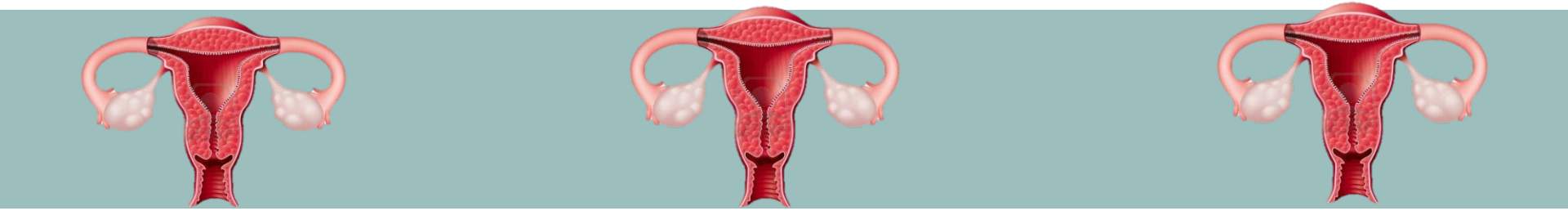
Gynecological Problems of Female Reproductive Organs

N123
L. Thompson MSN, RN

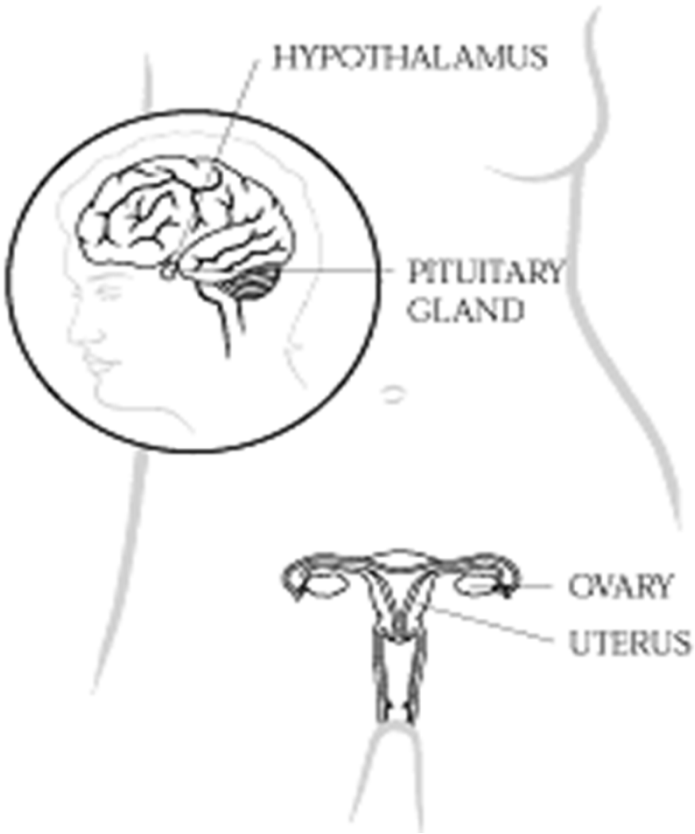


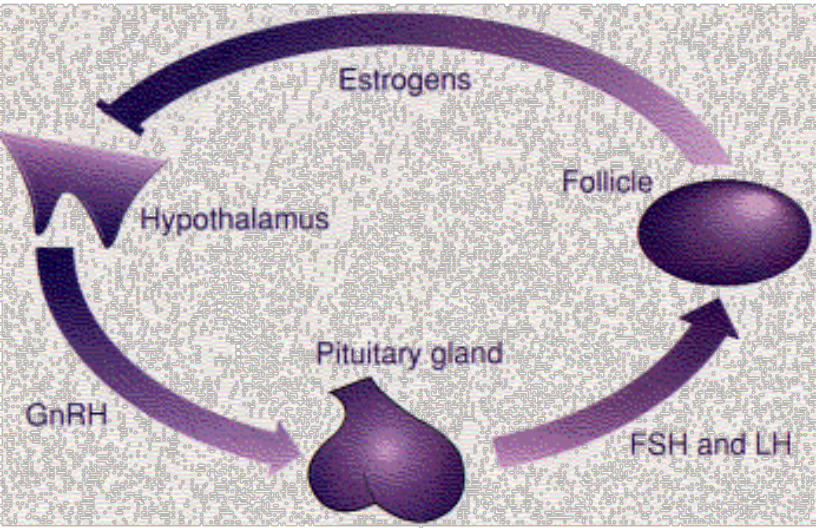
- Pre Menstrual Syndrome
- Abnormal Uterine Bleeding
- Menopause
- Endometriosis
- Pelvic Inflammatory Disease
- Benign Tumors/Cysts of the Repro Sys
  - Cervical Polyps
  - Uterine Leiomyomas
  - Ovarian Cysts/Tumors

Female Reproduction

Roles of the Female Reproductive System

- Ova production
- Hormone secretion
  - *Which ones?*
- Protection & facilitation of __



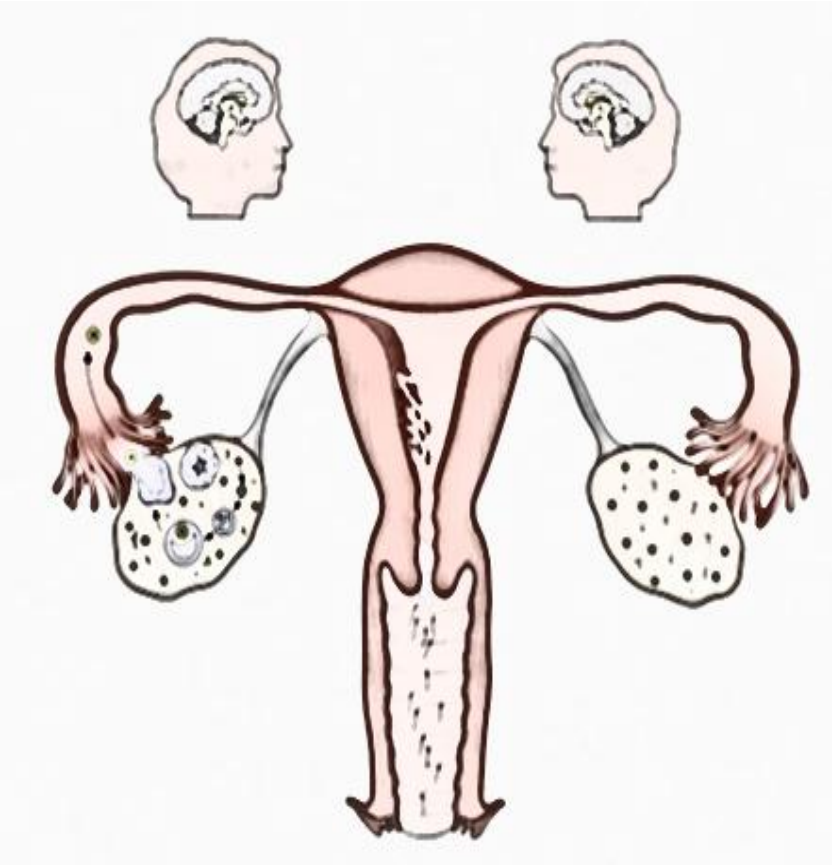


Also secreted by Pituitary:

