Chapter 4

Sexual Anatomy
Breasts

- Breasts consist of 15 or 20 clusters of *mammary glands*, each with a separate opening to the nipple, surrounded by fatty and fibrous tissue.
- *Nipple* - where milk ducts open; at the tip of the breasts.
- *Areola* - area surrounding the nipple.
Internal Structure of the Breast

- Breast lobule
- Lactiferous (milk) duct
- Lactiferous sinus
- Nipple
- Areola
- Fat
- Cooper's ligaments
- Clavicle (collar bone)
- Muscle
- Rib
Breasts Come in Many Sizes & Shapes

According to the text, few women are satisfied with the size of their breasts. Most think they are too small or too large.
Breast Cancer

• Second most common form of cancer in women.

• Causes:
  – Genetic factors (5%)
  – Virus
  – Diet (rare in low fat diets)
  – Cigarette smoking

• Diagnosis - do monthly breast self-exam.
Breast Cancer Screening Self Exam

Brief, Cooler Version

Breast Self-Examination

A

B

C

D
Breast Cancer Treatments

• Radiation therapy
• Chemotherapy
• Hormone therapy
• Surgery
Needle Aspiration

- Insert needle in breast lump
- Drain fluid
- If lump disappears, it was a cyst – monitor in future
- If lump remains, it may be either a fibroadenoma or a malignant tumor.
Breast Cancer Surgeries

• **Lumpectomy** - only the lump and a small bit of surrounding tissues are removed.

• **Radical Mastectomy** - breast and underlying muscle & lymph nodes are removed.

• Psychological impact of breast cancer and mastectomy can be enormous; may include depression and anxiety.
Two Categories of Sexual Organs

• External organs (Vagina Monologues)
• Internal organs
Female External Organs

- Clitoris
- Mons pubis
- Outer lips
- Inner lips
- Vaginal opening
- Organs collectively known as vulva
Homologous Organs

- Female & male sexual organs that develop from similar tissue before birth.
- Homologous means that they develop from the same source.
- For example, the clitoris is homologous to the penis.
Varying Shapes of Vulvas

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Clitoris

- Sensitive organ important in female sexual response. Only part of female sexual anatomy with no known reproductive function.
- **Tip** - knob of tissue externally in front of vaginal opening and urethral opening.
- **Shaft** - consists of 2 corpora cavernosa.
- **Crura** - two longer spongy bodies that lie deep in body and run from tip to either side of vagina.
The clitoris is erectile. This is possible because it’s internal structure contains corpora cavernosa that fill with blood as similar structures in the penis do.
Structure of the Clitoris
Mons Pubis

• Also called *mons* or *mons veneris*
• Rounded, fatty pad of tissue, covered with pubic hair, at front of the body.
• Lies on top of the pubic bones.
Labia

• Labia majora (outer lips)
  – rounded pads of fatty tissue lying along both sides of vaginal opening, covered with pubic hair.

• Labia minora (inner lips)
  – two hairless folds of skin lying between the outer lips and running right along the edge of the vaginal opening.
  – the inner lips extend forward and come together in front, forming the clitoral hood.
Vulva: Virginal, Nulliparous, Parous

Virginal

In the woman who has had intercourse

In the woman who has had a baby
Hymen

- Thin membrane which, if present, partially covers the vaginal opening.
- Varies in physical types.
- Also called “cherry” or “maidenhead.”
- Not a sign of virginity.
Various Types of Hymens

- Annular hymen
- Septate hymen
- Cribriform hymen
- Imperforate hymen
- Parous introitus (after childbirth)
Female Internal Organs

- Vagina
- Introitus – vaginal opening surrounded by pubococcygeus muscle
- Vestibular bulbs
- Skene’s gland (or Female Prostate) better known as the G-spot – located in the lower 1/3 of the vagina near the introitus
- Uterus
- Fallopian tubes
- Ovaries
Internal Sexual & Reproductive Organs (F)

- Fallopian tube
- Ovary
- Uterus
- Cervix
- Bladder
- Rectum
- Urethra
- Vagina
- Anus
Vagina

- Tube-shaped organ into which penis is inserted during coitus.
- Only 3 to 4 inches long in a resting state.
- Passageway through which a baby travels during birth; sometimes called *birth canal*.
- **Pubococcygeus muscle** may be stretched during childbirth.
- At the bottom it ends in the *vaginal opening* or *introitus*. 
Vestibular Bulbs

• Bulbs of the clitoris.
• Two organs about the size and shape of a pea pod.
• Lie on either side of vaginal wall, near the entrance, under the inner lips.
• They are erectile tissue and lie close to the crura of the clitoris.
Skene’s Gland

• Female prostate or paraurethral glands.
• Lies between wall of the urethra and wall of the vagina.
• Its ducts empty into the urethra.
• Responsible for female ejaculation
• Secretes fluid that is biochemically similar to male prostate fluid.
Uterus

• Also called *womb*

• Size of a fist and is shaped like an upside-down pear.
  – Cervix - narrow lower third of uterus
  – Fundus - top of uterus
  – Body - main part of uterus
Three Layers of the Uterus

