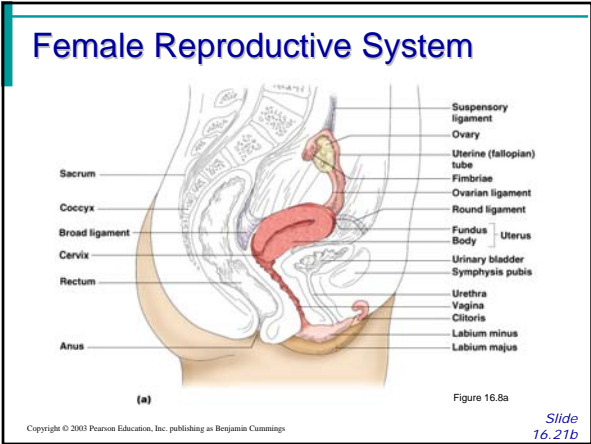


Bio 250
Female Anatomy

- ### Female Reproductive System
- Ovaries
 - Duct System
 - Uterine tubes (fallopian tubes)
 - Uterus
 - Vagina
 - External genitalia
- Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings
- Slide 16.21a*



Ovaries

- Composed of ovarian follicles (sac-like structures)
- Structure of an ovarian follicle
 - Oocyte
 - Follicular cells

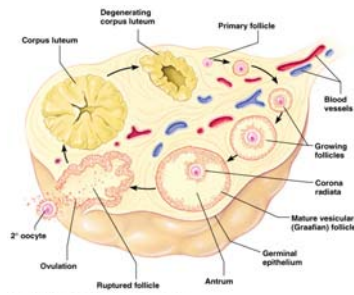


Figure 16.7

Slide 16.22

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Ovarian Follicle Stages

- Primary follicle – contains an immature oocyte
- Graafian (vesicular) follicle – growing follicle with a maturing oocyte
- Ovulation – when the egg is mature the follicle ruptures
 - Occurs about every 28 days
- The ruptured follicle is transformed into a corpus luteum

Slide 16.23

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

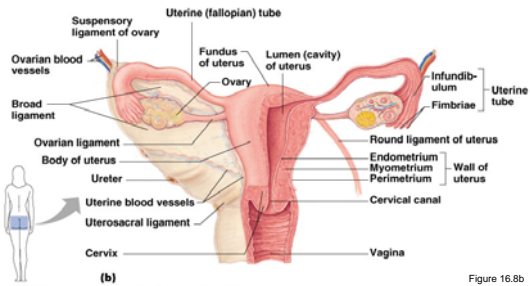
Support for Ovaries

- Suspensory ligaments – secure ovary to lateral walls of the pelvis
- Ovarian ligaments – attach to uterus
- Broad ligament – a fold of the peritoneum, encloses suspensory ligament

Slide 16.24a

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Support for Ovaries



Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Slide
16.24b

Uterine (Fallopian) Tubes

- Receive the ovulated oocyte
- Provide a site for fertilization
- Attaches to the uterus
- Does not physically attach to the ovary
- Supported by the broad ligament

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Slide
16.25

Uterine Tube Function

- Fimbriae – finger-like projections at the distal end that receive the oocyte
- Cilia inside the uterine tube slowly move the oocyte towards the uterus (takes 3–4 days)
- Fertilization occurs inside the uterine tube

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Slide
16.26

Uterus

- Located between the urinary bladder and rectum
- Hollow organ
- Functions of the uterus
 - Receives a fertilized egg
 - Retains the fertilized egg
 - Nourishes the fertilized egg

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Slide
16.27

Support for the Uterus

- Broad ligament – attached to the pelvis
- Round ligament – anchored anteriorly
- Uterosacral ligaments – anchored posteriorly

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Slide
16.28a

Support for the Uterus

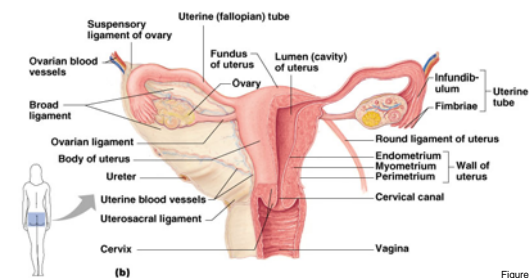


Figure 16.8b

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Slide
16.28b

Regions of the Uterus

- Body – main portion
- Fundus – area where uterine tube enters
- Cervix – narrow outlet that protrudes into the vagina

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Slide
16.29

Walls of the Uterus

- Endometrium
 - Inner layer
 - Allows for implantation of a fertilized egg
 - Sloughs off if no pregnancy occurs (menses)
- Myometrium – middle layer of smooth muscle
- Serous layer – outer visceral peritoneum

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Slide
16.30

Vagina

- Extends from cervix to exterior of body
- Behind bladder and in front of rectum
- Serves as the birth canal
- Receives the penis during sexual intercourse
- Hymen – partially closes the vagina until it is ruptured

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Slide
16.31

External Genitalia (Vulva)

- Mons pubis
 - Fatty area overlying the pubic symphysis
 - Covered with pubic hair after puberty



Figure 16.9

Slide
16.32a

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

External Genitalia (Vulva)

- Labia – skin folds
 - Labia majora
 - Labia minora



Figure 16.9

Slide
16.32b

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

External Genitalia

- Vestibule
 - Enclosed by labia majora
 - Contains opening of the urethra and the greater vestibular glands (produce mucus)
- Clitoris
 - Contains erectile tissue
 - Corresponds to the male penis

Slide
16.33

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Oogenesis

- The total supply of eggs are present at birth
- Ability to release eggs begins at puberty
- Reproductive ability ends at menopause
- Oocytes are matured in developing ovarian follicles

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Slide
16.34

Oogenesis

- Oogonia – female stem cells found in a developing fetus
- Oogonia undergo mitosis to produce primary oocytes
- Primary oocytes are surrounded by cells that form primary follicles in the ovary
- Oogonia no longer exist by the time of birth

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Slide
16.35

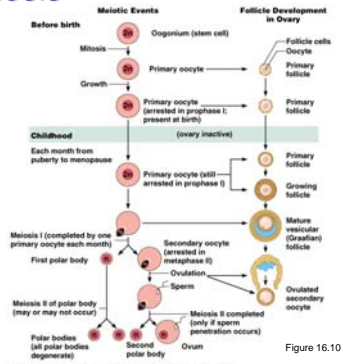
Oogenesis

- Primary oocytes are inactive until puberty
- Follicle stimulating hormone (FSH) causes some primary follicles to mature
 - Meiosis starts inside maturing follicle
 - Produces a secondary oocyte and the first polar body
 - Meiosis is completed after ovulation only if sperm penetrates
 - Two additional polar bodies are produced

Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Slide
16.36

Oogenesis



Copyright © 2003 Pearson Education, Inc. publishing as Benjamin Cummings

Slide 16.37