- Oxytocin
- Prolactin

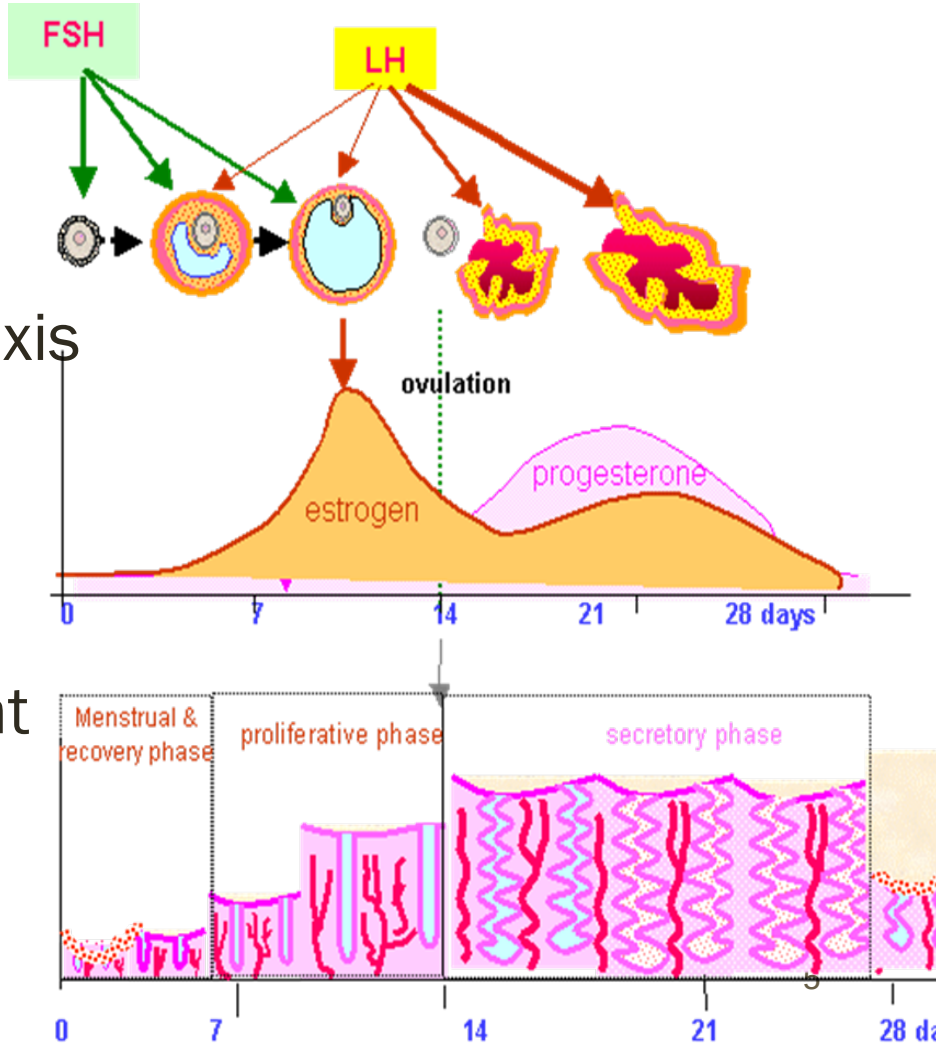
Female Reproduction

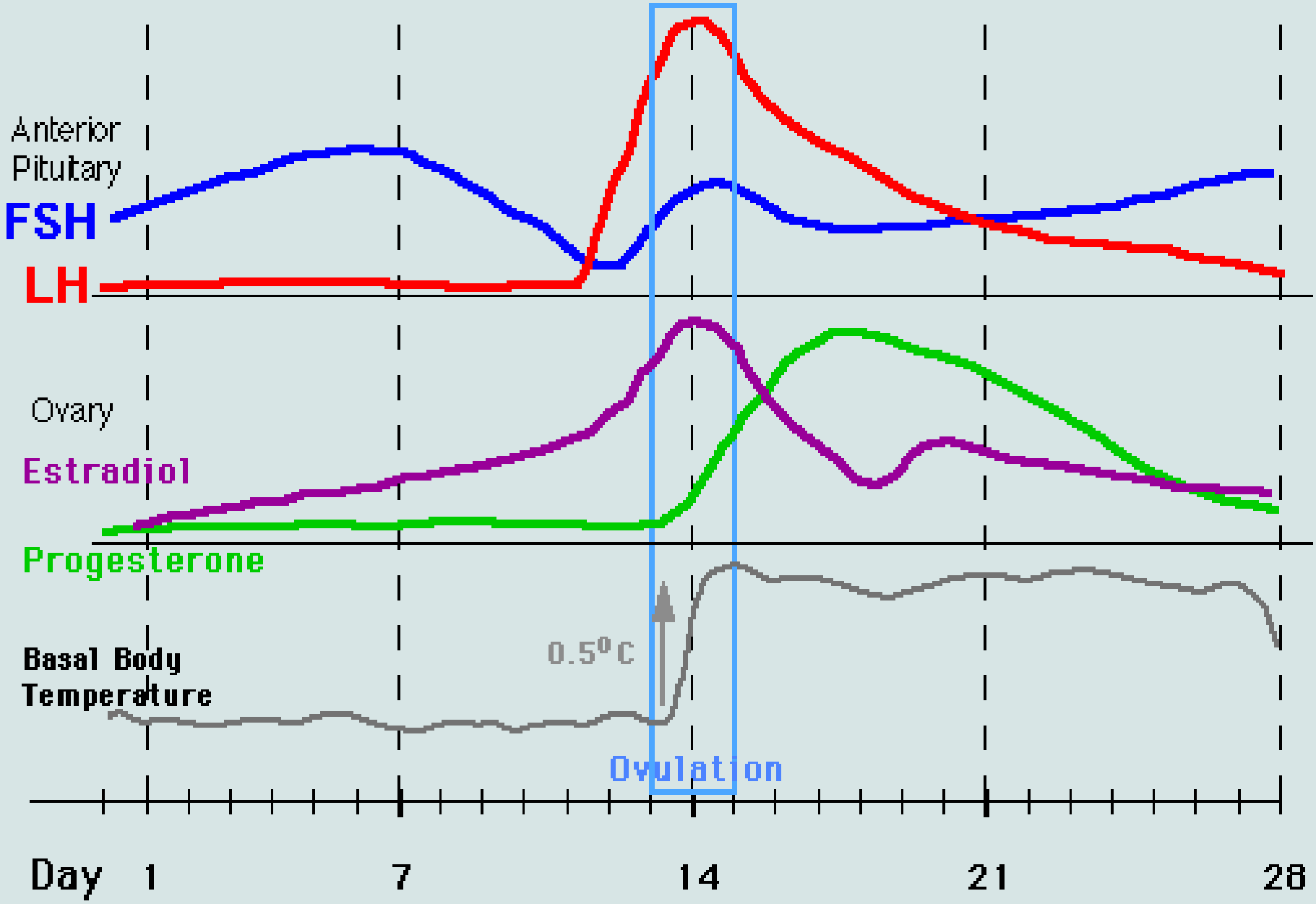
- Reproductive Organs
  - Primary (essential)
  - Secondary (accessory)
    - fallopian tubes
    - uterus
    - vagina
    - breasts



Menstrual Cycle

- Menarche
  - 9-16 yrs (12-13 yrs)
  - ↑ estrogen (development)
  - Irregular cycles
    - ↓ hypothalamic-pituitary axis
- Menstrual cycle
  - Duration: 2 to 8 days
  - Interval: 21-35 days
    - 17-45 days ok if consistent
  - Blood loss?
  - Mediated by .....
  - 3 Endometrial Phases





AKA: *ischemic phase* AKA: *follicular phase* AKA: *luteal phase*

Problems of Menstruation

Dysmenorrhea

- Cramping / discomfort
- Affects 50% of women
- Primary
  - R/T menstrual flow
- Secondary: pain persists
  - Endometriosis
  - PID (pelvic inflammatory)
  - Uterine Fibroids

- Estrogen + Progesterone
- Stimulates endometrium
- Releases prostaglandins
- Causes myometrial contractions

- Rule out Secondary
  - Persistent pain
  - Abnormal pelvic exam

Premenstrual Syndrome

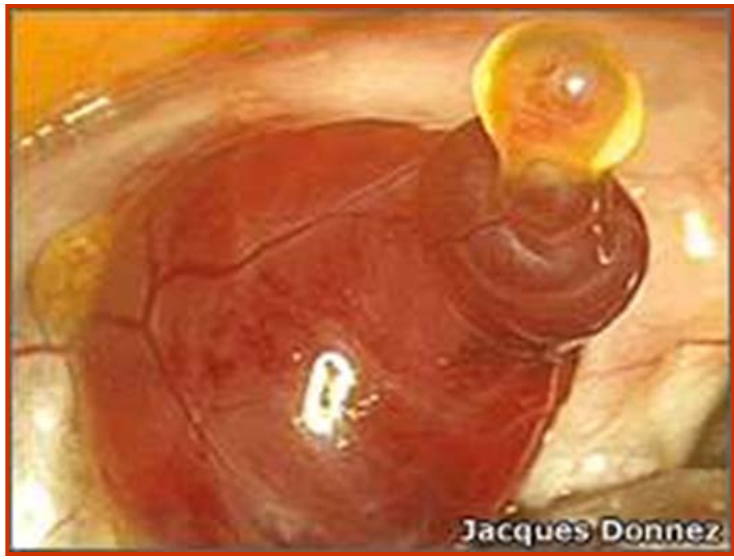
Therapeutic Management

- Medical Interventions
  - OCPs
    - Control hormonal fluctuations
  - Ibuprofen *(prostaglandin inhibitor)*
    - Cramping, backache, headache
  - SSRIs *(selective serotonin reuptake inhibitors)*
  - Anti-anxiety
    - taken in the luteal phase
  - Mood stabilizers
    - Vit B6
    - Calcium and Magnesium supplements

Abnormal Vaginal Bleeding

Anovulation

- Cycles without ovulation
- Corpus luteum does not form
- Common during:
  - Puberty onset
  - After pregnancy
  - Menopause



- Etiology
  - ↓ sensitivity to hypothalamic-pituitary axis
  - Obesity or eating disorders
  - Polycystic ovary syndrome
- Result: No progesterone to oppose estrogen
  - May cause endometrial buildup

Abnormal Vaginal Bleeding

Amenorrhea

- Absence of menstruation
  - **Primary** *(by 16 yrs. old)*
  - **Secondary** *(3-6 mo)*
    - ***Physiological***
      - *Pregnancy, lactation*
      - *Contraception*
      - *Menopause*
    - ***Pathological***
      - Hypothalamic-pituitary-axis
      - Stress, exercise, eating disorders
      - Pituitary tumor
      - Ovaries (polycystic ovary disease)

Oligomenorrhea

- Scant or infrequent menses (>35days)
- ***Causes:***
  - Same as amenorrhea (except pregnancy)

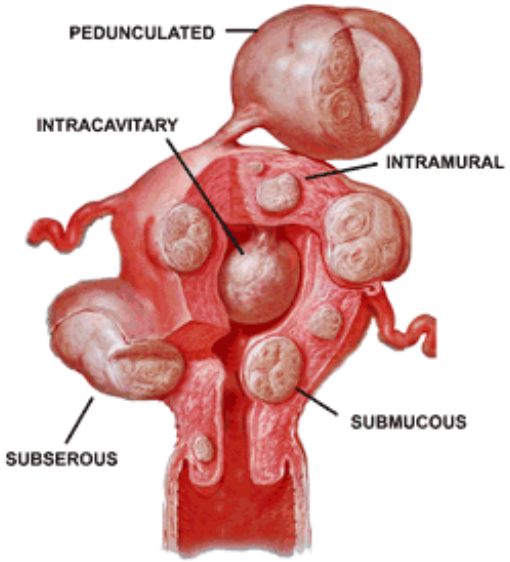
Abnormal Vaginal Bleeding

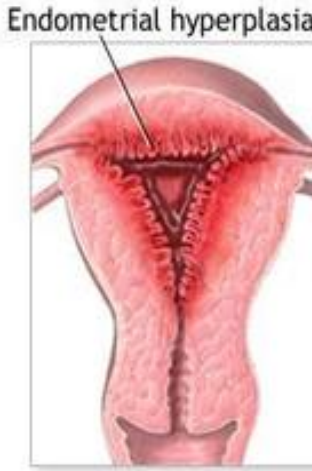
- **Amenorrhea**
  - Absence of menstruation
    - Primary *(by 16 yrs. old)*
    - Secondary *(3-6 months)*
- **Oligomenorrhea**
  - Scant or infrequent menses
  - (>35days)
- **Metrorrhagia**
  - Irregular bleeding
  - Spotting (between menses)
- **Menorrhagia**
  - Excessive or prolonged bleeding (>80ml & >7 days or both)
  - Often due to anovulation

Abnormal Vaginal Bleeding

Diagnostic Tests

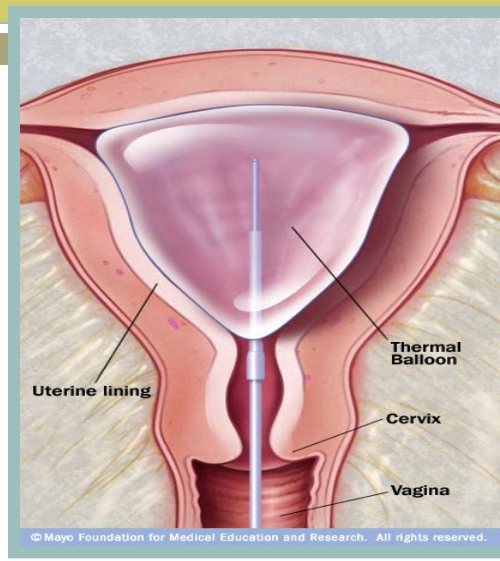
- Health history
  - lifestyle changes
  - current meds
- Age-directed physical exam
  - Peri-menopausal
  - Peri-natal
  - Puberty
- Labs:
  - Pregnancy test, tumor markers (AFP, CA-125)
  - CBC (anemia), coagulation & hormonal levels
- Pelvic Exams
- Ultrasonography or hysteroscopy



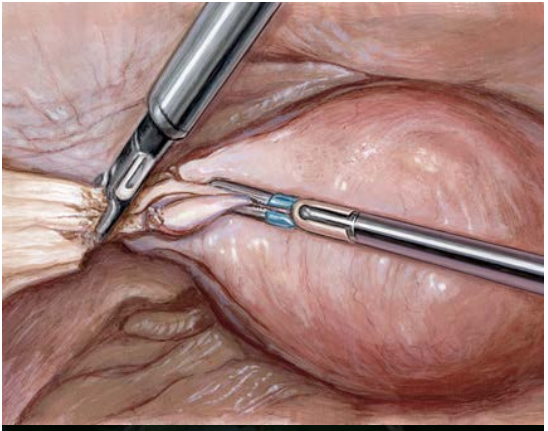


Abnormal Vaginal Bleeding Treatment

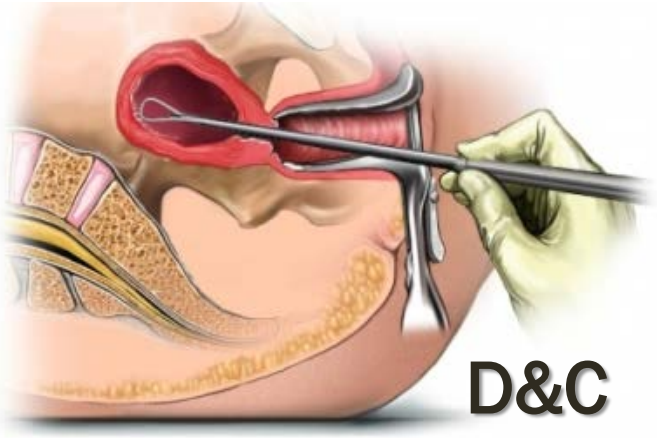
Menorrhagia



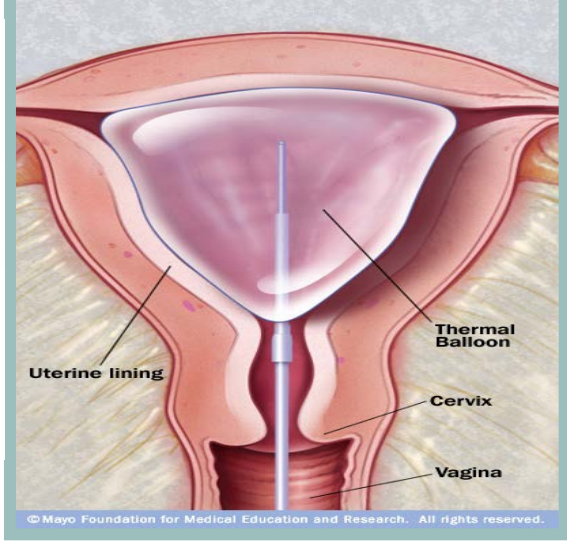
- Medical
  - Tranexamic Acid (Lysteda)
    - Nonhormonal antifibrinolytic
  - OCP (if anovulation is the cause)
- Surgical Techniques
  - Uterine Ablation - destroys uterine lining
    - Via balloon thermotherapy, cryotherapy, laser
    - Contraindications:
      - Wishes to maintain fertility
      - Uterine abnormalities (fibroids, cancer)
  - Myomectomy (removal of fibroids only, not uterus)
  - Hysterectomy (for uterine fibroids)
  - D&C (dilation & curettage)



