External Female Structures

• The vulva includes the external female structures, such as the mons pubis, labia majora and labia minor (protective barriers for the softer internal structures) and clitoris (plays a role in sexual arousal; analogous to the penis).

The Breasts

• The breasts are also part of the external female reproductive system.
• Their external structure include the nipple, areola (darker area around the nipples) and Montgomery tubercles (glands that produce a lubricant to keep the nipple soft and supple).
Internal Female Structures

- Vagina.
- Uterus.
- Cervix (lower portion of uterus).
- Fallopian tubes.
- Ovaries.
Common Diagnostic Tests for Reproductive System Disorders

**Laboratory Tests**
- Type Title Here
- Alpha-fetoprotein, cultures, Human chorionic gonadotropin, Pap smear, Serum calcium, Segregated bacteriologic localization culture

**Radiologic Tests**
- Type Title Here
- Hysterosalpingogram, Tomoscopy

**Surgical Tests**
- Type Title Here
- Breast biopsy, Dilation and curettage (D & C), Endometrial biopsy, Laparoscopy

**Other Tests**
- Colposcopy, Pelvic examination, Ultrasound

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**Common Diagnostic Tests**

- **Serum laboratory studies**
  - **Luteinizing hormone (LH)**
    - Stimulates progesterone secretion
    - Diminished levels may relate to prolonged, heavy menses
    - Elevated levels may result in short, scanty menses
  - **Follicle-stimulating hormone (FSH)**
    - Stimulates estrogen secretion
    - Diminished level may result in bleeding between cycles
    - Elevated levels may result in excessive uterine bleeding

- **Thyroid function tests**
  - Used to roll out menstrual abnormality secondary to thyroid dysfunction
  - Diminished thyroid hormone secretion may result in bleeding between cycles, irregular menses, or absence of menstrual flow

- **Adrenal function tests**
  - Used to rule out menstrual abnormalities secondary to adrenal dysfunction
  - Elevated or decreased production of adrenal cortex hormone secretion may result in a amenorrhea
### Common Diagnostic Tests

#### Procedures
- **Pelvic examination:** to inspect and assess the external genitalia, perineal and anal areas, introitus, vaginal tract & cervix
  - Have patient empty bladder
  - Please patient in lithotomy position
  - Flex and abduct patient’s thighs
  - Please patient’s feet in stirrups
  - Extends patient’s buttocks slightly beyond the edge of the examining table

- **Laparoscopy:** visualization of the pelvic structures with a lighted laparoscope inserted through the abdominal wall
  - After procedure, position patient on abdomen to expel air
  - Monitor for vaginal bleeding
  - Instruct patient to abstain from intercourse, douching, and using tampons until advised by physician

- **Culdoscopy:** visualization of the ovaries, fallopian tubes, and uterus with a lighted instrument inserted through the vaginal tract
  - After procedure, position patient on abdomen to expel air
  - Monitor for vaginal bleeding
  - Instruct patient to abstain from intercourse, douching, and using tampons until advised by physician

- **Colposcopy:** visualization of the cervix with an instrument that magnifies tissue

- **Papanicolaou smear test (Pap smear):** a sample of cervical scrapings is obtained for study under a microscope for evidence of malignant cells changes
  - Right patient’s name on the frost side of the slide, handling edge is only
  - Smear the specimen on the glass slide
  - Please drop of a fixative, dry, and send to laboratory
  - Reinforced importance of Pap smears is recommended to the American Cancer Society
Common Diagnostic Tests

- **Cervical biopsy examination**: removal of tissue to examine for presence of malignancy
  - After procedure, advice patient to rest and avoid strenuous activity for 24 hours
  - Leave packing in place until physician permits removal (usually 12 to 24 hours)
  - Monitor for vaginal bleeding
  - Instruct patient to abstain from intercourse, douching, and use of tampons until advised by physician
  - Explained that a malodorous discharge that may last three weeks will occur, daily bath should help control this discharge

Common Diagnostic Tests

- **Conization**
  - Removal of cone-shaped tissue of the cervix for analysis of cancerous cells
  - Indicated for removal of diseased cervical tissue
  - Nursing interventions
    - Maintained packing 12 to 24 hours
    - Monitor for bleeding
    - Instruct patient to abstain from intercourse, douching, and using tampons until advised by physician

