

Genito-Urinary System Examination

Prepared by: Tesfa D. (MSN-AAHPN_{candidate})
June 05, 2012

Lecture outline

- Objective
- Brainstorming
- Female genito-urinary system
 - Anatomy and Physiology overview
 - Examination
 - Subjective data
 - Objective data

Lecture outline...

- Male genito-urinary system
 - Anatomy and physiology overview
 - Examination
 - Subjective data
 - Objective data

Objective

At the end of this chapter the nurse students will be able to;

- Summarize a health history pertinent to the genito-urinary system.
- List the major sign and symptoms of GUS disease.

Objective...

- Identify the equipment needed for GUS examination.
- Describe the procedure to conduct GUS examination.
- Interpret the finding during GUS examination.

Brain storming

- ❑ Why GUS examination done at the end?
- ❑ What are the P/E technique commonly used during GUS examination?
- ❑ What are the major complaints of a patient with GUS disorder?
- ❑ What are the special consideration during GUS examination?
- ❑ Why varicose vein is more common in left scrotum?

A graphic of a scroll, tilted diagonally from the bottom-left to the top-right. The scroll is light gray with a darker gray border and a shadow. The text "Female Genito-Urinary System" is written across the scroll in a large, bold, black, sans-serif font. The scroll is unrolled at both ends, with the top edge showing a slight curve.

Female Genito-Urinary System

Anatomy and Physiology

❖ Classified as;

- ***External***: mons pubis, labia majora, labia minora, vestibule, urethral meatus, Skene's and Bartholin's gland, clitoris, perineum,.
- ***Internal***: vagina, uterus, cervix, fallopian tube, ovary, bladder, and urethra.