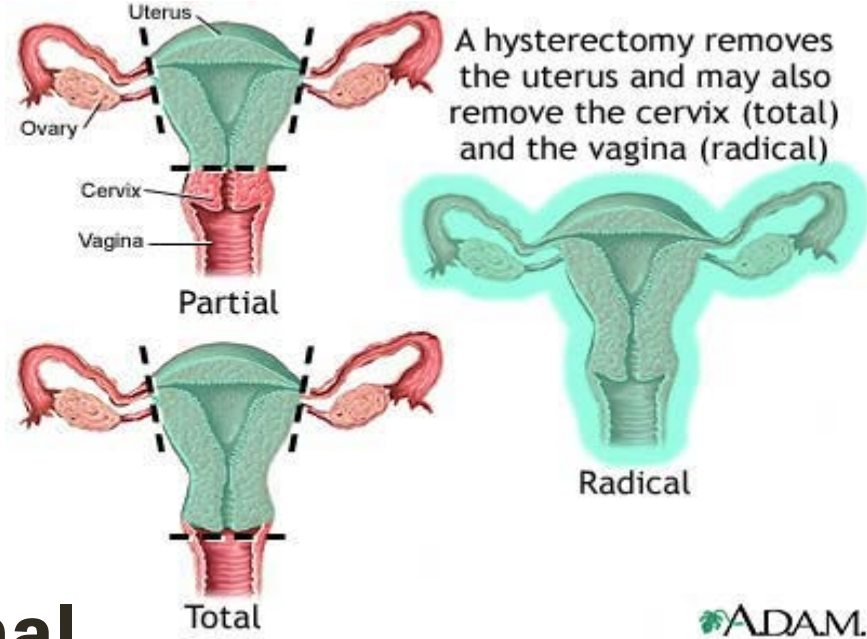
Laproscopic procedures

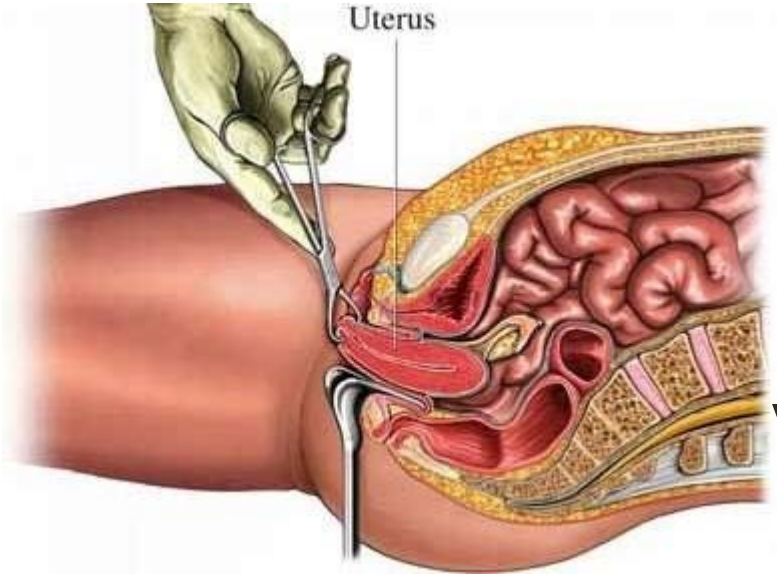


D&C



Uterine Ablation





Vaginal Hysterectomy

Abnormal Vaginal Bleeding Treatment

Oligomenorrhea & Amenorrhea

- Identify and Correct underlying cause
  - R/O pregnancy, diabetes mellitus, hypothyroidism, CNS or pituitary lesions, lifestyle changes
  - **Anovulation most common cause**
  - **Goal:**
    - ensure endometrium shedding (~4x/yr) for stable lining to form
  - **Endometrial hyperplasia is a risk**
- Treatment
  - **OCPs or progesterone contraception**

Premenstrual Syndrome-Abnormal Vaginal Bleeding

Nursing Management

- **Assess** (for anemia & hypovolemia)
  - Vital Signs, fatique
  - # of pads/tampons & saturation
- **Do**
  - Encourage open communication
  - Report and document findings
- **Teach**
  - Characteristics of normal menstruation (table 51-2)
  - **Myths:** Activity? Swimming? Intercourse?
  - Toxic Shock Syndrome (TSS)
    - high fever, n/v, diarrhea, weakness, myalgia
  - Medications

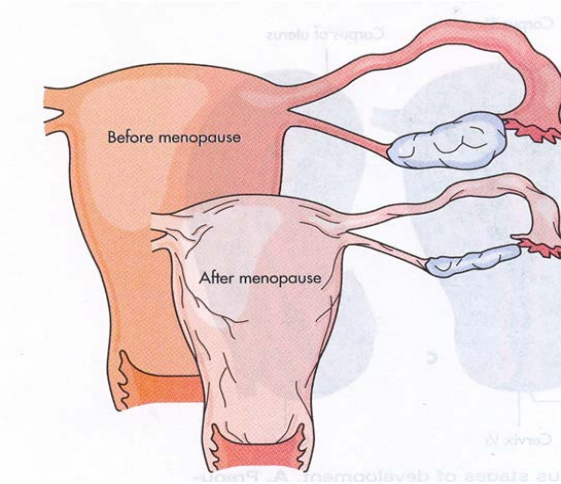
Menopause

Age-related or Surgical

Menopause

Pathophysiology

- Perimenopausal
  - Transition - reproductive to nonreproductive
  - Declining ovarian function
  - Starts age 44 to 55 yrs (aver. 51 yrs)

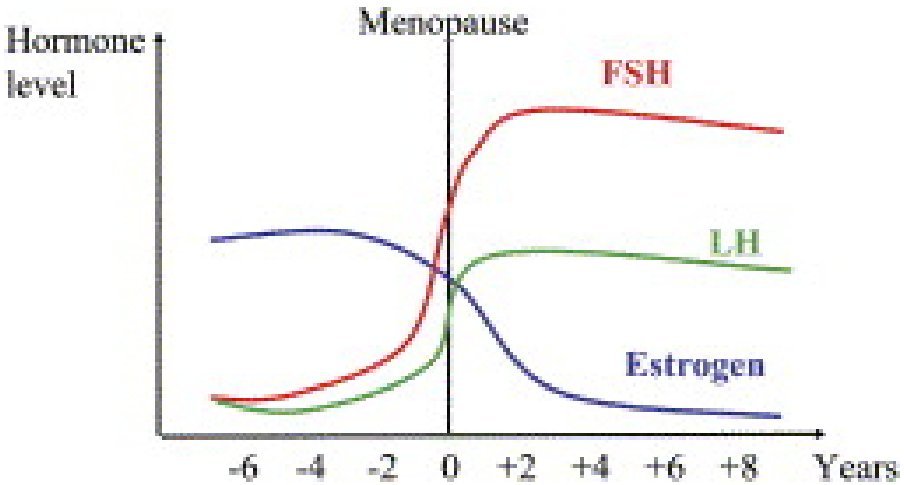


- Stages
  - *Premenopause*
    - Up to 5 yrs
    - Irregular mensus • hotflashes • vaginal dryness
  - *Menopause*
    - No mensus for one year
  - *Post menopause*
    - Adapts to new hormonal environment

Menopause

Pathophysiology

- Gradual Process
  - Follicle regression after 35 yrs of age
  - Less responsive to gonadotropins (FSH)
  - Causes ↓estrogen & progesterone production
  - Which stimulates ↑FSH and ↑LH
- Mixed anovulatory and ovulatory cycles



Menopause

- Artificial Menopause
  - Surgical removal of ?
  - Radiation or chemotherapy
  - Drugs
- Early onset Menopause
  - Smoking
  - Racial/ethnic
  - Genetic
  - Autoimmune Stress

Peri & Post Menopause

Clinical Manifestations

- Ammenorrhea, oligomenorrhea, metrorrhagia
- Bloating, cramping, water retention
- Vaginal dryness (causes dyspareunia)
- Hot flashes (vasomotor instability)
- Atrophy of GU tissue (↓ tone)
- Fat redistribution
- Fatigue, headaches, diminished concentration
- Psychological changes (vary widely)

REVIEW

Peri & Post Menopause

Clinical Manifestations

REVIEW

- Increased risk r/t ↓ estrogen
  - **Coronary Artery Disease (CAD)**
    - Changes in serum lipids
    - Increase in LDLs (low-density lipoproteins)
    - Decrease in HDLs (high-density lipoproteins)
  - **Osteoporosis**
    - Reduced bone density
    - Susceptible to fractures
    - Other factors:
      - Peak bone density (age 30) + bone loss
      - Family history
      - Sedentary Lifestyle

Peri & Post Menopause

Therapeutic Management

- Menopause Hormone Therapy (MHT)
  - Includes HRTs and ERTs
  - Teach risks and benefits
- Post Menopausal Bleeding
  - **Immediate Assessment!!**
    - **Highly suggestive of endometrial cancer**
    - Other possibilities:
      - Atrophic vaginitis
      - Cervical polyps or erosion
      - Uterine fibroids

REVIEW

Peri & Post Menopause

Therapeutic Management

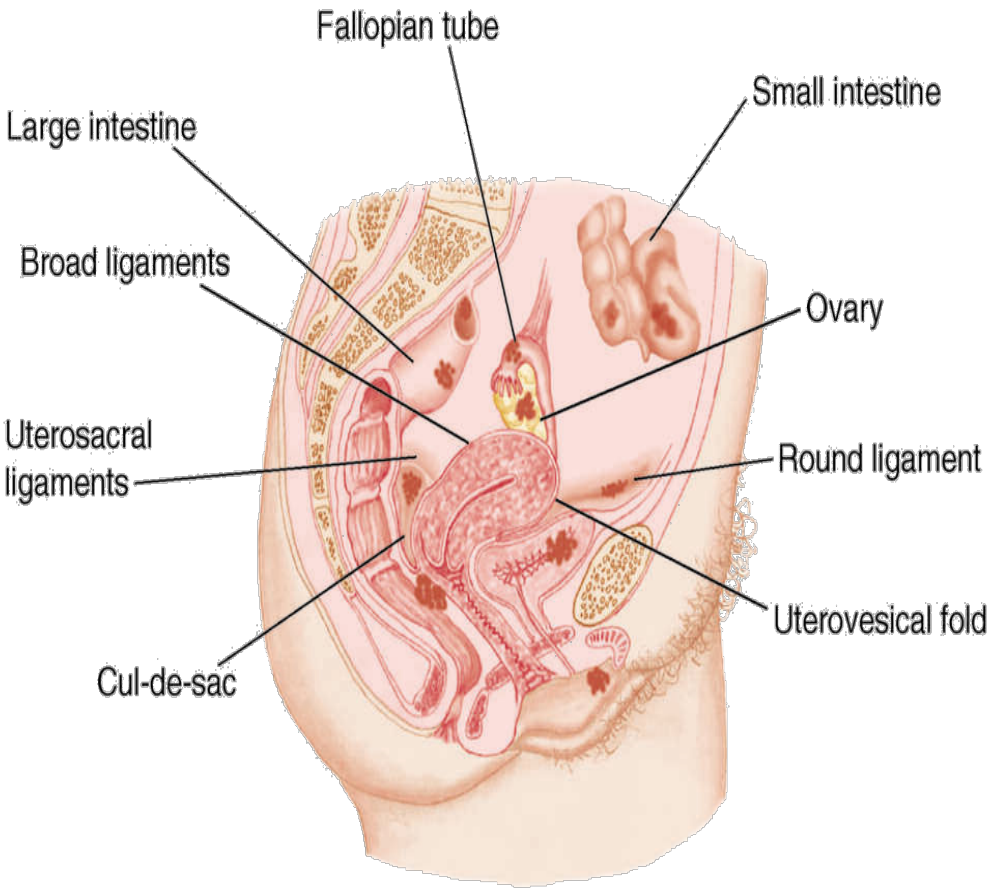
- Nonhormonal Therapies
  - Weight-bearing exercises / Ca supplements
  - Decrease heat production
    - Cool environment
    - Limit caffeine & alcohol
  - Water-soluble lubricants for vaginal dryness
  - Kegal exercises for genital atrophy
  - Hydration to prevent atrophic cystitis
  - Exercise for cardiovascular health
- Herbal or Nutritional Supplements
  - Black Cohosh
  - Soy
  - Vitamin E and B6

