• Overview of Anatomy and Physiology

• Male reproductive system
  ■ Testes
  ■ Ductal system
    • Epididymis
    • Ductus deferens (vas deferens)
    • Ejaculatory duct and urethra
  ■ Accessory glands
    • Seminal vesicles
    • Prostate gland
    • Cowper’s glands
  ■ Urethra and penis
  ■ Sperm

• Figure 52-1

• Figure 52-2

• Overview of Anatomy and Physiology

• Female reproductive system
  ■ Ovaries
  ■ Fallopian tubes
  ■ Uterus
  ■ Vagina
  ■ External genitalia
  ■ Accessory glands
    • Skene’s glands
    • Bartholin’s glands
- Perineum
- Mammary glands (breasts)

- Figure 52-3
- Figure 52-4
- Figure 52-6
- Figure 52-7
- Figure 52-14

- Human Sexuality

- Sexual identity
  - The sense of being feminine or masculine

- Influences on sexual health
  - Overall wellness includes sexual health, and sexuality should be part of the health care program

- Illness and sexuality
  - Illness may cause changes in a patient’s self-concept and result in an inability to function sexually

- Laboratory and Diagnostic Examinations

- Diagnostic tests for the female
  - Colposcopy; culdoscopy; laparoscopy
  - Papanicolaou (Pap) smear
  - Biopsies: Breast, cervical, endometrial
  - Conization; dilation and curettage
  - Cultures and smears
  - Schiller’s iodine test
- Hysterograms
- Mammography; pelvic ultrasonography
- Tubal insufflation (Rubin’s test)
- Human chorionic gonadotropin; serum CA-125

○ Laboratory and Diagnostic Examinations

○ Diagnostic tests for the male
  - Testicular biopsy
  - Semen analysis
  - Prostatic smears
  - Cystoscopy
  - Prostate specific antigen (PSA)

○ The Reproductive Cycle

○ Menarche
  - The beginning of menses
  - Follows breast development by 2 to 2½ years
  - Average age range is between 9 and 17 years
  - Cycle length ranges from 24 to 32 days
  - The average flow lasts 3 to 5 days
  - The average flow is 35 mL/cycle

○ The Reproductive Cycle

○ Amenorrhea
  - Etiology/pathophysiology
    - Absent or suppressed menstrual flow
  - Clinical manifestations/assessment
    - No menstrual flow for at least 3 months
Medical management/nursing interventions
  • Based on underlying cause
  • Hormone replacement may be necessary

The Reproductive Cycle

The Reproductive Cycle

Dysmenorrhea (continued)

Medical management/nursing interventions
  • Exercise
  • Nutritious foods, high in fiber
  • Heat to pelvic area
  • Mild analgesics
  • Prostaglandin inhibitors

Abnormal uterine bleeding

Menorrhagia
  • Excessive bleeding during the regular menstrual flow
  • Causes: Endocrine disorders; inflammatory disturbances; uterine tumors

Metrorragia
  • Uterine bleeding between regular menstrual periods or after menopause
  • May indicate cancer or benign tumors of the uterus

Premenstrual syndrome (PMS)

Etiology/pathophysiology
  • Related to the neuroendocrine events occurring within the anterior pituitary gland
Clinical manifestations/assessment
- Irritability, lethargy, and fatigue
- Sleep disturbances; depression
- Headache; backache; breast tenderness
- Vertigo
- Abdominal distention
- Acne

The Reproductive Cycle

Premenstrual syndrome (PMS) (continued)

Medical management/nursing interventions
- Pharmacological management
  - Analgesics; diuretics; progesterone
- Dietary recommendations
  - High in complex carbohydrates
  - Moderate in protein
  - Low in refined sugar and sodium
  - Limit caffeine, chocolate, and alcohol
- Reduce or eliminate smoking
- Exercise; adequate rest, sleep, and relaxation

The Reproductive Cycle

Menopause

Etiology/pathophysiology
- The normal decline of ovarian function resulting from the aging process
- May be induced by irradiation of the ovaries or surgical removal of both ovaries
- Not considered complete until 1 year after the last menstrual period

