Cryptorchidism

Pelvic cavity
Inguinal ligament
Symphysis pubis
Penis
Scrotum

(a) Incomplete descent
(b) Ectopic testis
Hormonal Control — Reproductive Functions

Hypothalamus

GnRH

Androgens prevent oversecretion of GnRH

Androgens prevent oversecretion of LH (ICSH)

LH (ICSH)

Inhibin prevents oversecretion of FSH

Bloodstream

FSH stimulates meiosis in primary spermatocytes to form immature sperm cells; FSH stimulates secretion of inhibin by sustentacular cells

Inhibin

LH (ICSH) stimulates interstitial cells to secrete androgens (primarily testosterone)

Testes

Androgens

Androgens stimulate the development of male secondary sex characteristics and maturation of sperm cells
Testosterone Actions

- 8 weeks makes a male
- Stimulates testes descent
- During puberty stimulates enlarge of testes
- Development of 2nd sexual characteristics
- Increases cellular metabolism
- Increases RBC production
Sperm Cell Structure

- Acrosome
- Nucleus
- Head
- Midpiece
- Tail
Male Reproductive Organs—Posterior View (1)

- Ureter
- Urinary bladder
- Ampulla
- Seminal vesicle
- Ejaculatory duct
- Bulbourethral gland
- Prostate gland
- Vas deferens
Male Reproductive Organs — Posterior View (1)

- Ureter
- Urinary bladder
- Ampulla
- Seminal vesicle
- Ejaculatory duct
- Prostate gland
- Bulbourethral gland
- Vas deferens
Sperm Movements

In semen

Activated by a female's biochemicals

In cervical mucus

Penetrating an oocyte
Female Reproductive Organs (1)

- Uterine tube
- Ovary
- Uterus
- Urinary bladder
- Symphysis pubis
- Urethra
- Clitoris
- Labium minus
- Labium majus
- Vaginal orifice
Location of Ovaries

- Suspensory ligament of ovary
- Fimbriae of uterine tube
- Uterine tube
- Ovarian ligament
- Round ligament of uterus
- Broad ligament
- Left ovary
- Uterus
Female Internal Reproductive Organs (1)

- Uterine tube
- Ovarian ligament
- Body of uterus
- Ovary
- Round ligament
- Broad ligament
Ovary

1. Mitotic division

2. First meiotic division begins and then stops

3. First meiotic division completed just before ovulation

4. Second meiotic division begins and then stops

5. Second polar body (may divide to form two polar bodies)

6. Second meiotic division completed after sperm cell unites with the oocyte

Fertilization
Ovarian Cycle

- Corpus albicans
- Corpus luteum
- Ovulation
- Uterine tube
- Secondary oocyte
- Primordial follicle
- Primary follicle
- Follicular cells
- Primary oocyte
- Follicular fluid
- First polar body
- Zona pellucida
- Corona radiata
Hormonal Control—Female Reproductive Functions

Hypothalamus

GnRH

Estrogen inhibits oversecretion of gonadotropins

FSH, LH (gonadotropins)

Pituitary gland

Breasts develop
- Increased vascularization of the skin
- Accessory reproductive organs enlarge
- Increased deposition of adipose tissue in breasts, thighs, and buttocks

Bloodstream

Gonadotropins

Estrogen

Ovaries
Ovarian and Menstrual Cycles

Plasma hormonal concentration

Ovarian events

Plasma hormonal concentration

Thickness of endometrium
Changes in Basal Body Temperature During Menstrual Cycle

![Graph showing changes in basal body temperature during the menstrual cycle.](image-url)
Breast Cancer

- Mammogram
- Ultrasound
- Lumpectomy
- Modified mastectomy
- Radical mastectomy
- Breast Cancer Causes?