Common Diagnostic Tests

- **Schiller’s test**
  - Application of a dye to the cervix to aid in detecting cancerous cells
  - Normal vaginal cells will stain a deep brown
  - Abnormal cells will not absorb the dye
  - Nursing intervention: recommend to patient that a perineal pad be used to protect clothes from stain
- **Ultrasonography**
  - A sound frequency that reflects an image of the pelvic structures
  - An aid in confirming ovarian and uterine tumors
Common Diagnostic Tests

• Culture and sensitivity
  – The culture of a specimen and exudate suspected of infection
  – The sensitivity of an antibiotic to the microorganism

• Dilatation & curettage (D&C)
  – A diagnostic and therapeutic procedure
  – The cervix is dilated to scrape the lining of the uterine cavity with a curet.

Common Diagnostic Tests

– Nursing intervention
  • After procedure, provide sterile perineal pads and record amount of drainage
  • Encourage avoiding to prevent urinary retention
  • Instruct patient to abstain from intercourse, douching, and using tampons until advised by physician

• Mammography: an x-ray examination of the breasts to detect tumors; screening test is done yearly for women over 40 years of age

Common Diagnostic Tests

• Thermography: infrared photography used to detect breast tumors
• Xerography: an x-ray examination of the breasts and skin that provides good definition of the tissue
• CT, MRI
Inflammatory Disorders: Pelvic Inflammatory Disease

- An inflammatory process involving pathogenic invasion of the fallopian tubes or ovaries or both, as well as any vascular or supporting structures within the pelvis, except the uterus.
- Risk factors include multiple sexual partners, frequent intercourse, IUDs, and childbirth.

Symptoms include low-grade fever, pelvic pain, abdominal pain, a "bearing down backache, foul-smelling vaginal discharge, nausea, etc.
- Future infertility may develop as complications.

Inflammatory Disorders: Pelvic Inflammatory Disease

- Diagnostic tests and method: C&S, CBC, pelvic examination, laparoscopy
- Treatment: antibiotic therapy, analgesics
- Nursing interventions
  - Provide nonjudgmental, accepting attitude
  - Place patients in semi-Fowler’s position to provide dependent pelvic drainage
  - Apply heat to abdominal area if ordered to improve circulation and provide comfort
Pelvic Inflammatory Disease

- Patient teaching should include the following:
  - Take shower instead of tub bath
  - Perform perineal hygiene: wipe from front to back
  - Learn how to recognize its sexual partner is infected with gonococcus: discharge from penis of whitish fluid with painful urination (not all males are symptomatic).
  - Learned the importance of routine physical examination, because gonococcal infection is asymptomatic in the women
  - Reinforce safe sex guidelines

Inflammatory Disorders:

Endometriosis

- The growth of endometrial tissue, the normal lining of the uterus, outside of the uterus within the pelvic cavity.
- Most often occurs in women over 30 with familial history.
- One cause of female infertility.

Endometriosis

- Pathology
  - during menstrual period, endometrial cells are stimulated by ovarian hormone
  - Bleeding into surrounding tissue occurs, causing inflammation
  - Condition may result in adhesions, fusion of pelvic organs, bladder dysfunction, stricture of prowl, or sterility
Endometriosis

• Signs and symptoms
  – Subjective
    • Discomforts of pelvic area before menses, becoming worse during menstrual flow, and diminishing as flow ceases.
    • Dyspareunia
    • Fatigue
  – Objective: infertility
• Diagnostic tests and methods
  – Laparoscopy culdoscopy

Endometriosis

• Treatment
  – Hormonal therapy to suppress ovulation
  – Surgical intervention: hysterectomy, oophorectomy, or salpingectomy
• Nursing interventions
  – Provide emotional support.
  – If patient is young, advised not to delay having a family because of risk of sterility.
  – Explain that hormonal drugs may cause pseudo pregnancy and irregular bleeding
  – If patient is middle-aged, advise her that menopause may stop progression of condition

Endometriosis

• Follow general post operative nursing actions, if the patient undergoes surgical procedure
  – Observe for vaginal hemorrhage, malodorous vaginal discharge, or vaginal discharge, other than serosanguineous discharge
  – Observe for year-end retention, burning, frequency, or urgency to void
  – Listen to renewed bowel sounds
• Provide patient teaching on discharge
  – Heavy lifting, prolonged standing, walking, and sitting are contraindicated
  – Sexual intercourse should be avoided until approved by physician
### Inflammatory Disorders: Vaginitis