The Reproductive Cycle
Menopause

- Clinical manifestations/assessment
  - Decrease in frequency, amount, and duration of the normal menstrual flow
  - Shrinkage of vulval structures; shortening of the vagina
  - Dryness of the vaginal wall; pelvic relaxation
  - Loss of skin turgor and elasticity
  - Increased subcutaneous fat; decreased breast tissue; thinning of hair
  - Osteoporosis

The Reproductive Cycle

- Menopause (continued)
  - Medical management/nursing interventions
    - Estrogen therapy
      - Premarin
      - Provera
    - Calcium supplements

The Reproductive Cycle

- Male climacteric
  - Etiology/pathophysiology
    - Gradual decrease of testosterone levels and seminal fluid production; 55 to 70 years of age
  - Clinical manifestations/assessment
    - Decreased erections; decreased seminal fluid
    - Enlarged prostate gland; decreased muscle tone
    - Loss or thinning of hair
  - Medical management/nursing interventions
    - Emotional support; treatment for impotence
• The Reproductive Cycle

• Erectile dysfunction
  ▪ Etiology/pathophysiology
    ▪ Inability of an adult man to achieve penile erection
  ▪ Types
    ▪ Functional
    ▪ Anatomical
    ▪ Atonic
  ▪ Medical management/nursing interventions
    ▪ Remove cause if possible
    ▪ Treat diseases
    ▪ Viagra
    ▪ Mechanical devices: penile prosthesis

• The Reproductive Cycle

• Infertility
  ▪ Etiology/pathophysiology
    ▪ Inability to conceive after 1 year of sexual intercourse without birth control
  ▪ Medical management/nursing interventions
    ▪ Depends on the cause
    ▪ Hormone therapy
    ▪ Repair occlusion
    ▪ Intrauterine insemination
    ▪ In vitro fertilization

• Infections of the Female Reproductive Tract

• Simple vaginitis
  ▪ Etiology/pathophysiology
• Common vaginal infection

• Causative organisms: *E. coli*; staphylococcal; streptococcal; *T. vaginalis*; *C. albicans*; *Gardnerella*

Clinical manifestations/assessment

• Inflammation of the vagina

• Yellow, white, or grayish white, curd-like discharge

• Pruritus and vaginal burning

Simple vaginitis *(continued)*

Medical management/nursing interventions

• Douching

• Vaginal suppositories, ointments, and creams
  • Organism-specific

• Sitz baths

• Abstain from sexual intercourse during treatment

• Treat partner if necessary

Cervicitis

Etiology/pathophysiology

• Infection of the cervix

Clinical manifestations/assessment

• Backache

• Whitish exudate

• Menstrual irregularities

Medical management/nursing interventions

• Vaginal suppositories, ointments, and creams; organism-specific

Pelvic inflammatory disease (PID)

Etiology/pathophysiology

• Any acute, subacute, recurrent, or chronic infection of the cervix, uterus, fallopian tubes, and ovaries that has extended to the connective tissues
• Most common causative organisms
  ▪ Gonorrhea; streptococcus; staphylococcus; Chlamydia; tubercle bacilli

• High risk: Surgical and examination procedures; sexual intercourse (especially with multiple partners); pregnancy

- Pelvic inflammatory disease (PID) (continued)
  ▪ Clinical manifestations/assessment
    • Fever and chills
    • Severe abdominal pain
    • Malaise
    • Nausea and vomiting
    • Malodorous purulent vaginal exudate

  ▪ Medical management/nursing interventions
    • Antibiotics; analgesics
    • Bed rest

- Toxic shock syndrome
  ▪ Etiology/pathophysiology
    • Acute bacterial infection caused by Staphylococcus aureus
    • Usually occurs in women who are menstruating and using tampons

- Toxic shock syndrome (continued)
  ▪ Clinical manifestations/assessment
    • Usually occurs between days 2 and 4 of the menstrual period
    • Flu-like symptoms; sore throat; headache
    • Red macular palmar or diffuse rash
    • Decreased urinary output; BUN elevated
    • Pulmonary edema

  ▪ Medical management/nursing interventions
    • Antibiotics; IV fluid therapy; oxygen
Disorders of the Female Reproductive System

