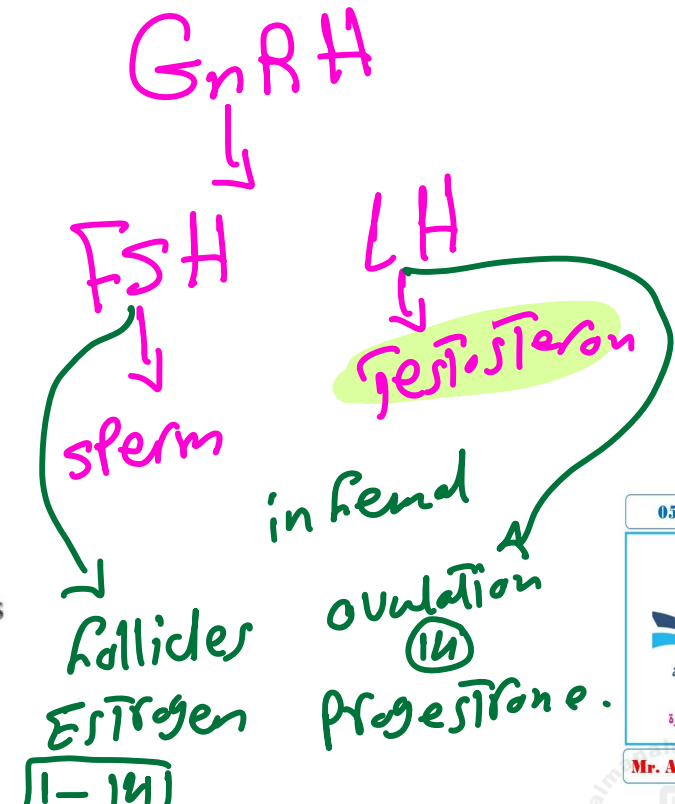
Testosterone (tes TAHS tuh rohn), a hormone which is made in the testes, is necessary for the production of sperm. It also influences the development of male secondary sex characteristics that begin to appear at puberty, the period of growth when sexual maturity is reached. These characteristics include hair on the face and chest, broader shoulders, increased muscle development, and a deeper voice. Three hormones influence testosterone production. **Figure 3** indicates that the hypothalamus produces gonadotropin-releasing hormone (GnRH), which acts on the anterior pituitary gland. GnRH stimulates the production of follicle-stimulating hormone (FSH) and luteinizing (LEW tee uh ni zing) hormone (LH). Both FSH and LH travel from the anterior pituitary gland through the bloodstream and to the testes. In the testes, FSH promotes the production of sperm and LH stimulates the production and secretion of testosterone.

Figure 3 The hypothalamus produces GnRH, which travels to the pituitary gland and influences the rate of LH and FSH production. LH and FSH are regulated by negative feedback.

Levels of the male hormones are regulated by a negative feedback system that starts with the hypothalamus. Increased levels of testosterone in the blood are detected by cells in the hypothalamus and anterior pituitary, and the production of LH and FSH is decreased. When testosterone levels in the blood drop, the body responds by making more LH and FSH.



Brain
Hypothalamus → GnRH
Anterior Pituitary → FSH, LH



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Q1: Which hormone is produced by the hypothalamus and directly stimulates the anterior pituitary gland to release FSH and LH?

- A) Testosterone
- B) Estrogen
- C) Gonadotropin-releasing hormone (GnRH)
- D) Progesterone

Q2: Which hormone is synthesized in the testes and is primarily responsible for the development of male secondary sex characteristics such as broader shoulders and a deeper voice?

- A) Luteinizing hormone (LH)
- B) Follicle-stimulating hormone (FSH)
- C) Gonadotropin-releasing hormone (GnRH)
- D) Testosterone

Q3: From which specific area are FSH and LH released into the general circulation?

- A) Hypothalamus
- B) Posterior pituitary
- C) Anterior pituitary
- D) Testes capillary bed

Q4: A patient clinical assessment reveals an abnormally high concentration of testosterone circulating in the blood.

How will the negative feedback system respond to normalize these levels?

- A) The hypothalamus and anterior pituitary will decrease the production of LH and FSH.
- B) The hypothalamus will increase the production of GnRH to stimulate more testosterone.
- C) The anterior pituitary will increase the production of LH and decrease FSH.
- D) The testes will automatically signal the posterior pituitary to release more hormones.

Q5: What are the specific operational targets of Follicle-stimulating hormone (FSH) and Luteinizing hormone (LH) once they travel through the bloodstream to the testes?

- A) FSH stimulates testosterone production, and LH promotes sperm development.
- B) FSH promotes sperm production, and LH stimulates testosterone secretion.
- C) FSH activates the hypothalamus, and LH activates the anterior pituitary.
- D) FSH induces broader shoulders, and LH deepens the voice.