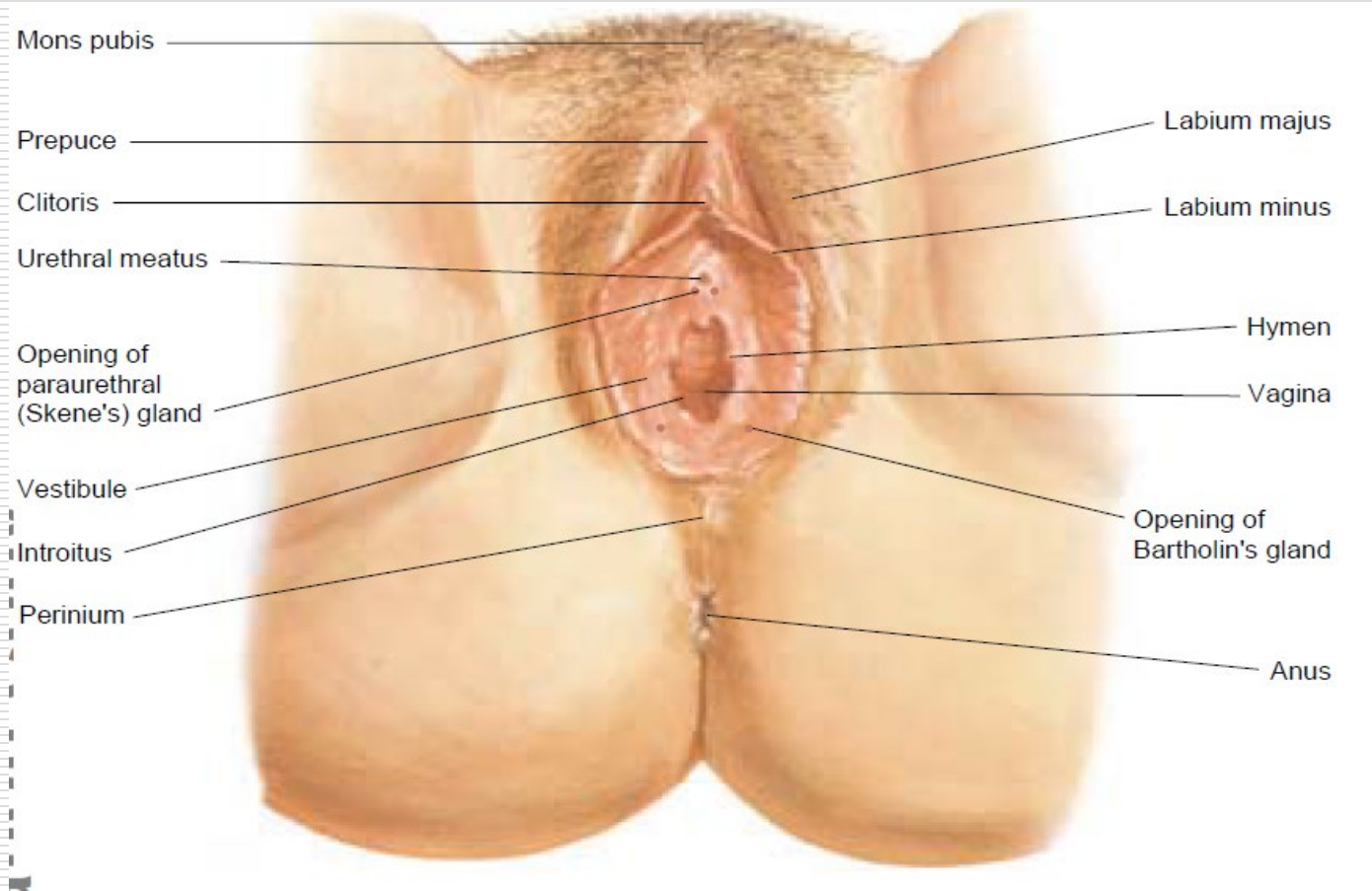
External

- ❑ *Mons pubis*: round, firm, hair-covered fat pad.
- ❑ *Labia majora*: rounded folds of adipose tissue.
- ❑ *Labia minora*: thinner pinkish red folds.
- ❑ *Vestibule*: from the clitoris to the fourchette.
- ❑ *Clitoris*: small, pea shaped, erogenous organ.

External...

- ❑ ***Skene's gland***: posterior to urethra, 5 and 7 o'clock position.
- ❑ ***Bartholin's glands***: either side of the introitus.
- ❑ ***Perineum***: tissue between the introitus and the anus.
- ❑ ***Urethral meatus***: urethral opening.
- ❑ ***Hymen***: circular or crescent shaped fold.

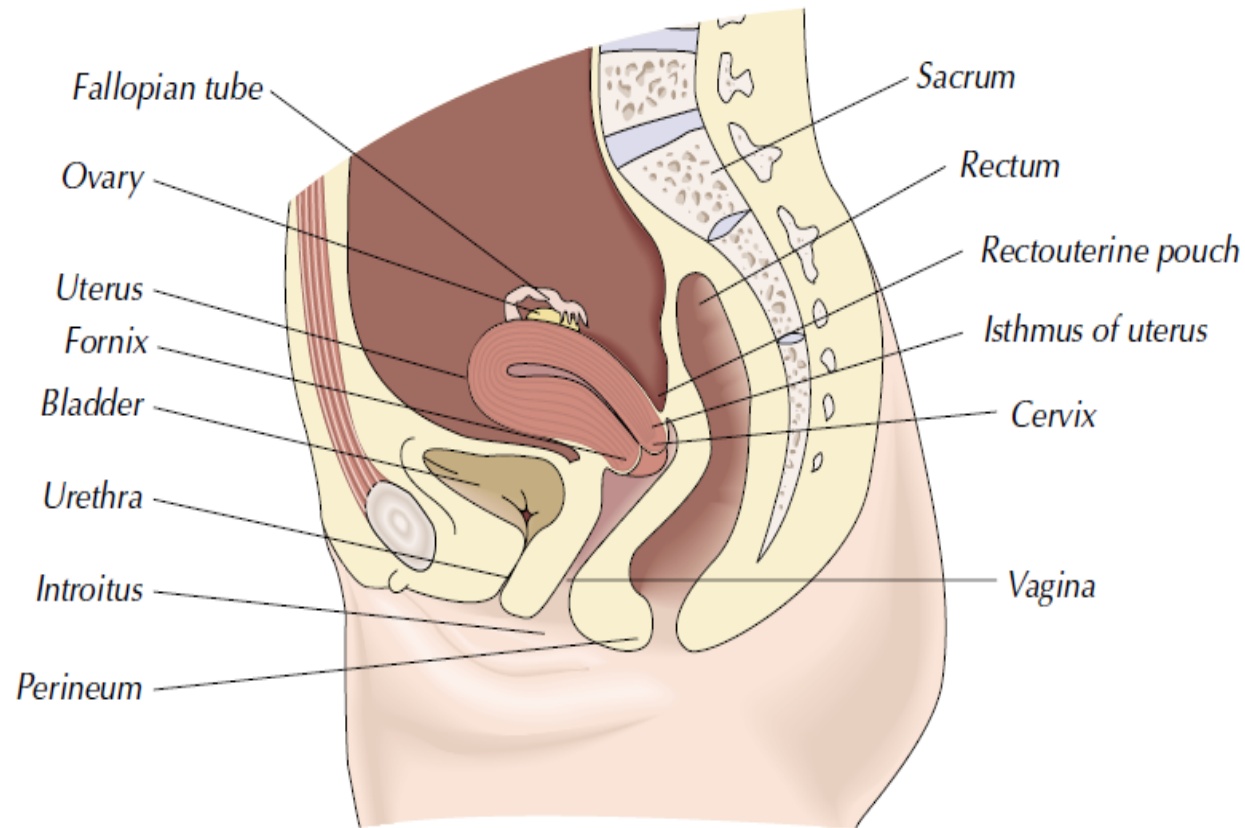
External (pictorial)...