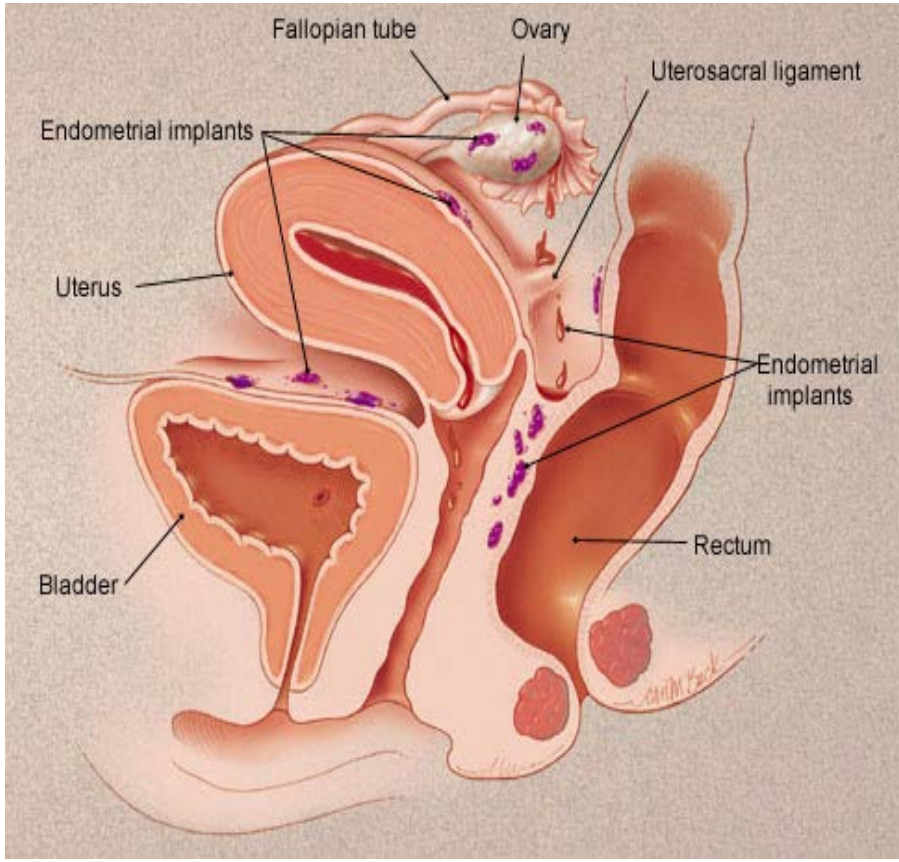
REVIEW

Endometriosis

Endometriosis

- Growth of endometrial tissue outside the uterus





Endometriosis

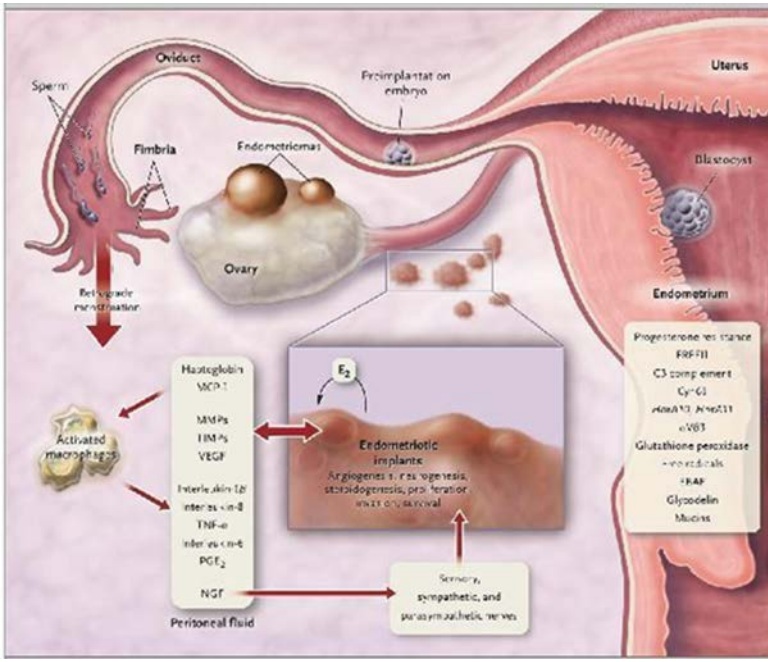
Pathophysiology

- Endometrial tissue in a closed cavity controlled by cyclic estrogen and progesterone
- Cyclic bleeding in the pelvic cavity leads to:
  - chronic inflammation (pressure & pain)
  - scarring and adhesions
  - lesions secrete prostaglandins causing contractions
  - may interfere with conception

Endometriosis

Etiology

- Occurs in 10% of women
- Usually diagnosed in 20s-30s
- Unknown etiology
- Theories
  - Genetic predisposition
  - Altered immune function
  - Retrograde menstrual flow
  - Dormant undifferentiated embryonic cells

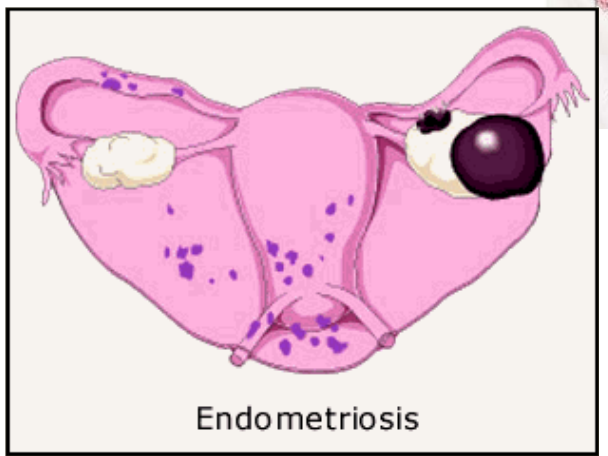


Endometriosis

Clinical Manifestations

Symptoms varies widely (severe to asymptomatic)

- Secondary dysmenorrhea
- Infertility
- Pelvic pain
- Dyspareunia
- Irregular bleeding
- Ovarian chocolate cyst
- Less common
  - Backache
  - Dysuria
  - Painful bowel movement

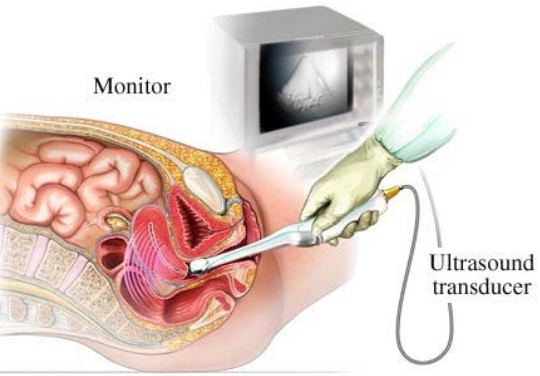


Infertility

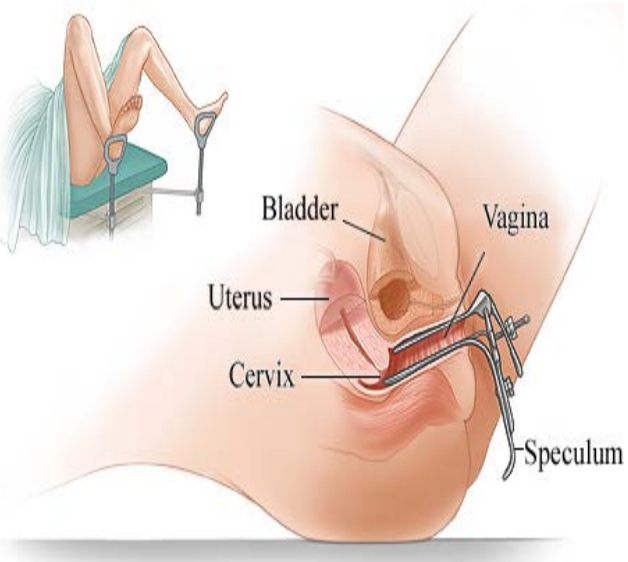
- **The inability to achieve a pregnancy after at least one year of regular intercourse without contraception.**
- Common Causes:
  - Pelvic Inflammatory Disease
  - Diseases of the cervix and uterus
  - Fallopian tube obstructions
  - Endocrine gland dysfunction causing anovulation
  - Age related menopause

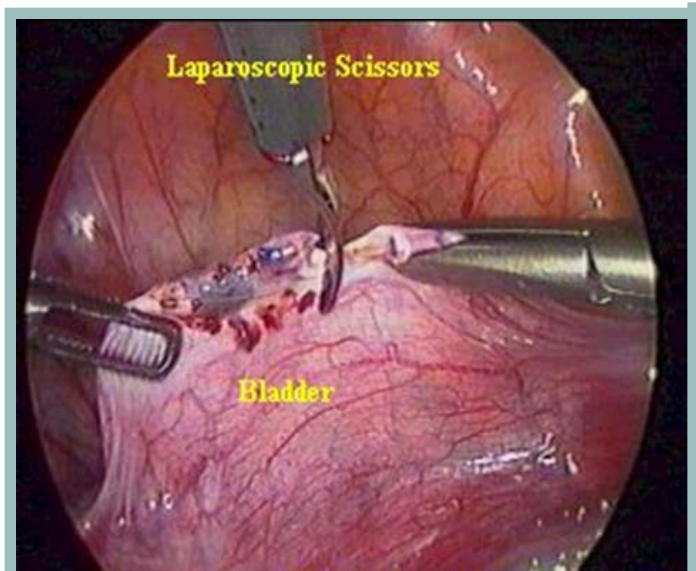
Endometriosis

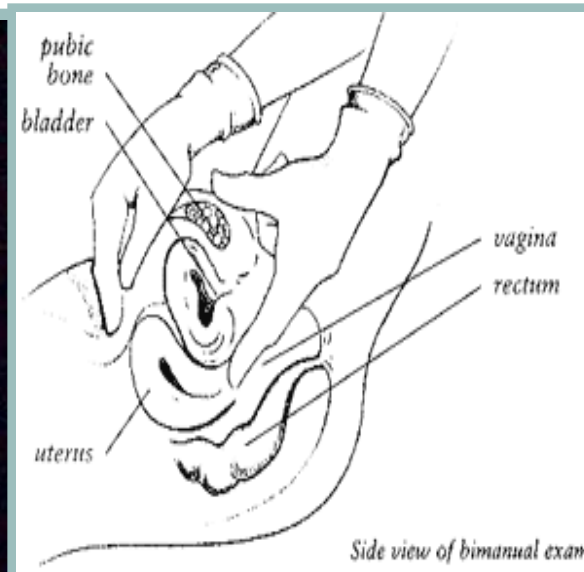
Diagnostic Evaluation



- Laparoscopy
- Speculum vaginal exam
- Bimanual Palpation of adnexa
- External or Transvaginal ultrasound
- Lab: CA-125