Q6: What happens immediately within the regulatory loop when testosterone levels in the human blood drop significantly below normal?

- A) The body shuts down the anterior pituitary gland entirely.
- B) The production of GnRH is permanently halted by the hypothalamus.
- C) The body responds by making more LH and FSH to stimulate production.
- D) The testes immediately convert existing muscle proteins into secondary sex traits.

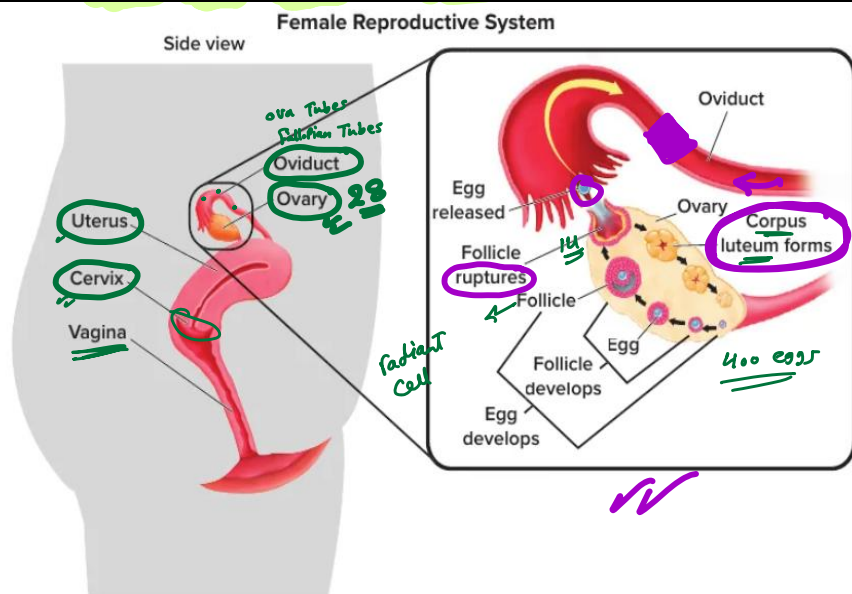
Q7: Which of the following physical changes is classified as a male secondary sex characteristic influenced by testosterone at puberty?

- A) Decreased muscle development
- B) Increased hair growth on the face and chest
- C) Narrowing of the shoulders
- D) Transition to a higher pitch voice

BIO.3.1.01.118 Identify the structures and their functions of the female reproductive systems to include ovaries, uterus, vagina, and oviduct

Figure 4

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The female reproductive system is responsible for producing eggs (ova) and receiving sperm. It also provides a suitable environment for fertilization of the egg and the development of the embryo.

Gonads (ovaries): Each is about the size of an almond. They contain egg cells (immature ova). Every 28 days, one mature egg is released, and they also produce female hormones (progesterone and estrogen).

Ovaries

A tube connected to the uterus through which eggs are transported and where fertilization takes place.

Fallopian tubes (oviducts)

A muscular organ about the size of a fist where the fetus develops until birth.

Uterus

The lower part of the uterus is a narrow opening that connects to the vagina, which leads to the outside of the female body.

Cervix

Q1: Which female reproductive structure is directly responsible for producing egg cells and secreting the hormones estrogen and progesterone?

- A) Uterus
- B) Oviduct
- C) Ovary**
- D) Vagina

Q2: A patient is diagnosed with an anatomical blockage in both of her fallopian tubes (oviducts), but her ovaries and uterus are confirmed to be completely healthy and functional.

Which of the following biological processes will be directly prevented by this specific condition?

- A) The production of female sex hormones like progesterone.
- B) The physical development of immature ova inside the follicles.
- C) The fertilization of the egg cell by a sperm cell.**
- D) The final birth process through the narrow cervical opening.

Q3: Based on the detailed inset diagram of the ovary, what structure is formed immediately after the follicle ruptures and releases the mature egg?

- A) Oviduct
- B) Corpus luteum
- C) Vagina
- D) Cervix

الجسم الأصفر

prolactin
Testosterone LH

Q4: Which structure undergoes structural expansion to provide a suitable muscular environment where the human fetus develops until birth?

- A) Uterus
- B) Oviduct
- C) Ovary
- D) Cervix

Q5: What is the precise anatomical layout and function of the cervix within the female reproductive system?

- A) It is a tube connected to the ovaries where fertilization takes place.
- B) It is the upper region of the oviduct that catches the released egg.
- C) It is a narrow opening at the lower part of the uterus that connects to the vagina.
- D) It is the main hormone-producing gland that regulates the 28-day cycle.

Q6: What is the correct biological term used to describe the immature egg cells contained within the almond-sized ovaries from birth?

- A) Corpus luteum → After the 14th day.
- B) Ova
- C) Sperm → male
- D) Zygotes → Combine between ova + sperm.

✗