- **Inflammation of the vaginal mucosal**
- **Pathology:**
  - Invitation of virulent organisms permitted by changes in normal flora; pH becomes alkaline
  - Causes:
    - *Trichomoniasis*: parasitic organism
    - *Candida albicans* (moniliasis): fungal organism
    - *Atrophic* (senile): occurs in postmenopausal women because of atrophy of vaginal mucosa

<table>
<thead>
<tr>
<th>Causes</th>
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### Inflammatory Disorders: Vaginitis

- **bacterial**: invasion by *staphylococci, streptococci, E. coli, chlamydia, or gargarrella vaginalis*
- **Foreign body**
- **Allergens or irritants**

### Diagnostic tests, and methods: C & S, pelvic examination

- **Nursing interventions**
  - Reassure the patient during vaginal examination to decrease anxiety
  - Instruct patients on perineal hygiene: cleansing front to back
  - In the event of trichomoniasis, instruct patient to abstain from intercourse, or have partner wear a condom, because this infection can be transmitted
  - Advice patient to use perineal pads because of increased discharge
  - Teach patient importance of compliance with treatment

### Inflammatory Disorders: Vaginitis

- **Ways to decrease risk of vaginitis include:**
  - Wearing cotton-crotch underwear.
  - Avoiding sitting in a wet bathing suit.
  - Seeking prompt medical attention at first sign of infection.
  - Eating an 8-oz. container of yogurt with active cultures daily while taking antibiotics.
Inflammatory Disorders: Toxic Shock Syndrome

- A condition most often associated with *Staphylococcus aureus*, which enters the bloodstream.
- A strong relationship found between the use of tampons during menstruation and the onset of TSS symptoms.

Inflammatory Disorders: Toxic Shock Syndrome

- Symptoms include fever, vomiting, diarrhea, and progressive hypotension.
- This woman with toxic shock syndrome developed a flat, red, sunburnlike rash. This rash causes the skin to peel 1-2 weeks after the illness.

Benign Neoplasms: Fibrocystic Breast Disease (FBD)

- Also called chronic mastitis or lumpy breast syndrome, it is the most common breast lesion in females and usually occurs between ages 35 and 50. Many cases will subside after menopause.
Benign Neoplasms:  
Fibrocystic Breast Disease (FBD)  

- Incidence of developing breast cancer is increased 3 to 4 times with FBD.  
- Pathology  
  - Cause is unknown; possible hormonal imbalance  
  - Condition occurs during reproductive years and disappears with menopause  
  - A benign condition affecting 25% of women over 30 years of age  

Benign Neoplasms:  
Fibrocystic Breast Disease (FBD)  

- Signs and symptoms  
  - Subjective: breast tenderness and pain  
  - Objective: small, round, smooth nodules  
- Diagnostic tests and methods  
  - Mammography, thermomastography, xerography  
- Treatment: conservative  
  - Aspiration  
  - Biopsy examination to rule out malignancy  

Benign Neoplasms:  
Fibrocystic Breast Disease (FBD)  

- Nursing intervention  
  - Explain importance of monthly breast self-examination  
  - Encourage patient to seek medical evaluation if nodule forms, because cystic disease may interfere with early diagnosis of breast malignancy
Malignant Neoplasms: Breast Cancer

• Second major cause of cancer death among women. Statistics indicate that 1 in 10 will develop cancer sometime during her life.
• The key to cure is early detection by physical examination, mammography, and breast self-examination.