Endometriosis

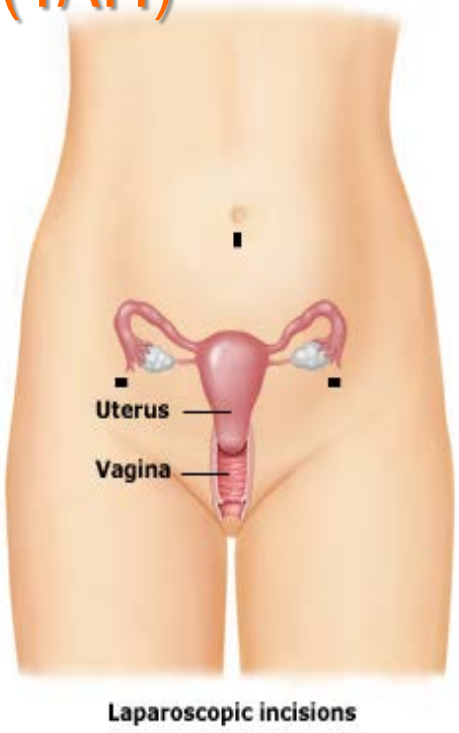
Treatment

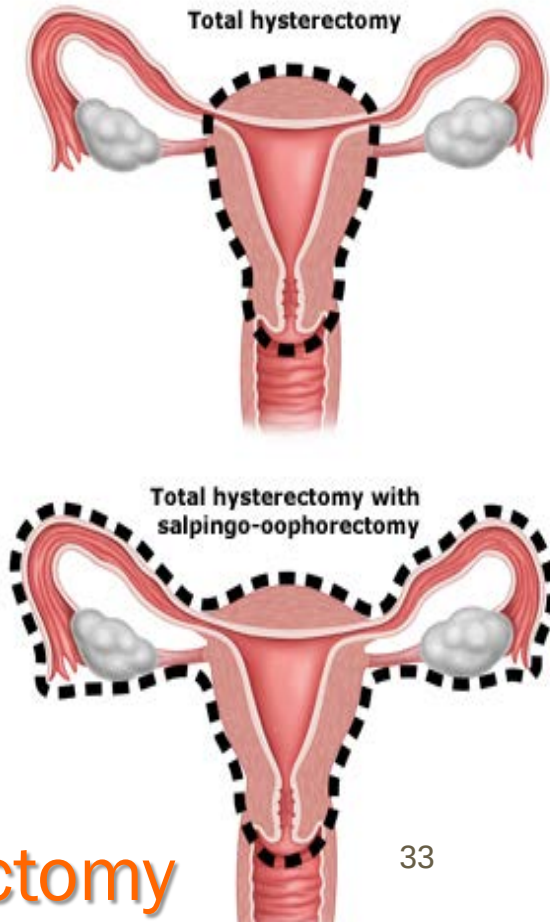
- Treatment Plan may vary on:
  - age and desire to have children
  - symptom severity and location of disease
- Hormone Therapy (refer to pharm lecture)
- Surgery (may include hormone therapy shrinkage)
  - Conservative Approach
    - Confirm diagnosis or/and remove endometrial implants
  - Definitive Approach
    - Hysterectomy (salpingo-oophorectomy)
- Watch and Wait Approach

Endometriosis

Hysterectomy

- Subtotal Abd. Hysterectomy
- Total Abd. Hysterectomy (TAH)
- TAH-BSO
  - Total abdominal hys + bilateral salpingo-oophorectomy
- Radical hysterectomy
  - TAH-BSO
  - Partial vaginectomy
  - Dissection of lymph nodes
- Laparoscopic-assisted vaginal hysterectomy





Hysterectomy

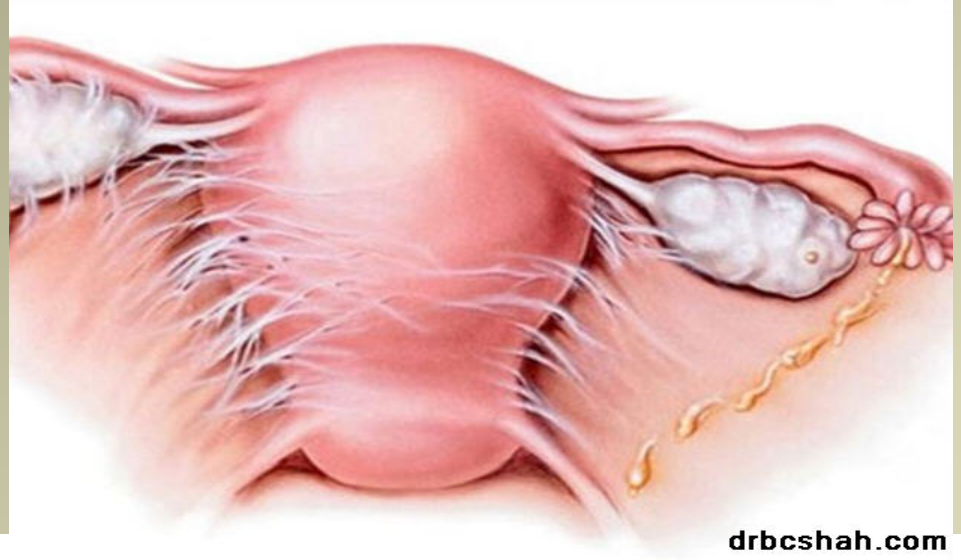
Nursing Management

- Hysterectomy or Myomectomy
  - When benign or malignant tumors are found.
  - Can be performed vaginally or abdominally.
- Post-op Care (abd surgery)
  - Monitor abdominal site/vaginal pads
  - Monitor UOP, VS, pain
  - Auscultate bowel & breath sounds
  - Encourage ambulation
  - Interventions? ___ ___ ___ ___
- Patient teaching
  - What to expect after surgery
    - Oophorectomy?
  - Activity restrictions, diet, vaginal rest 4-8 weeks

Hysterectomy

Nursing Diagnosis

- Anxiety, Fear
- Acute pain
- Sexual Dysfunction
- Alt. Urinary elimination
- Disturbed body image
- Ineffective Coping
- Grieving
- Readiness for enhanced coping

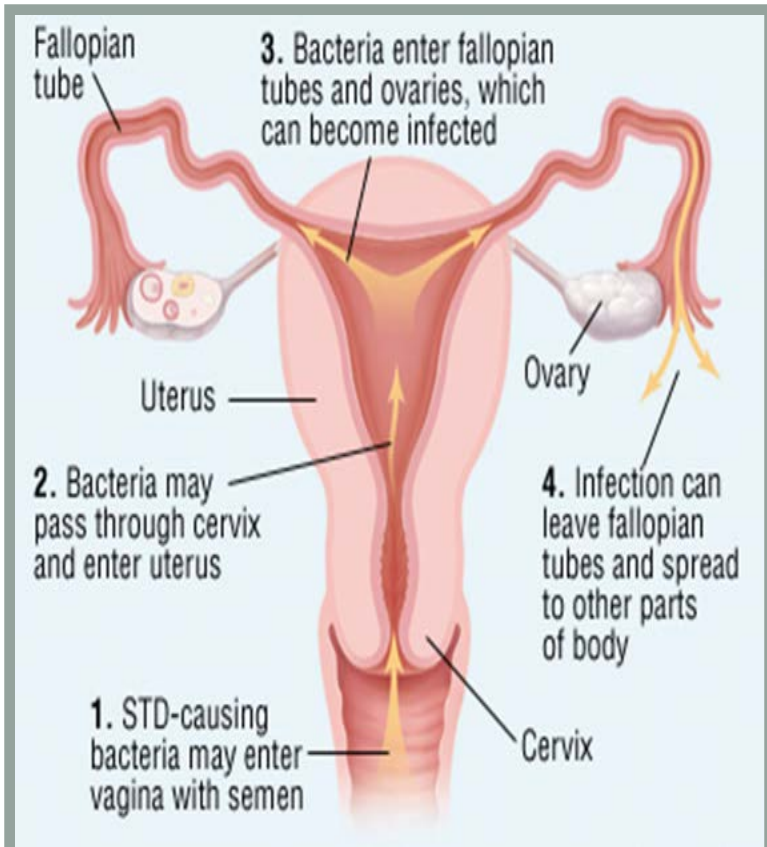


Pelvic Inflammatory Disease

Pelvic Inflammatory Disease

Etiology

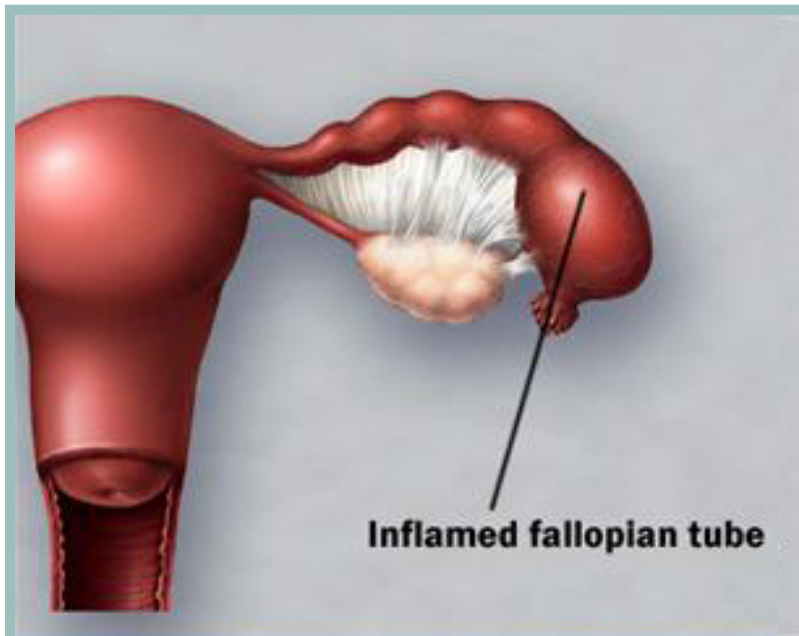
- Infection (acute or chronic) of the pelvic cavity
- Approx 1 million annually
  - Complications in 10%-15%
  - Infertility or Ectopic pregnancy
- Causative Pathogen (bacterial)
  - May be viral, fungal or parasitic
  - Chlamydia trachomatis
  - Neisseria gonorrhoeae



Pelvic Inflammatory Disease

Pathophysiology

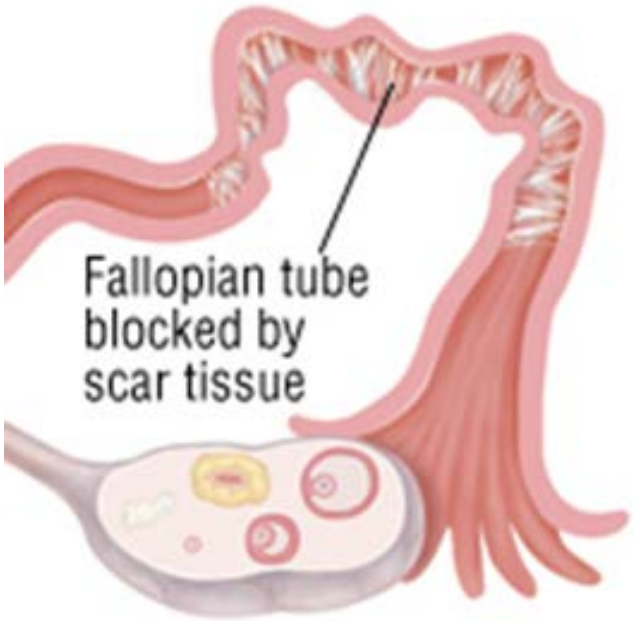
- Routes
  - **Sexually transmitted** (most common)
  - Lymphatic, childbirth or abortion, IUD, pelvic surgery
- If Untreated or misdiagnosed
  - Cervicitis
  - Endometritis
  - Salpingitis
  - Oophoritis
  - Peritonitis



