Biology 12
Human Biology *Textbook: BC Biology 12*

Study Guide

Reproductive System

Vocabulary

- gametes
- gonads

14.1 Male Reproductive System

- testes
- epididymis
- vas deferens
- ejaculatory ducts
- urethra
- seminal fluid
- semen
- seminal vesicles
- prostate gland
- Cowper's glands (bulbourethral)
- prostaglandins
- penis
- scrotum
- seminiferous tubules
- spermatogenesis
- sperm
  - acrosome
  - head
  - middle piece
  - tail
  - end piece
- interstitial cells
- hypothalamus
  - gonadotropin-releasing hormone (GnRH)
- anterior pituitary gland
  - follicle-stimulating hormone (FSH)
  - luteinizing hormone (LH) *also known as* interstitial cell-stimulating hormone (ICSH)
- testosterone

14.2 Female Reproductive System

- ovaries
- oogenesis
- oocyte (egg/ova)
- ovulation
- oviducts (fallopian or uterine tubes)
- fimbriae
- zygote
- implantation
- uterus (womb)
- cervix
- endometrium
- vagina
- vulva
- clitoris

14.3 Female Hormone Levels

- ovarian cycle
  - follicular phase
  - FSH
  - primary follicle
  - secondary follicle
  - vesicular follicle (Graafian follicle)
  - ovulation
  - luteal phase
  - LH
  - corpus luteum
  - estrogen
  - progesterone
- uterine cycle
  - menstruation (menstrual period)
    - fibrinolysin
  - proliferative phase
  - secretory phase
  - placenta
  - fertilization
  - human chorionic gonadotropic (HCG)
  - oxytocin
- menopause

Key Points

PLO C14 analyse the functional interrelationships of the structures of the male reproductive system

PLO C15 analyse the functional interrelationships of the structures of the female reproductive system

Potential Test Questions

1. Distinguish between a gamete and a gonad using specific examples from the male and female systems.
2. Label parts of male reproductive system.
3. Describe the path of sperm testes to urethra.
4. Name the three glands and describe their contribution to the composition of seminal fluid.
5. What two things are found within a testis? Give the function of each.
6. Draw and label a sperm. State the function of each part.
7. How …
    a. many sperm are produced per ejaculation?
    b. many chromosomes are found in a sperm head?
    c. long can a sperm potentially live for in the female genital tract?
8. Describe the relationship between the hypothalamus and the pituitary gland in regards to reproductive hormones.
9. Name three functions of testosterone unique to men.
10. Label parts of female reproductive system.
11. Describe where an oocyte is produced and how it is transported to the uterus.
12. Label a diagram of ovary (primary follicle, secondary follicle, vesicular follicle, ovulation, corpus luteum).
13. Assuming that fertilization has not occurred, describe the route that ova take through the female body.
14. Name the phases of the ovarian cycle and uterine cycle.
15. Summarize the events that occur during the two phases of the ovarian cycle.
16. Distinguish between the proliferative phase and the secretory phase of the uterine cycle and the hormones that promote each.
17. Name three functions of estrogen unique to women.
18. Name one role of each of the following in relation to a female's reproduction system: hypothalamus, anterior pituitary, posterior pituitary.
19. Describe the effects of hormonal secretion from the placenta.
20. What regulates the secretion of oxytocin?
21. Describe the mechanisms of labour. Include the terms: cervix, positive feedback, oxytocin, and contraction.
22. Complete the table by naming the source of, the target, and effect of the hormones named in the first column. (selected from the worksheet completed in class)
23. Compare and contrast sperm and ova in the following FOUR ways: site of production, ability to move, number produced, comparative size.
24. Compare and contrast each of the following: ejaculation and ovulation, follicle and corpus luteum.
25. Name the primary function of testosterone and estrogen.
26. Explain how males and females differ in the specialization of their genital tract for reproduction versus urination.