Endometriosis

- Etiology/pathophysiology
  - Endometrial tissue appears outside the uterus
  - The tissue responds to the normal stimulation of the ovaries; bleeds each month

- Clinical manifestations/assessment
  - Lower abdominal and pelvic pain
  - May radiate to lower back, legs, and groin

- Medical management/nursing interventions
  - Antiovulatory medications; pregnancy
  - Laparoscopy; total hysterectomy

Figure 52-9

Vaginal fistula

- Etiology/pathophysiology
  - Abnormal opening between the vagina and another organ

- Clinical manifestations/assessment
  - Urine and/or feces being expelled from vagina

- Medical management/nursing interventions
  - Oral or parenteral antibiotics
  - Diet: high protein; increase vitamin C
  - Surgery: Repair fistula; urinary or fecal diversion

Figure 52-10

Displaced uterus

- Etiology/pathophysiology
  - Congenital
- Childbirth
- Backward displacement
  - Retroversion
  - Retroflexion
- Forward displacement
  - Anteversion
  - Anteflexion

Displaced uterus *(continued)*

- Clinical manifestations/assessment
  - Backache
  - Muscle strain
  - Leukorrheal discharge
  - Heaviness in the pelvic area
- Medical management/nursing interventions
  - Pessary
  - Uterine suspension

Uterine prolapse

- Etiology/pathophysiology
  - Prolapse of the uterus through the pelvic floor and vaginal opening
- Clinical manifestations/assessment
  - Fullness in vaginal area
  - Backache
  - Bowel or bladder problems
  - Protrusion of cervix and vaginal walls in perineal area

Figure 52-11

Uterine prolapse *(continued)*

- Medical management/nursing interventions
- Pessary
- Surgery
  - Vaginal hysterectomy
  - Anteroposterior colporrhaphy

- Cystocele and rectocele
  - Etiology/pathophysiology
    - Cystocele
      - Displacement of the bladder into the vagina
    - Rectocele
      - Rectum moves toward posterior vaginal wall

- Figure 52-12

- Cystocele and rectocele (continued)
  - Clinical manifestations/assessment
    - Cystocele
      - Urinary urgency, frequency, and incontinence; pelvic pressure
    - Rectocele
      - Constipation; rectal pressure; hemorrhoids

  - Medical management/nursing interventions
    - Surgical repair
      - Anteroposterior colporrhaphy; bladder suspension

- Leiomyomas of the uterus (fibroids, myomas)
  - Etiology/pathophysiology
    - Arise from the muscle tissue of the uterus
    - Stimulated by ovarian hormones
  - Clinical manifestations/assessment
    - Pelvic pressure; pain; backache
    - Dysmenorrhea; menorrhagia
    - Constipation; urinary symptoms
Medical management/nursing interventions
- Surgery: Myomectomy; hysterectomy

Figure 52-13

Ovarian cysts
- Etiology/pathophysiology
  - Benign tumors that arise from dermoid cells of the ovary
- Clinical manifestations/assessment
  - May be no symptoms
  - Palpable on examination
  - Disturbance of menstruation
  - Pelvic heaviness; pain
- Medical management/nursing interventions
  - Ovarian cystectomy

Cancer of the Female Reproductive Tract

Cancer of the cervix
- Etiology/pathophysiology
  - Squamous cell carcinoma
  - Carcinoma in situ
  - If untreated, invades the vagina, pelvic wall, bladder, rectum, and regional lymph nodes
  - High risk
    - Sexually active during teens
    - Multiple sexual partners
    - Multiple births
    - Chronic cervical infections

Cancer of the Female Reproductive Tract

Cancer of the cervix (continued)
Clinical manifestations/assessment
- Few symptoms in early stages
- Leukorrhea
- Irregular vaginal bleeding; spotting
- Advanced
  - Pain in the back, upper thighs, and legs

Cancer of the Female Reproductive Tract

Cancer of the cervix (continued)
- Medical management/nursing interventions
  - Carcinoma in situ
    - Removal of the affected area
  - Early carcinoma
    - Hysterectomy
    - Intracavitary radiation
  - Advanced carcinoma
    - Radical hysterectomy with pelvic lymph node dissection