Pelvic Inflammatory Disease

Pathophysiology

- Chronic inflammation (≥6mo) may cause:
  - Adhesions, abscesses & scarring
  - Ectopic pregnancy
  - Infertility
  - Endometriosis
  - Chronic pelvic pain
- Severe Complications
  - Septic Shock
  - Acute perihepatitis
  - Embolism



Pelvic Inflammatory Disease

Clinical Manifestations

- Identify risk factors
- Additional Criteria
  - Mild to severe lower abd pain
  - Fever & chills
  - Abnormal discharge
  - Irregular bleeding
  - Dyspareunia / Spotting after intercourse
- Asymptomatic
  - 60% will have no symptoms

Pelvic Inflammatory Disease

Diagnostic Evaluation

- Clinical Diagnosis (obtained from bimanual exam)
  - Positive cervical motion tenderness (Chandelier sign)
  - Lower abdominal and adnexal tenderness
  - Cultures
- Urinalysis
- Serum testing
  - CBC, Sedimentation rate (ESR)
  - VDRL, RPR, or FTA-ABS
  - HIV
- Pregnancy test
- Vaginal ultrasound (tubo-ovarian abscess)
- Laparoscopic examination

Pelvic Inflammatory Disease

Treatment

- Outpatient Care
  - Drug Therapy may begin before culture results
  - Broad Spectrum Antibiotics
  - No intercourse for 3 weeks
  - Partner examined & treated if necessary
  - Reevaluation within 2-3 days

- Hospitalization
  - Unsuccessful treatment (severe pain, s/s infection)
  - Tubo-ovarian abscess (may require laparoscopic surgery)
  - Parental antibiotics
  - Corticosteroids
  - Ibuprofen

Pelvic Inflammatory Disease

Nursing Management

- Monitor vital signs & urine
- Administer meds and evaluate effectiveness
- Teach
  - STD prevention
  - Pelvic Inflammatory Disease
  - Importance of medication regimen
  - Signs & symptoms to report
- Encourage discussion of feelings

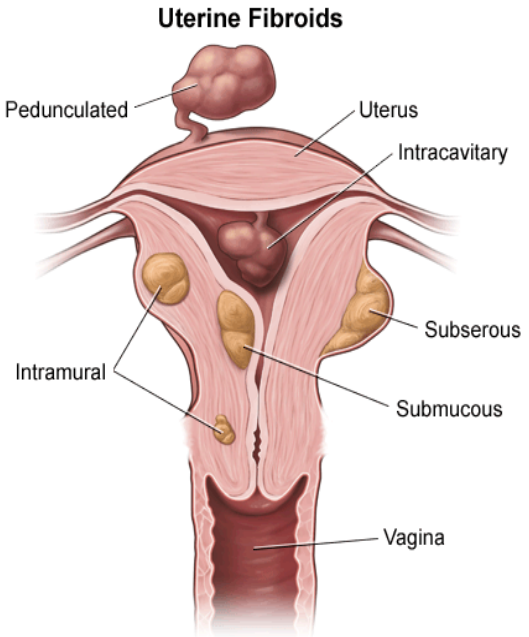
Pelvic Inflammatory Disease

Nursing Diagnoses

- Pain
- Alteration in urinary elimination
- Anxiety
- Fear
- PC: Sepsis
- PC: Ectopic Pregnancy
- Knowledge deficit vs Non-compliance

Benign Tumors of Reproductive System

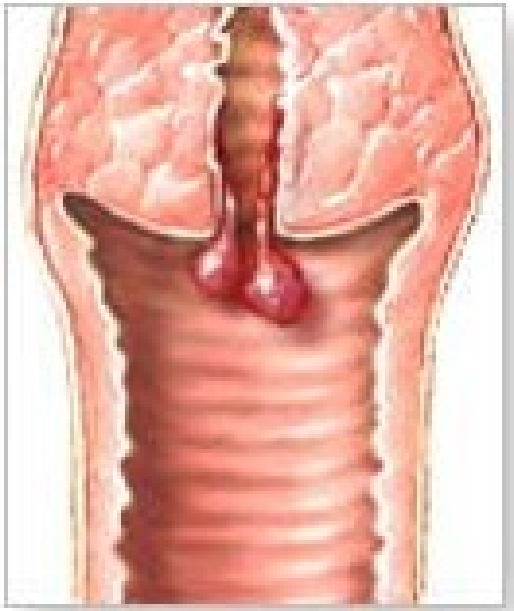
- Cervical polyps
- Uterine leiomyomas
- Ovarian Cysts



Cervical Polyps

Pathophysiology

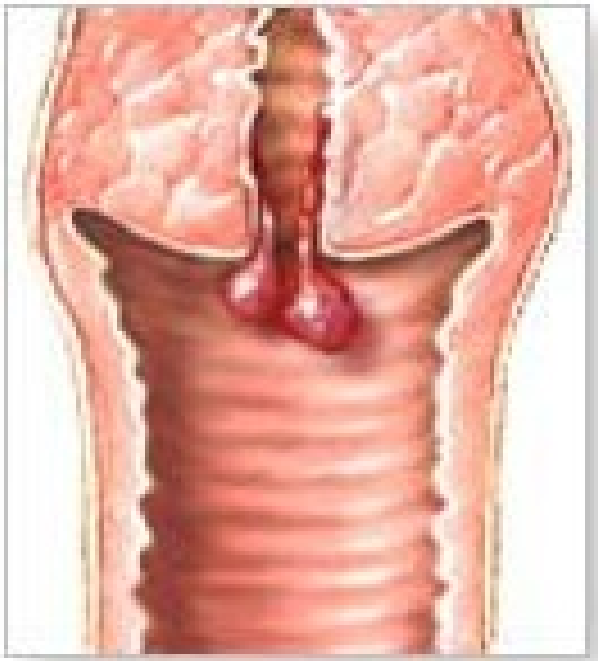
- Unknown etiology
- Small benign tumors
- Proliferation of endocervical mucosa
- Stemlike structures
- Prone to infection and bleeding
- Symptoms
  - Usually painless
  - Metrorrhagia
  - Bleeding from friction or pressure



Cervical Polyps

Medical Treatment

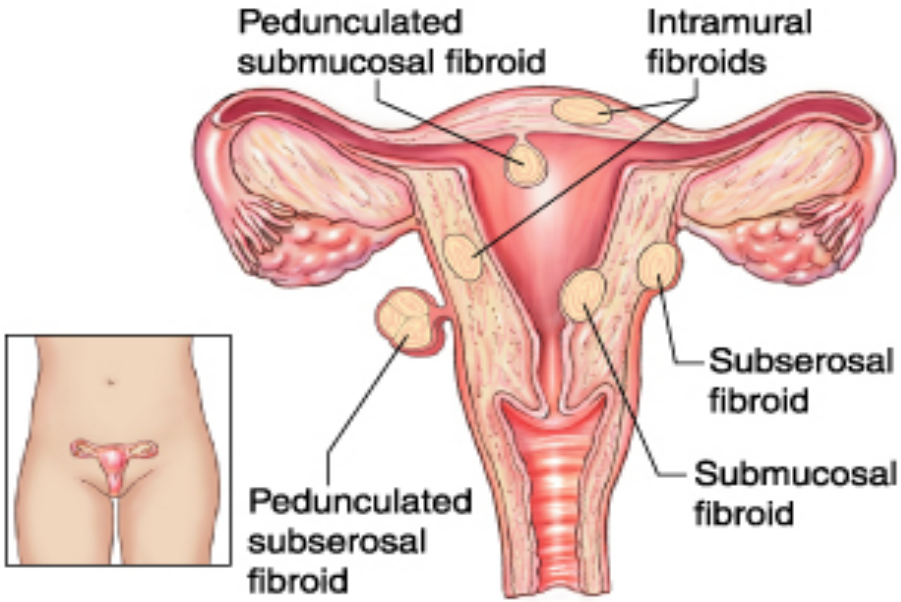
- Treat Cervicitis if present
- Surgically removed (excised) in outpatient setting
- Pathology examination



Uterine Leiomyomas (fibroids)

Etiology / Pathophysiology

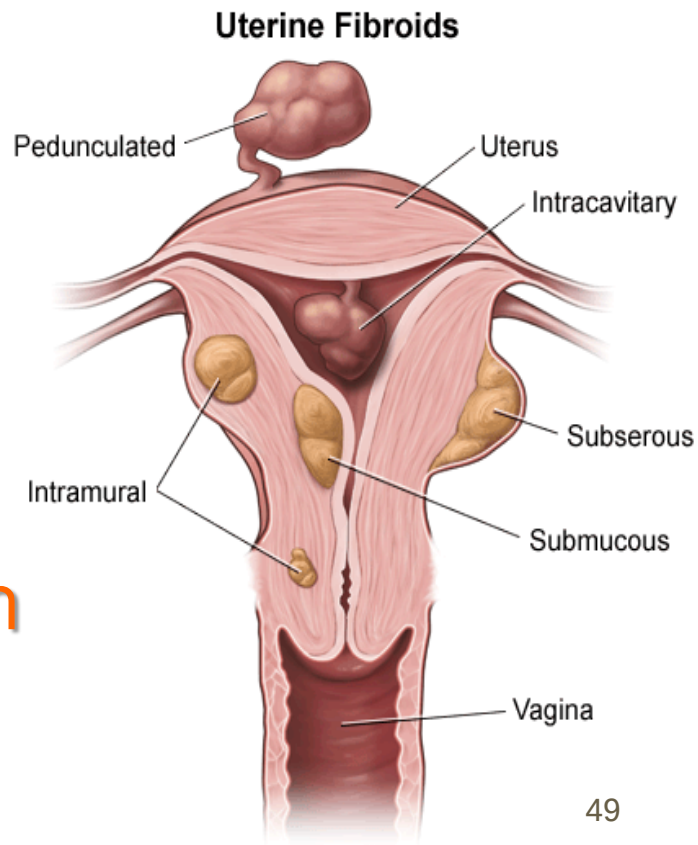
- Most common gynecologic tumor
- Etiology unknown
- Develop from smooth muscle cells
- Occurs in different muscle layers
- Estrogen dependent



Uterine Leiomyomas (fibroids)

Clinical Manifestations

- Usually asymptomatic
- Symptoms may reflect area affected
- Submucousal fibroid
  - Heavy menstrual bleeding
  - Anemia
- Increased uterine size
- Pressure, back pain
- Urinary frequency, constipation
- Pelvic pain may occur r/t
  - Devascularization
  - Infection



Uterine Leiomyomas (fibroids)