Internal...

- ❑ *Vagina*: hollow tube extending upward.
- ❑ *Uterus*: anteverted and anteflexed position.
- ❑ *Cervix*: protrudes into the vagina.
- ❑ *FT*: pliable, trumpet shaped tubes.
- ❑ *Ovaries*: almond-shaped.

Internal (pictorial)...



Examination

- Subjective data;
 - ✓ Health history

- Objective data;
 - ✓ Physical assessment

Subjective data

□ Menstrual hx;

- ✓ LMP, age, cycle, amount, duration, pain, clotting, e.t.c.

□ Obstetric hx;

- ✓ Gravidity, parity, abortion, Px symptoms, e.t.c.

Subjective data...

- Menopause hx;
 - ✓ Symptoms (hot flashes, flushing, sweating, and disturbances of sleep)
- Self-care behaviours;
 - ✓ Gynecologic checkup, hx of maternal DES ingestion, e.t.c.

Subjective data...

- Urinary complaints;
 - ✓ Frequency, amount, pain, blood, smell, sleep disturbance, incontinency, hesitancy, urgency, dribbling, e.t.c.

- Vaginal discharge hx;
 - ✓ Color, amount, time, itching, pain, OCP, DM hx, e.t.c.

Subjective data...

- Past hx;
 - ✓ Lesion, abdominal pain, surgery and other Rx, e.t.c.
- Sexual activity hx;
 - ✓ Sexual r/ship, satisfaction, partner, sexual preference, e.t.c.

Subjective data...

- Contraceptive use hx;
 - ✓ Px plan, past and current use, type, satisfaction, Px difficulty, smoking hx, e.t.c.
- STIs hx;
 - ✓ Time, Rx, complication, e.t.c.
- STIs risk reduction;
 - ✓ Condom use, faithfulness, e.t.c.

Objective data

- Equipment;
 - ✓ Glove, lamp, vaginal speculum (Grave's and Pederson), large cotton tipped applicator, protective clothing for examiner, lubricant, KOH, e.t.c.

Objective data...



Small metal Pedersen, medium metal Pedersen, medium metal Graves, large metal Graves, and large plastic Pedersen (from left to right)



Method of Examination

□ Preparation:

- ✓ Examiner;
- ✓ Patient; Positioning, empty bladder, avoids intercourse, douching, or use of vaginal suppositories for 24 to 48 hours before examination.

External Genital Examination

Inspection

- Pubic hair distribution and skin color; (ab. pediculosis pubis-excoriations or itchy, small, red maculopapules).
- Labia majora; symmetric, plump, well formed, meet midline, sebaceous cyst (yellowish, 1cm nodule, firm, tender, and multiple).

External Genital Examination...

- Clitoris; 2 cm X 0.5 cm. (ab. enlarged clitoris in pseudohermaphroditism, chancre in syphilis).
- Labia minora; dark pink, moist, symmetric, no ecchymosis, no varicose veins.

External Genital Examination...

- Urethral opening; stellate, midline, no discharge, tenderness, swelling, no prolapse. (ab. Epispadiases, hypospadiases, urethral caruncle or carcinoma, or prolapse of the urethral mucosa).

External Genital Examination...