- Endometrium
- Myometrium
- Perimetrium or serosa
Fallopian Tubes

- Also called oviducts or uterine tubes.
- Extremely narrow, lined with hairlike projections called cilia.
- Pathway by which egg leaves ovaries and the sperm reach the egg.
- Fertilization of egg typically occurs in the infundibulum, section of tube closest to ovary.
- Fimbria - fingerlike projections on end of fallopian tube.
Ovaries

- Two organs about size and shape of unshelled almonds; lie on either side of uterus.
- 2 functions:
  - Release eggs (ova) - females are born with about 400,000 immature eggs
  - Manufacture female sex hormones, estrogen and progesterone.
- Contain numerous follicles - capsule that surrounds an egg.
Internal Sexual & Reproductive Organs (F)
Muscles on the Floor of the Pelvis

- Suspensory ligament
- Vagina
- Anus
- Pubococcygeus muscle
- Iliococcygeus muscle
- Coccygeus muscle

DEEPER MUSCLES

ORGANS AND MUSCLES NEAR SKIN
Female Genital Cutting

• *Sunna* refers to removal of the clitoral hood (prepuce), not the clitoris, and is the only procedure that could legitimately be called “female circumcision.”

• *Excision (clitoridectomy)* refers to complete removal of the clitoris and perhaps some of the inner lips.

• The most extreme form of FGM is *infibulation*, which involves removal of the clitoris, all of the inner lips and part of the outer lips.
Male External Organs

- Penis
- Scrotum or Scrotal Sac
External Parts of the Penis

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- **Glans** - end or tip of penis.
- **Meatus or urethral opening** - opening at the end of the glans; urine and semen pass through.
- **Body or shaft** - main part of the penis.
- **Corona** - raised ridge separating glans from the body of the penis.
- **Foreskin**, or prepuce - additional layer of skin that forms a sheathlike covering over the glans. Absent in circumcised penises.
Internal Parts of the Penis

- Internally the penis contains 3 long, spongy cylinders:
  - *Corpora cavernosa* - the two bodies lying on top.
  - *Corpus spongiosum* - single body lying on the bottom of the penis; urethra runs through the middle of it.
• No muscle is involved in erection which is purely a vascular phenomenon and results entirely from blood flow.

• Average erect penis is 6 inches (according to your text)
Male Genital Cutting

- **Circumcision** - surgical cutting away or removal of foreskin.
- **Supercision** - making a slit in the length of the foreskin on the top.
- **Subincision** - making a slit on the lower side of the penis along its entire length.
Scrotum

• Also known as *scrotal sac*.
• Loose pouch of skin, lightly covered with hair.
• Contains the *testes*.
• Left one usually hangs lower than the right one.
Testes

• **Testes** - are the *gonads* or reproductive glands.
  – Manufacture germ cells (sperm).
  – Manufacture sex hormones; testosterone.
Inside the Testes

- **Seminiferous tubules** - long series of threadlike tubes in testes; manufacture & store sperm.
- **Interstitial cells** - or *Leydig’s cells*
  - Produce testosterone.
  - Found in connective tissue between seminiferous tubules.
Internal Structures of the Testes
Epididymis and Vas Deferens

- **Epididymis** - long tube coiled into a small crescent-shaped region on the top and side of the testis.
  - Stores, ripens, & matures sperm.
- **Vas Deferens** - tube that goes up and out of the scrotum and eventually passes through the prostate, where it is called the *ejaculatory duct.*
Seminal Vesicles

- Two saclike structures that lie above the prostate, behind the bladder, and in front of the rectum.
- Produce 70% of the seminal fluid, or ejaculate.
Prostate and Cowper’s Glands

• **Prostate** - lies below the bladder; size and shape of a chestnut.
  – Secretes a milky alkaline fluid that is part of the ejaculate.

• **Cowper’s Glands** or bulbourethral glands - located below prostate; empty into urethra.
Cancers of the Sex Organs

• Breast Cancer
• Cancer of the Cervix, Endometrium, and Ovaries
• Cancer of the Prostate
• Cancer of the Testes
### Cancers of the Cervix, Endometrium, and Ovaries

- Most common cancers in women after breast cancer.
- 95% of cases of cervical cancer are caused by Human Papillomavirus (HPV).
- *Pap test* is highly accurate and can detect cancer long before person has symptoms.
- **Hysterectomy**, surgical removal of the uterus, is often used to treat all three cancers.
Speculum and Bimanual Pelvic Exam

(Opening to cervix) 
Spatula

Ayre spatula (used for scraping)

Cervix

Speculum in place in vagina

(a)

(b)

Pubic bone
Clitoris
Bladder
Uterus
Cervix
Rectum

(b)
Cancer of the Prostate

- Early symptoms: frequent urination, difficulty in urination, difficulty emptying the bladder.
- Diagnosis: rectal examination; men over 40 should have a yearly rectal exam.
Cancer of the Testes

• A disease of young men.
• First sign - painless lump in the testes, or slight enlargement or change in consistency of the testes, pain in lower abdomen or groin.
• Diagnosis - physician exam or testicular self-exam & ultrasound.
• Cause - unknown.