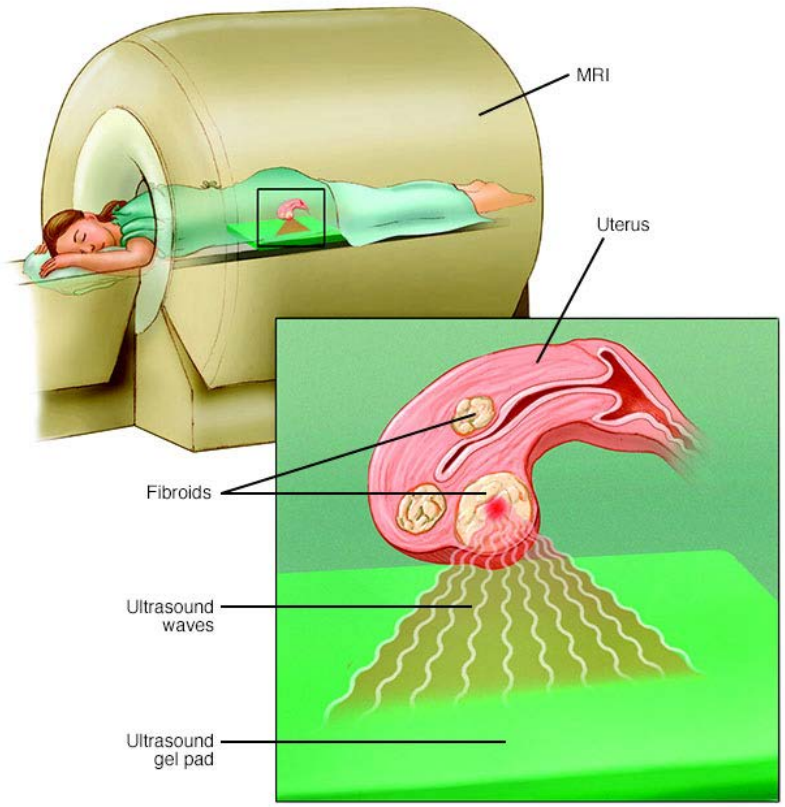
Treatment

- Treatment depends on numerous factors:
  - Size and location
  - Symptoms
  - Desire to bear children
- Treatment options
  - Observation
  - Hysterectomy
  - Myomectomy
  - Cryosurgery
  - MRI-guided focused ultrasound
  - Uterine artery embolization (*Risks*: amenorrhea, IUGR, PTL)

Uterine Leiomyomas (fibroids)

Treatment

- MRI-guided focused ultrasound
- Uterine artery embolization



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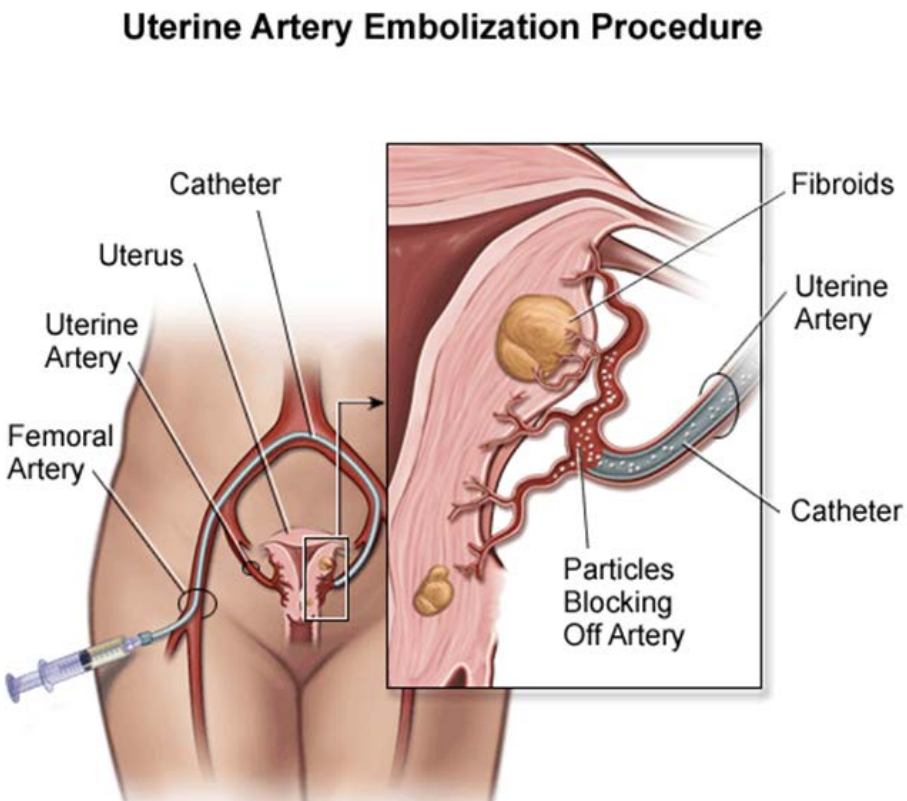
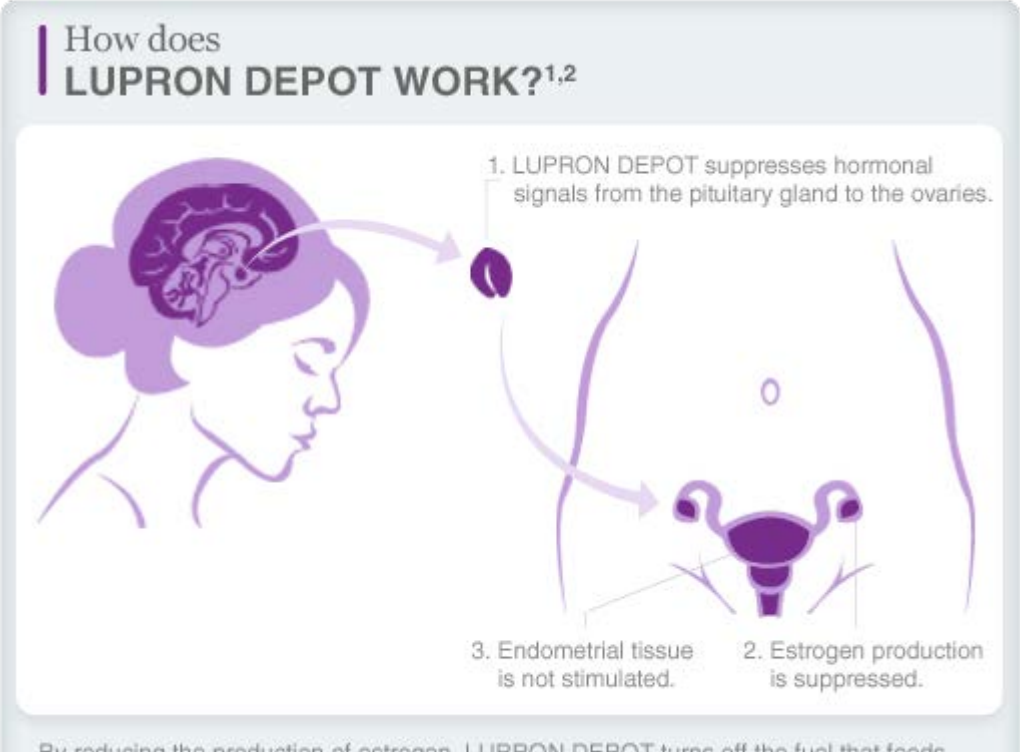


Uterine Leiomyomas (fibroids)

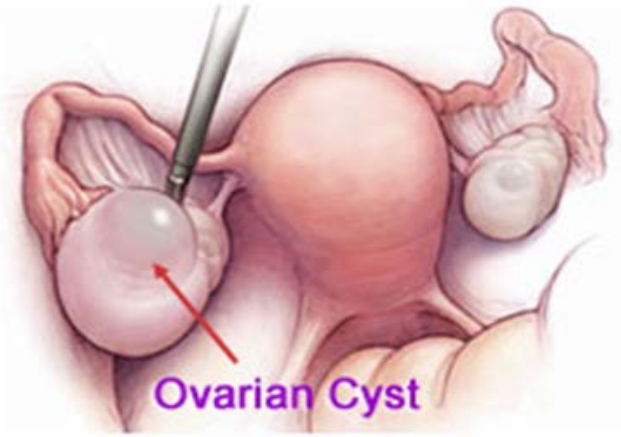
Collaborative Management

- Medical treatment
  - Progesterone-only or combined contraceptives
  - Short course of GnRH agonists (Lupron)



Ovarian Tumor / Cysts

Pathophysiology



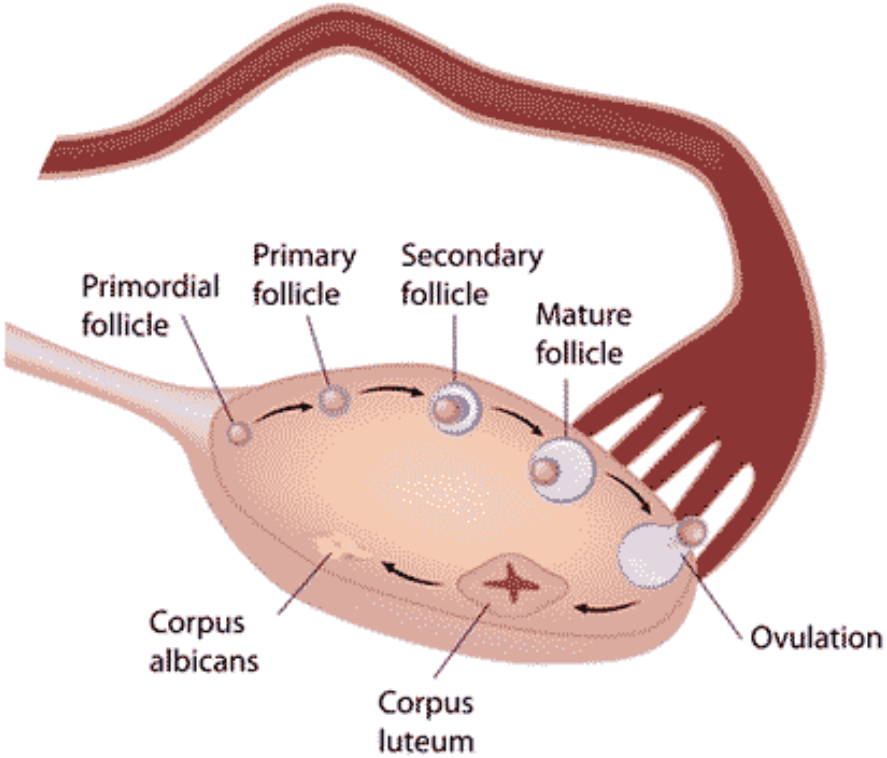
- Functional Ovarian Cysts
  - Soft, surrounded by thin capsule
  - During reproductive years
  - Usually regresses in a few cycles
  - Asymptomatic or pain if ruptures or twists (torsion)
  - Follicular Cyst
  - Graffian follicle does not release egg or expel fluid
  - *Most common*
  - Luteal Cyst
  - Corpus luteum does not regress with failed conception.
- If >5-8 cm, requires intervention

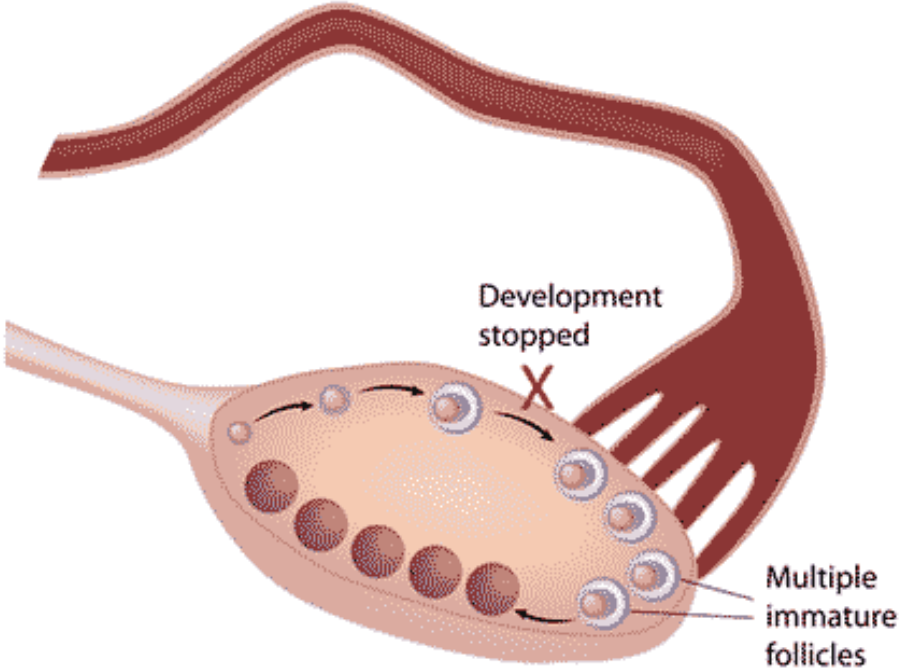
Ovarian Tumor / Cysts

Pathophysiology

Polycystic Ovary Syndrome (PCOS)