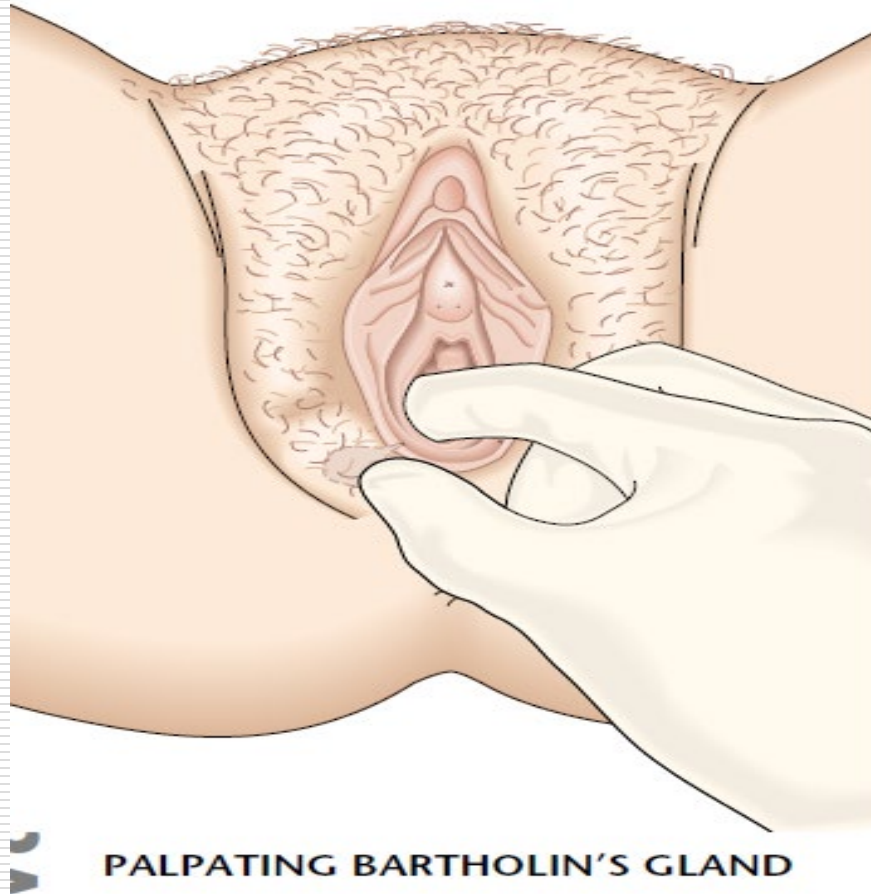
- Vaginal opening; narrow vertical slit or large opening, no discharge, prolapse, e.t.c. (ab. vaginitis or cervicitis, trauma, atrophy).
- Hymen;
- Perineum; smooth, intact, slightly darkened.
- Anus; coarse skin, increased pigmentation.

External Genital Examination...

Palpation

- ❑ Skene's gland; insert your index finger in to the Vx and milk it up and out. No tenderness, discharge, indurations.
- ❑ Bartholin's gland; palpate posterior part of labia majora with your index finger in the vagina and your thumb outside. Soft and homogeneous.

External Genital Examination...



Internal Genital Examination...