Breast cancer

• Signs and symptoms
  – Subjective: nontender nodule
  – Objective:
    • Enlarged axillary nodes
    • Nipple retraction or elevation
    • Skin dimpling
    • Nipple discharge

• Diagnostic tests and methods
  – Mammography, thermography, xerography, breast biopsy examination

Breast cancer

• Treatment
  – Lumpectomy: removal of the lump and partial breast tissue; indicated for early detection
  – Mastectomy
    • Simple mastectomy: removal of breast
    • Modified radical mastectomy: removal of breast, pectoralis minor, and some of an adjacent lymph nodes
    • Radical mastectomy: removal of the breast, pectoral muscles, pectoral fascia, and nodes
  – Oophorectomy, adrenalectomy, hypophysectomy to remove source of estrogen and the hormones that stimulate the breast tissue
  – Radiation therapy to destroy malignant tissue
  – Chemotherapeutic agents to shrink, retard, and destroy cancer growth
  – Corticosteroids, antigens, and anti-estrogens to alter cancer that is dependent on hormonal environment
Breast cancer

- Nursing intervention
  - Provide atmosphere of acceptance, frequent patient contact, and encouragement in illness adjustment
  - Encourage grooming activities
  - Arrange attractive environment
  - If the patient is receiving radiation or chemotherapy, explain and assist with potential site effects

- If the patient has undergone surgical intervention, follow post operative nursing actions
  - Elevate affected arm above level of right atrium to prevent edema
  - Drawing blood or administering parenteral fluids or taking blood pressure on affected arm is contraindicated
  - Monitor dressing for hemorrhage, observed back for pooling of blood
  - Empty Hemovac and measure drainage every 8 hours
  - Assess circulatory status of affected limb
  - Measure upper arm and forearm, twice daily, to monitor edema
  - Encourage exercises of the affected arm when approved by a physician; avoid abduction

- Patient teaching on discharge
  - Exercise to tolerance
  - Sleep with arm elevated
  - Elevated arm several times daily
  - Avoid injections, vaccinations, IV, and taking blood pressure, in affected arm
Malignant Neoplasms:
Breast Cancer

- Five year survival rate is 97% for localized cancer, 76% for cancer that has spread regionally, and 21% for cancers having distant metastases.

Highest At-Risk for Breast Cancer

- Had a mother or sibling with breast cancer.
- Never had children or had first child after 30.
- Never breast fed.
- Has a history of fibrocystic breast disease.
- Started menstruating before age 10.
- Is obese.
- Consumes high-fat diet and moderate amount of alcohol.
- Smokes.
- Experienced a late menopause.

Malignant Neoplasms:
Cervical Cancer

- The most preventable gynecological cancer, it is detected by Pap smear.
- An abnormal Pap smear shows dysplasia, a change in the size and shape of the cervical cells.
Malignant Neoplasms: Cervical Cancer

• Sexual habits constitute a major factor in the development of cancer of the cervix, with sexually transmitted disease being a particularly significant factor.
• Five year survival rate is 69%.

Cervical cancer

• Signs and symptoms
  – Subjective
    • Asymptomatic in early stage
    • Menstrual disturbances
    • Postmenopausal bleeding
    • Bleeding after intercourse
    • Watery discharge
  – Objective: suspicious Pap test result

Cervical cancer

• Diagnostic tests and methods
  – Pap smear
  – Cervical biopsy examination
  – Colposcopy
  – Schiller’s test
  – Conization
• Treatment
  – Panhysterectomy
  – Radiation in advance case
  – chemotherapy
Cervical cancer

- Nursing interventions
  - Reassure the patient and family that adjustment illness can be slow
  - Acknowledge that the patient must adapt to illness, according to her age, developmental stage, and past life experiences
  - If patient is to receive an internal radium implant:
    - Provide isolation
    - Instruct a patient to maintain supine or side-lying position
    - Explain to the patient and visitors that the amount of time spent with patients will be limited to avoid overexposure to radiation

- Provide high-protein, low residue diet to avoid straining of bowels
- Maintain high fluid intake: 2000 to 3000 mL daily
- Insert Foley catheter to prevent bladder distention
- Administer antiemetics as ordered

- If the patient undergo surgery, followed general post operative nursing actions

Malignant Neoplasms:
Endometrial Cancer

- Postmenopausal women are at greatest risk, especially if they have taken estrogen therapy for more than five years.
- Cancer of the endometrium does not usually produce symptoms until it becomes relatively advanced.
Malignant Neoplasms: Endometrial Cancer

- The five-year survival rate for endometrial cancer is 84%.
- Signs and symptoms
  - Subjective
    - Postmenopausal bleeding
    - Bleeding between cycles
    - Bleeding after intercourse
    - Watery vaginal discharge
  - Objective
    - Uterine enlargement
    - Suspicious Pap test results
- Diagnostic tests and methods: D & C, tissue biopsy examination