Cancer of the Female Reproductive Tract

Cancer of the endometrium
- Etiology/pathophysiology
  - Adenocarcinoma of the uterus
- Clinical manifestations/assessment
  - Postmenopausal bleeding (50% will have cancer)
  - Abdominal pressure; pelvic fullness
- Medical management/nursing interventions
  - Surgery: total abdominal hysterectomy with bilateral salpingo-oophorectomy (TAH-BSO)
  - Radiation; chemotherapy
Cancer of the Female Reproductive Tract

Cancer of the ovary

- Etiology/pathophysiology
  - Fourth most common cause of cancer death in women
  - High risk: infertile; anovulatory; nulliparous; habitual aborters; high-fat diet; exposure to industrial chemicals

Cancer of the Female Reproductive Tract

Cancer of the ovary (continued)

- Clinical manifestations/assessment
  - Early
    - Vague abdominal discomfort
    - Flatulence; mild gastric disturbance
  - Advanced
    - Enlarged abdominal girth
    - Flatulence; constipation
    - Urinary frequency
    - Nausea and vomiting
    - Weight loss

Cancer of the Female Reproductive Tract

Cancer of the ovary (continued)

- Medical management/nursing interventions
  - Surgery
    - TAH-BSO and omentectomy
  - Radiation and/or chemotherapy

Hysterectomy

Total hysterectomy

- Removal of the uterus including the cervix
- TAH-BSO
  - Removal of the uterus, fallopian tubes, and ovaries

- Radical hysterectomy
  - TAH-BSO with removal of the pelvic lymph nodes

- Vaginal hysterectomy
  - The uterus is removed through the vagina

- Abdominal hysterectomy
  - Abdominal incision is made to perform procedure

- Disorders of the Female Breast

- Fibrocystic breast condition
  - Etiology/pathophysiology
    - Hyperplasia and cystic formation in mammary ducts
  - Clinical manifestations/assessment
    - Cysts are soft, well-differentiated, tender, and freely moveable; often bilateral and multiple
  - Medical management/nursing interventions
    - Eliminate methylxanthines
    - Danazol (danocrine); vitamin E

- Disorders of the Female Breast

- Acute mastitis
  - Etiology/pathophysiology
    - Acute bacterial infection of the breast
  - Clinical manifestations/assessment
    - Breasts are tender, inflamed, and engorged
  - Medical management/nursing interventions
• Keep breasts clean
• Application of warm packs
• Support: Well-fitting bra
• Systemic antibiotics

Disorders of the Female Breast

Chronic mastitis
  ■ Etiology/pathophysiology
    • Fibrosis and cysts in the breast
  ■ Clinical manifestations/assessment
    • Tender, painful, and palpable cysts
    • Usually unilateral
  ■ Medical management/nursing interventions
    • Same as for acute mastitis

Disorders of the Female Breast

Breast cancer
  ■ Etiology/pathophysiology
    • Unknown cause; usually adenocarcinoma
  ■ Clinical manifestations/assessment
    • Small, solitary, irregular-shaped, firm, non-tender, and non-mobile tumor
    • Change in skin color
    • Puckering or dimpling of tissue
    • Nipple discharge; retraction of nipple
    • Axillary tenderness

Disorders of the Female Breast

Breast cancer (continued)
Medical management/nursing interventions
  • Depends on the stage
    ▪ Radiation
    ▪ Chemotherapy
    ▪ Surgery
      o Lumpectomy
      o Mastectomy—partial, subcutaneous, simple, radical

Inflammatory Disorders of the Male Reproductive System

Prostatitis
  ▪ Etiology/pathophysiology
    • Acute or chronic infection of the prostate gland
  ▪ Clinical manifestations/assessment
    • Chills and fever
    • Dysuria; urgency and frequency of urination
    • Cloudy urine
    • Perineal fullness; lower back pain
    • Arthralgia; myalgia
    • Tenderness, edema, and firmness of the prostate

Inflammatory Disorders of the Male Reproductive System

Prostatitis (continued)
  ▪ Medical management/nursing interventions
    • Antibiotics
    • Digital massage of the prostate
    • Sitz baths
    • Monitor I&O