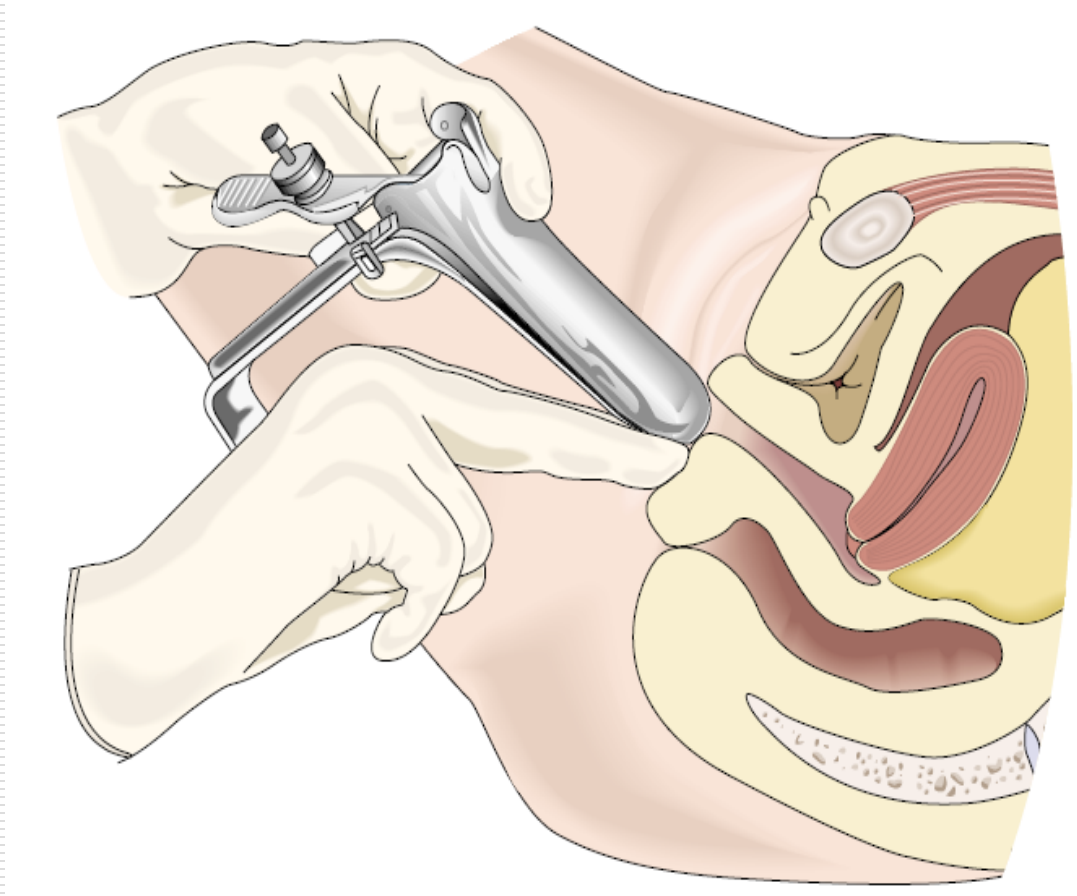
How to insert the speculum?

- ✓ Select a speculum of appropriate size and shape.
- ✓ Lubricate and warm it with warm water.
(Other lubricants may interfere with cytologic studies and bacterial or viral cultures.)

Internal Genital Examination...

- Hold the speculum in your right hand, with the index and middle fingers surrounding the blades and your thumb under the thumbscrew. (advantage?)
- With your left index and middle fingers, push the introitus down and open to relax the pubococcygeal muscle.

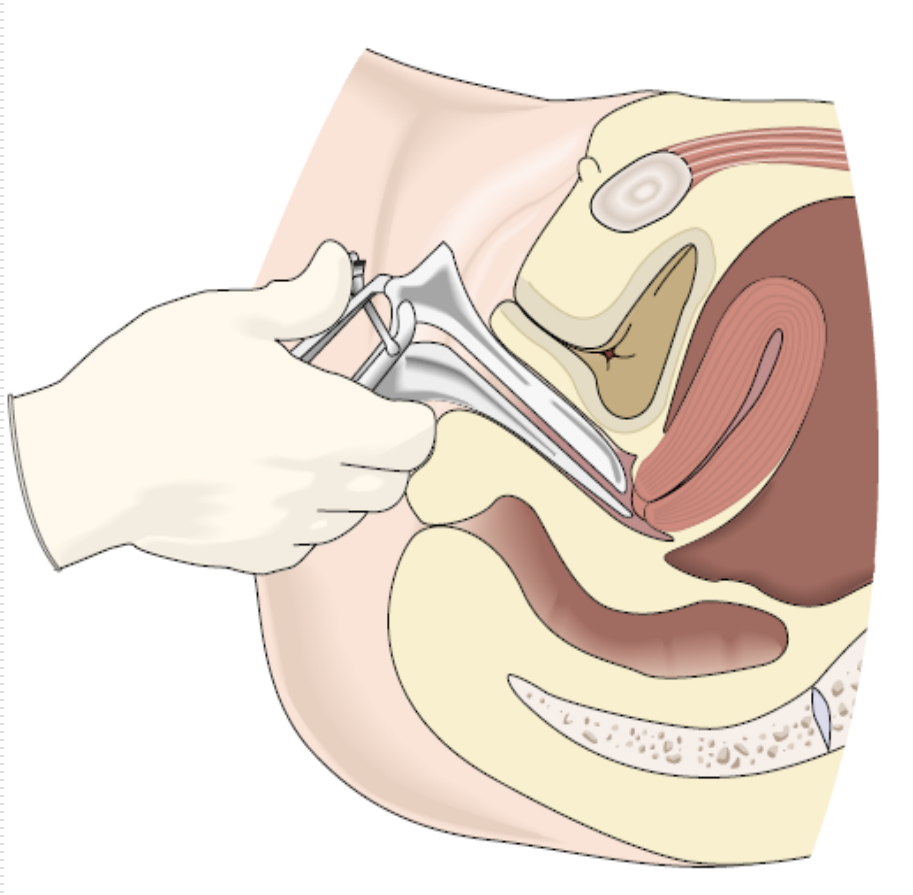
Internal Genital Examination...