Malignant Neoplasms: Endometrial Cancer

- Treatment
  - Surgical intervention
    - Panhysterectomy, oophorectomy, salpingectomy
  - Chemotherapy
  - Radiation
- Nursing interventions: see cancer of the cervix

Malignant Neoplasms: Ovarian Cancer

- Causes more deaths than any other gynecological cancer.
- Incidence is greatest in women between 45 and 65.
Ovarian Cancer

- Risks include nulliparity (never having borne a child), smoking, alcohol, infertility, and high-fat diet.
- Five year survival rate is 46%.

Menstrual Disorders: Dysmenorrhea

- Painful menstruation, also called “menstrual cramps,” is more common in nulliparous women and in women who are not having intercourse.
- Cause: uterine spasms cause cramping of the lower abdomen
- Signs and symptoms
  - Subjective: headache, backache, abdominal pain, chills, nausea
  - Objective: fever, vomiting

Menstrual Disorders: Dysmenorrhea

- Treatment
  - Analgesics, such as NSAIDs
  - Local application of heat
  - Pelvic exercises
  - D & C
- Nursing intervention
  - Instruct patient on avoidance of fatigue and overexertion during menstrual period.
  - Instruct patient on ingestion of warm beverages before onset of pain to prevent attack
Menstrual Disorders:
Amenorrhea

- Absence of menstruation. Can be primary or secondary.
- Primary amenorrhea defined as absence of menstruation by age of 17. Can be related to anatomical or genetic abnormalities.
- Secondary amenorrhea may result from anatomic abnormalities, nutritional deficits (anorexia nervosa), excessive exercise, emotional disturbances, endocrine dysfunction, side effects of medication, pregnancy, and lactation.

Premenstrual Syndrome (PMS)

- Experienced by one-third to one-half of women between 20 and 50.
- Symptoms include weight gain, irritability, mood swings, edema, headache, inability to concentrate, food cravings, acne, and many others.
- Can be alleviated by pharmacological interventions, diet, and exercise.

Complications of Menopause

- Menopause, or climacteric, is the cessation of menstruation.
- Some women experience psychological responses, such as depression, nervousness, and insomnia.
- Mild to moderate periods of perspiration called hot flashes may occur.
- May be treated by pharmacological intervention, diet, and exercise.
Structural Disorders

- **Cystocele** (a downward displacement of the bladder into the anterior vaginal wall).
- **Urethrocele** (a downward displacement of the urethra into the vagina).

Structural Disorders

- **Retocele** (an anterior displacement of the rectum into the posterior vaginal wall).
- **Prolapsed uterus** (a downward displacement of the uterus into the vagina).

Risk factors for any and all of above may include multiple pregnancies, third or fourth-degree lacerations with childbirth, and weakening of pelvic muscles as an aging process.

Structural disorders

- **Nursing interventions (post-operative)**
  - Administer catheter care twice a day and PRN
  - Splint abdomen when coughing
  - Place in low Fowler’s position or flat in bed to avoid pressure on suture line
  - Explain to the patient that she should respond to bowel stimuli to avoid suture strain
  - After each bowel movement, clean perineal area with warm water and soap; pat dry anterior to posterior
  - Apply heat lamp, anesthetic spray, or ice packs in order to relieve discomfort
Structural disorders

- Provide patient teaching
  - Heavy lifting and prolonged standing, walking in sitting are contraindicated
  - Sexual intercourse should be avoided until approved by physician
  - Perform pelvic exercises

Infertility

- May be related to anatomic or endocrine problems.
- Diagnostic tests may include:
  - Endometrial biopsy to detect tissue responses during both phases of menstrual cycle.
  - Endocrine imbalance testing.
  - Laparoscopy to discover conditions such as endometriosis, adhesions, or scar tissue.

Contraception

- Natural method: what is known as the “rhythm method.”
- Barrier methods (male and female condoms, the diaphragm, and the cervical cap) and spermicides.
- Oral contraceptives (the “pill”).
- Norplant (six small progestin-filled pellets inserted under the skin of the upper arm).
- Depo-Provera (injected every 12 weeks).
- Intrauterine Device (IUD).
- Sterilization (tubal ligation; vasectomy).