Inflammatory Disorders of the Male Reproductive System
• Epididymitis
  ▪ Etiology/pathophysiology
    • Infection of the epididymis
  ▪ Clinical manifestations/assessment
    • Scrotal pain and edema
    • Pyuria; chills and fever
  ▪ Medical management/nursing interventions
    • Bed rest
    • Elevate scrotum; cold compresses
    • Antibiotics

• Disorders of Male Genital Organs

• Phimosis
  ▪ Etiology/pathophysiology
    • Prepuce is too small to allow retraction of the foreskin over the glans
    • Usually congenital; may be due to inflammation or disease
  ▪ Clinical manifestations/assessment
    • Infection of foreskin and glans penis
    • Occasionally causes obstruction of urine flow
  ▪ Medical management/nursing interventions
    • Circumcision

• Disorders of the Male Genital Organs

• Paraphimosis
  ▪ Etiology and pathophysiology
    • An edematous condition of the retracted uncircumcised foreskin preventing a normal return over the glans
  ▪ Medical management/nursing interventions
- Warm compresses
- Circumcision

- Disorders of Male Genital Organs

- Hydrocele
  - Etiology/pathophysiology
    - Accumulation of fluid between the membranes of the testes
  - Clinical manifestations/assessment
    - Enlargement of the scrotum; pain
  - Medical management/nursing interventions
    - Aspiration of fluid
    - Surgical removal of testicular sac
    - Bed rest; elevate scrotum; cold compresses

- Disorders of Male Genital Organs

- Varicocele
  - Etiology/pathophysiology
    - Dilation of scrotal veins causing obstruction and malfunction of circulation
  - Clinical manifestations/assessment
    - Engorgement and elongation of the scrotum
    - Pulling sensation in scrotum; dull, aching pain
  - Medical management/nursing interventions
    - Surgery: Removal of obstruction
    - Bed rest
    - Elevate scrotum; cold compresses

- Cancer of the Male Reproductive Tract

- Cancer of the testis
- Etiology/pathophysiology
  - Cause unknown

- Clinical manifestations/assessment
  - Enlarged scrotum; feeling of heaviness
  - Firm, painless, smooth mass

- Medical management/nursing interventions
  - Radical inguinal orchiectomy
  - Radiation and/or chemotherapy
  - Teach testicular self-examination

- Cancer of the Male Reproductive Tract

- Cancer of the penis
  - Etiology/pathophysiology
    - Very rare

- Clinical manifestations/assessment
  - Painless, wart-like growth or ulceration, usually on the glans penis

- Medical management/nursing interventions
  - Surgery
    - Removal of tissue
    - Partial or total amputation of the penis
    - Metastasis: Radical surgical procedures

- Herpes

- Sexually Transmitted Diseases

- Genital herpes (HSV)
  - Etiology/pathophysiology
    - Infectious viral disease; usually acquired sexually

  - Clinical manifestations/assessment
• Fluid-filled vesicles
• Eventually rupture and develop shallow, painful ulcers
• Fever; malaise
• Dysuria
• Leukorrhea (female)

Figure 52-19

Sexually Transmitted Diseases

Genital herpes (HSV) (continued)
- Medical management/nursing interventions
  - No cure; treat symptoms
  - Acyclovir (Zovirax)
  - Sitz baths
  - Local anesthetic; analgesics
  - Keep lesions clean and dry
  - GOOD handwashing
  - No sexual contact while lesions are present
  - Encourage use of condoms

Sexually Transmitted Diseases

Syphilis
- Etiology/pathophysiology
  - Treponema pallidum organism
  - Transmission occurs primarily with sexual contact

Clinical manifestations/assessment
- Incubation period
  - No symptoms
- Primary stage
Chancre; headaches; enlarged lymph nodes

Sexually Transmitted Diseases

Syphilis (continued)

Clinical manifestations/assessment

• Secondary stage
  ▪ Rash on palms of hands and soles of feet
  ▪ Generalized enlargement of lymph nodes

• Latent stage
  ▪ No symptoms

• Tertiary or late stage
  ▪ Lesions may affect many different systems; may be fatal

Medical management/nursing interventions

• Pharmacological management
  ▪ Penicillin
  ▪ Tetracycline or erythromycin, if allergic to penicillin