Internal Genital Examination...

- ❑ Tilt the width of the blades obliquely and insert the speculum past your left fingers, applying any pressure downward. (advantage?)
- ❑ As the blades pass your left fingers, withdraw your fingers. Now turn the width of the blades horizontally, and continue to insert in 45⁰ angle.

Internal Genital Examination...



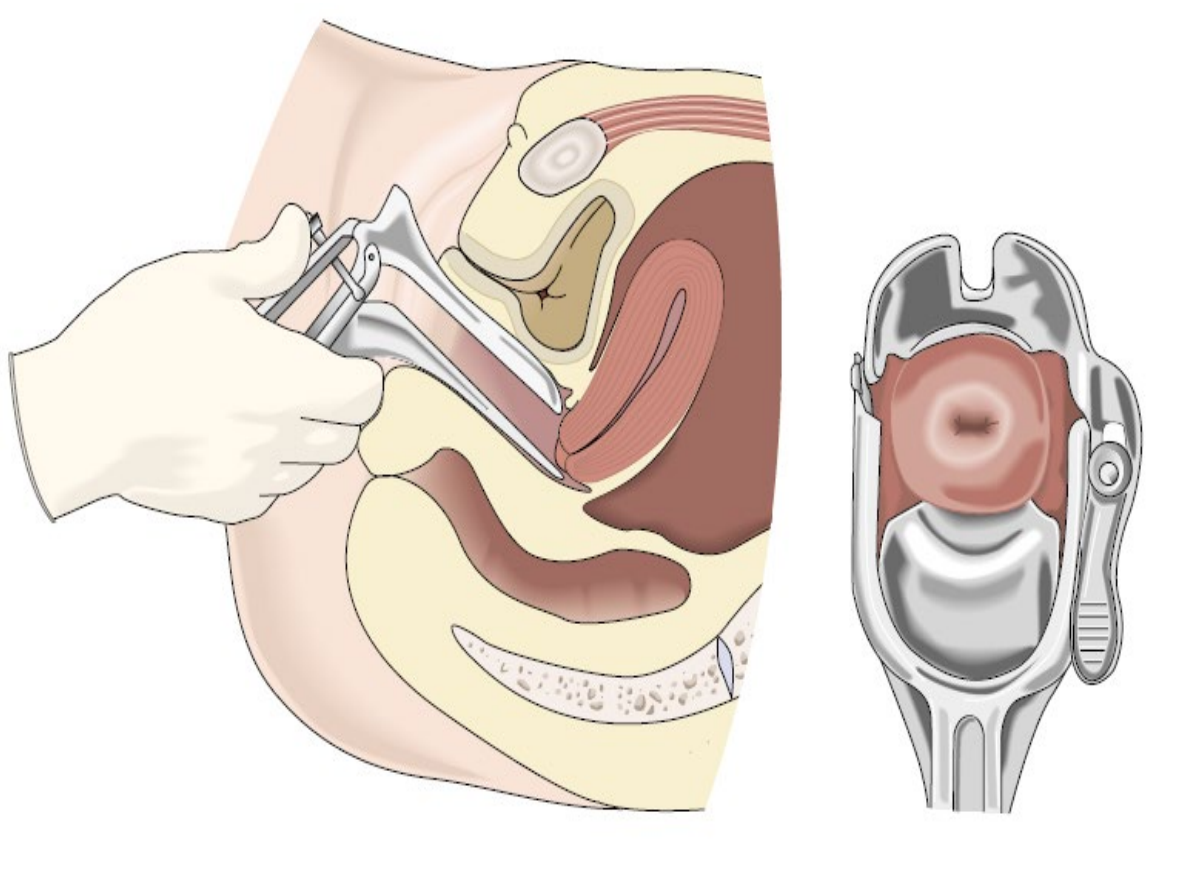
Internal Genital Examination...