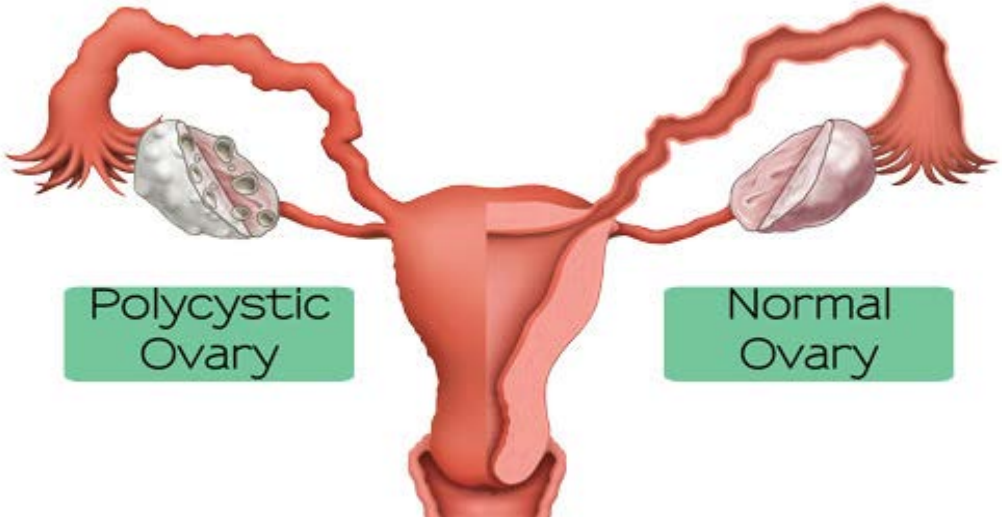
- Chronic endocrine disorder
- Affects 3-7% of women in reproductive age
- Unknown etiology but appears genetic
- **Hormonal imbalance**
  - Estrogen
  - *No* progesterone
  - *Excess* testosterone
- **Results in**
  - Anovulation
  - Amenorrhea
  - Oligomenorrhea
  - Acne
  - Hirsutism
  - Prediabetes
  - Numerous benign cysts (follicular) both ovaries





Normal Ovary

Polycystic Ovary



Nonfunctional Ovarian Tumor / Cysts

Pathophysiology

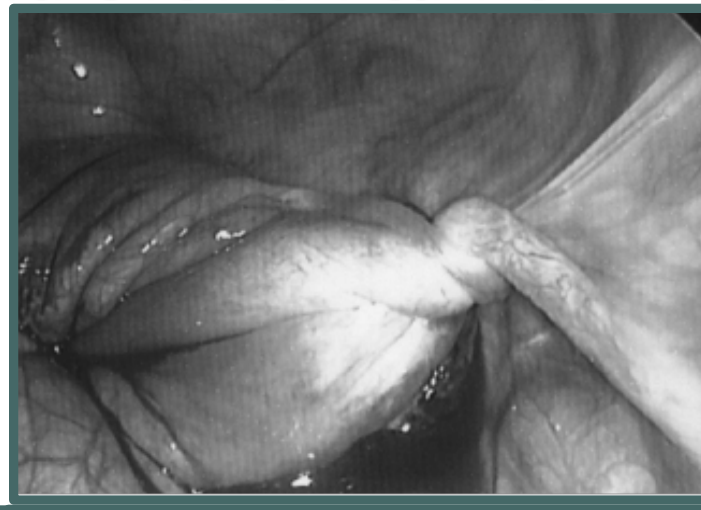
- Dermoid Cysts
  - Germ cell tumors
  - Contains hair, teeth, sebaceous secretions, bone
  - Begins in childhood
  - Bilateral or unilateral
- Ovarian Fibromas
  - Solid ovarian neoplasms
  - Connective tissue
  - Occurs usually after menopause

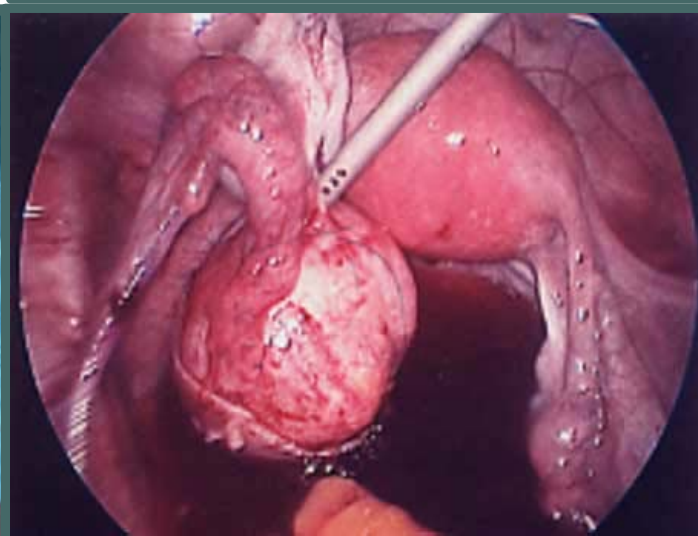
- Asymptomatic
- Pain if pressure on other organ(s)
- Treatment: surgical removal

Ovarian Tumor / Cysts

Diagnostic Evaluation

- Differentiate benign cyst from solid ovarian tumor
  - Ultrasound
  - Transvaginal ultrasound
  - Laparoscopy
  - Pelvic Exam
  - MRI or CT Scan





Ovarian Tumor / Cysts

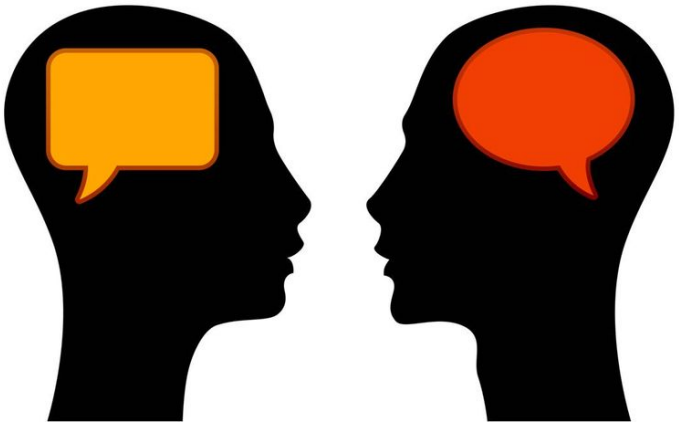
Medical Treatment

- Follicular or Luteal Cyst
  - No follow-up
  - Follow up with ultrasound
  - Laparotomy
- PCOS
  - ↓risk of complications, ↑ quality of life
    - OCPs
    - GnRH agonist
    - clomiphene (Clomid)
    - Weight management
    - metformin (Glucophage)
    - Hysterectomy (TAH-BSO)

Ovarian Tumor / Cysts

Nursing Management

- Hysterectomy
  - Pre and post-op care
- Teach
  - Disease process (syndrome)
  - Drug Regimen
  - Discuss concerns
  - Lifestyle modifications
  - Support group if necessary



Abnormal Vaginal Bleeding

- Is it Physiological??
  - Puberty
  - Pregnancy
  - Lactation
  - Abortion or Ectopic pregnancy
  - Spontaneous abortion
  - Contraception (progesterone)
  - Menopause
  - Severe lifestyle changes
- Is it Pathological??
  - Malnutrition, Stress
  - Cancer (pituitary adenoma, endometrial Ca)
  - Infection
  - Polycystic ovarian syndrome
  - Uterine fibroids or polyps

1. Dysmenorrhea
2. Amenorrhea
3. Oligomenorrhea
4. Metrorrhagia
5. Menorrhagia
6. Anovulation

Abnormal Vaginal Bleeding

1. Dysmenorrhea
2. Amenorrhea
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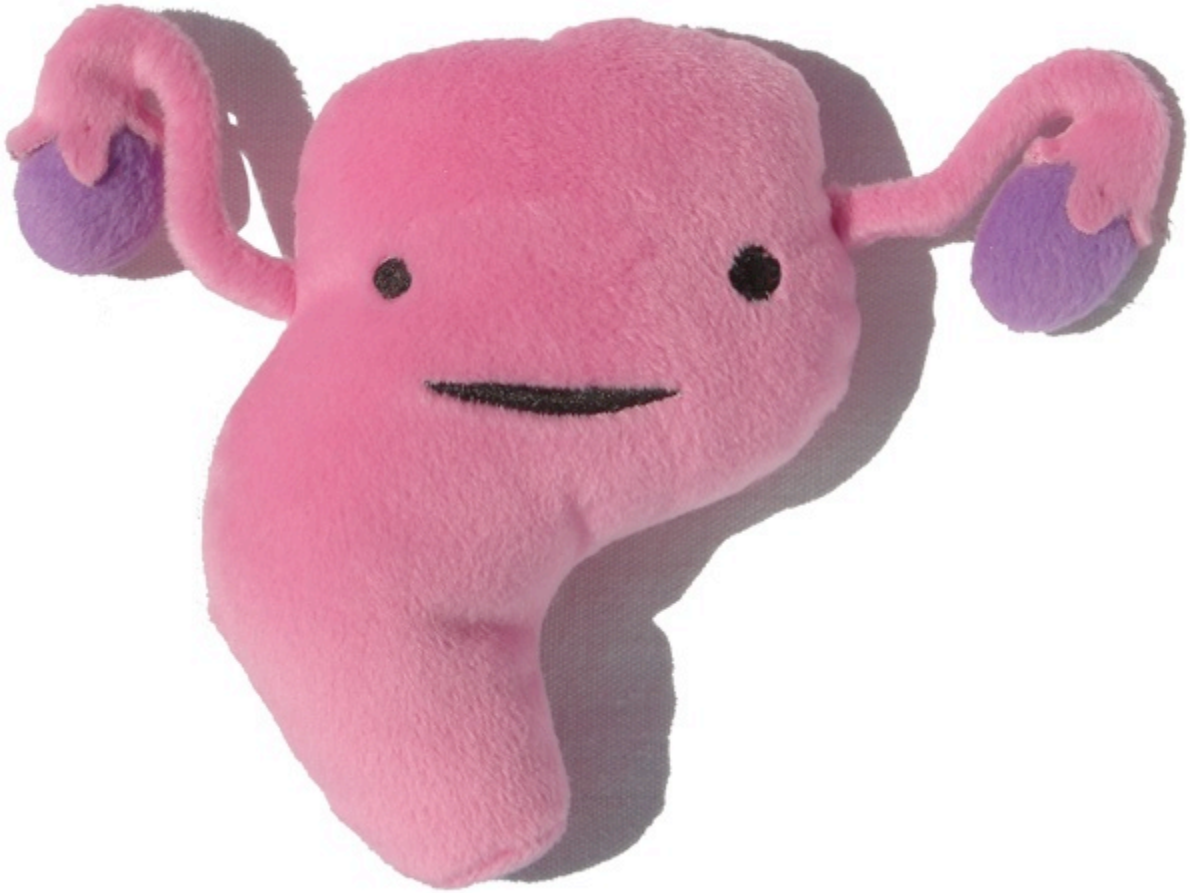
Is it Physiological??

- Puberty 2, 3, 6
- Pregnancy 2, 6
- Lactation 2, 3,6
- Abortion or Ectopic pregnancy 1,4, 5
- Spontaneous abortion 1,4,5
- Contraception (progesterone) 2, 3,4,6
- Menopause 2,3, *4, 5,* 6
- Severe lifestyle changes 2, 3

Is it Pathological??

- Malnutrition, Stress 2, 3, 6
- Cancer (pituitary adenoma, endometrial Ca) 1, 2, 3, 4, 5
- Infection 1, 4
- Polycystic ovarian syndrome 1,2,3,6
- Uterine fibroids or polyps 1,5

Questions???