• May be treated in any stage; damage from previous stages will not be reversed

• Treat all sexual contacts

Chancre of syphilis

Rash of secondary syphilis

Sexually Transmitted Diseases

Gonorrhea

• Etiology/pathophysiology
  ▪ N. gonorrhoeae
• Transmitted by sexual contact
  ▪ Clinical manifestations/assessment
    • Vaginal (female)
      ▪ Urinary frequency and pain
      ▪ Yellowish discharge
      ▪ Nausea and vomiting

• Sexually Transmitted Diseases

• Gonorrhea (continued)
  ▪ Clinical manifestations/assessment (continued)
    • Urethra (male)
      ▪ Urethral discomfort; dysuria
      ▪ Yellowish discharge containing pus
      ▪ Red and swollen meatus
    • Rectal (male and female)
      ▪ Perineal discomfort; purulent rectal discharge
    • Pharyngitis (male and female)
      ▪ Sore throat and swallowing discomfort
      ▪ Edema of the throat

• Sexually Transmitted Diseases

• Gonorrhea (continued)
  ▪ Medical management/nursing interventions
    • Pharmacological management
      ▪ Penicillin
      ▪ Rocephin
      ▪ Doxycycline or tetracycline
    • Patient education
    • TREAT ALL SEXUAL CONTACTS

• Gonorrhea
• Gonorrhea  Pharyngitis

• Sexually Transmitted Diseases

• Trichomoniasis
  ▪ Etiology/pathophysiology
    • T. vaginalis protozoan
    • Usually sexually transmitted
  ▪ Clinical manifestations/assessment
    • Most are asymptomatic
    • Male: Urethritis, dysuria, urinary frequency, pruritus, and purulent exudate

• Sexually Transmitted Diseases

• Trichomoniasis (continued)
  ▪ Clinical manifestations/assessment (continued)
    • Female
      ▪ Frothy, gray, green, or yellow malodorous discharge
      ▪ Pruritus
      ▪ Edema
      ▪ Tenderness of vagina
      ▪ Dysuria and urinary frequency
      ▪ Spotting; menorrhagia; dysmenorrhea

• Sexually Transmitted Diseases

• Trichomoniasis (continued)
  ▪ Medical management/nursing interventions
    • Pharmacological management
      ▪ Metronidazole (Flagyl)
    • Patient education
    • TREAT ALL SEXUAL CONTACTS
Sexually Transmitted Diseases

Candidiasis

- Etiology/pathophysiology
  - *C. albicans* and *C. tropicalis*

- Clinical manifestations/assessment
  - Mouth: Edema; white patches
  - Nails: Edematous, darkened, erythematous nail base; purulent exudate
  - Vaginal: Cheesy, tenacious white discharge; pruritus; inflammation of the vagina
  - Penis: Purulent exudate
  - Systemic: Chills; fever; general malaise

Sexually Transmitted Diseases

Candidiasis (continued)

- Medical management/nursing interventions
  - Pharmacological management
    - Nystatin (Mycostatin)
    - Topical amphotericin B
  - Treat underlying condition

Sexually Transmitted Diseases

Chlamydia

- Etiology/pathophysiology
  - *Chlamydia trachomatis*

- Clinical manifestations/assessment
  - Usually asymptomatic
  - Male
    - Scanty white or clear exudate
• Burning or pruritus
• Urinary frequency; mild dysuria

• Sexually Transmitted Diseases

• Chlamydia (continued)
  ■ Clinical manifestations/assessment
  • Female
    ▪ Vaginal pruritus or burning
    ▪ Dull pelvic pain
    ▪ Low-grade fever
    ▪ Vaginal discharge; irregular bleeding
  ■ Medical management/nursing interventions
    • Pharmacological management
      ▪ Tetracycline; doxycycline; Zithromax
    • TREAT ALL SEXUAL CONTACTS

• Chlamydia cervicitis

• Nursing Process

• Nursing diagnoses
  ■ Anxiety
  ■ Body image, disturbed
  ■ Coping, ineffective
  ■ Fear
  ■ Fluid volume, deficient
  ■ Health maintenance, ineffective
  ■ Infection, risk for