- After the blades are fully inserted, open them by squeezing the handles together.

Remember:

- Ease insertion by asking the women to bear down.
- Be careful not to open the blades of the speculum prematurely.

Internal Genital Examination...



Internal Genital Examination...

Inspection

Cervix;

- ❑ Color: pink and even. Blue (Chadwick's sign), pale (menopause).
- ❑ Position: midline, 1-3cm project into Vx. (ab. adhesion, tumor, prolapse)

Internal Genital Examination...

- Size: 2.5cm. (ab. Hypertrophy-tumor, infm.).
- Surface: smooth. (ab. Cxal polyp-bright red growth protruding from the Os, fragile, benign, may bleed).
- Discharge: clear, thin or thick, opaque, and stringy. (ab. yellowish discharge-mucopurulent cervicitis due to NG, HS, CT).

Internal Genital Examination...

Vagina;

- Withdraw the speculum slowly while observing the vagina.
- During withdrawal inspect the vaginal mucosa, noting its color and any inflammation, discharge, ulcers, or masses.

Internal Genital Examination...

- *Normal*: pink, deeply rugated, moist, smooth, free from lesion, inflammation, discharge-thin, clear, opaque, stringy, odorless.
- *Abnormal*: leukoplakia (spot of dried white paint), candidiasis (thick, white, curdlike Vxal discharge), trichomoniasis (profuse, watery, gray-green and frothy), cystocele, rectocele, mass.

Internal Genital Examination...

Palpation

Vagina;

- Lubricate the index and middle fingers of one of your gloved hands.

Internal Genital Examination...

- Note any nodularity or tenderness in the vaginal wall, including the region of the urethra and the bladder anteriorly.
- Stool in the rectum may simulate a rectovaginal mass, but unlike a tumor mass can usually be dented by digital pressure.

Internal Genital Examination...

Cervix;

- Palpate the cervix, noting its position, shape, consistency, regularity, mobility, and tenderness.
- Normally the cervix can be moved somewhat without pain.

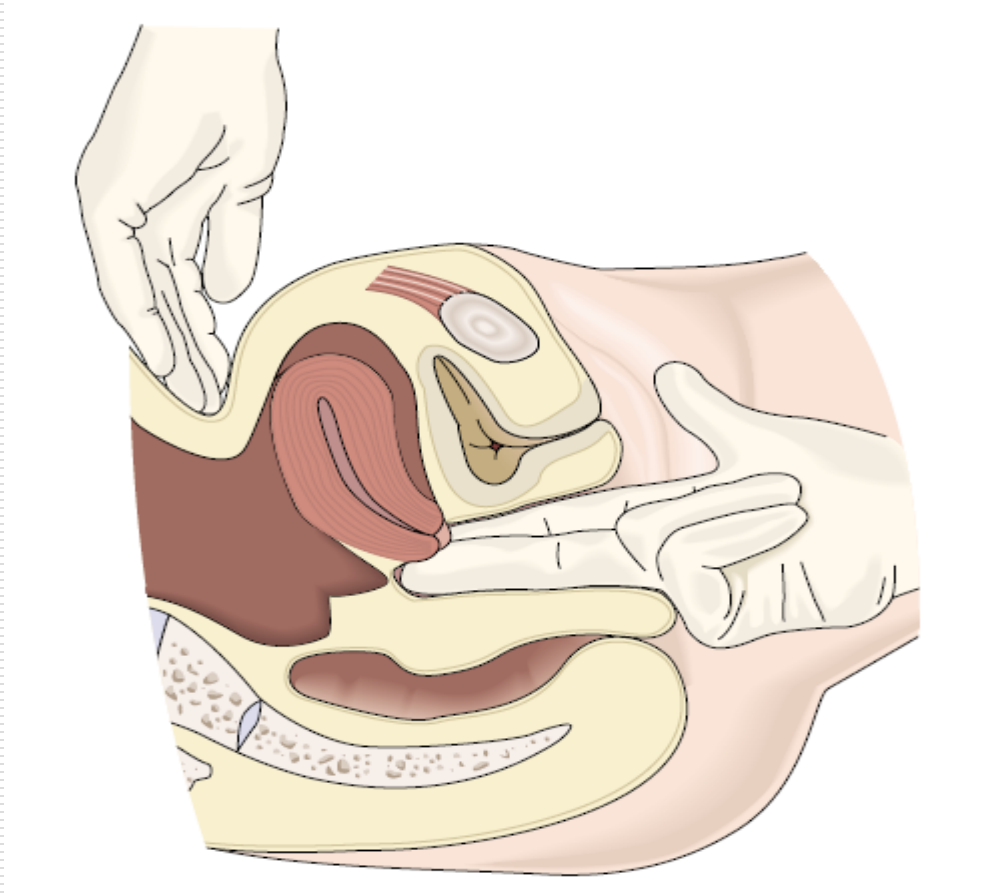
Internal Genital Examination...

- Pain on movement of the cervix, together with adnexal tenderness, suggests pelvic inflammatory disease.

Uterus;

- Place your other hand on the abdomen about midway between the umbilicus and the symphysis pubis. (BME)

Internal Genital Examination...



Internal Genital Examination...

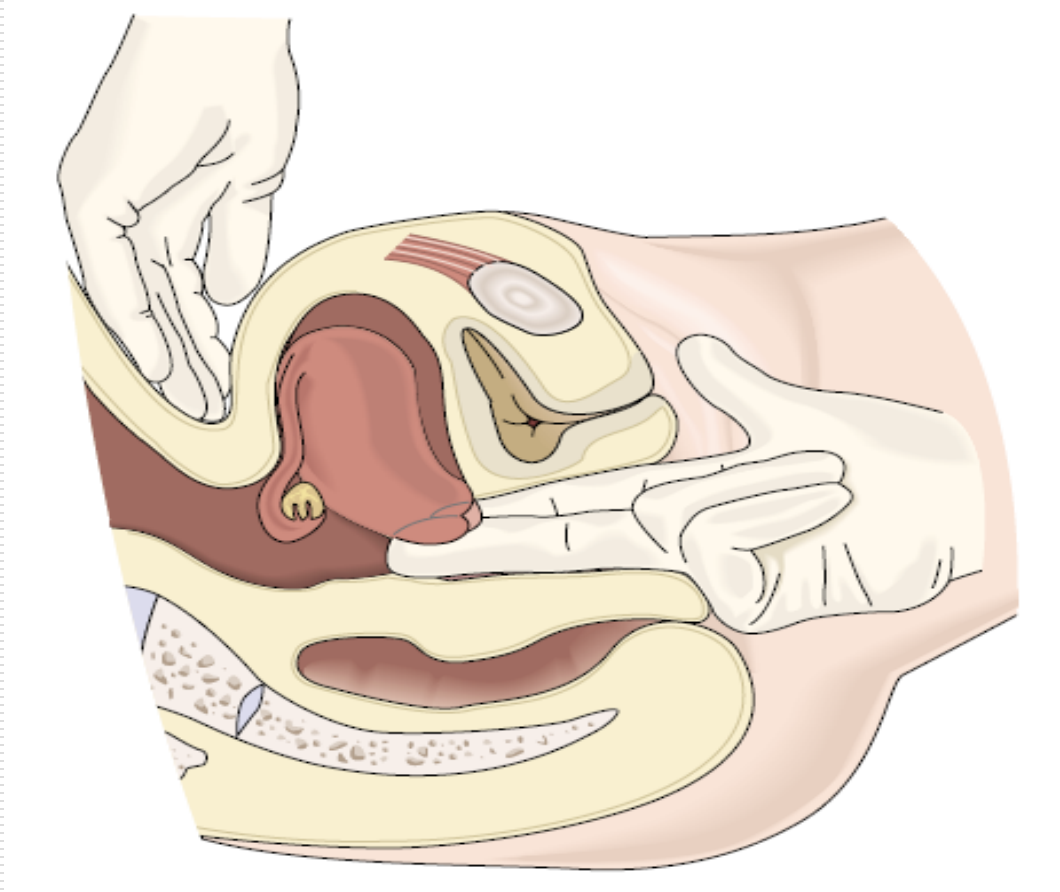
- Note its size, shape, consistency, and mobility, and identify any tenderness or masses.
- Uterine enlargement-pregnancy or benign or malignant tumors. Nodules (firm, irregular, single or multiple, vary in size) on the uterine surfaces suggest myomas.

Internal Genital Examination...

Ovary;

- Note their size, shape, consistency, mobility, and tenderness.
- Normal ovaries are somewhat tender, atrophied 3-5 years post menopause. (ab. cyst or a tumor).

Internal Genital Examination...

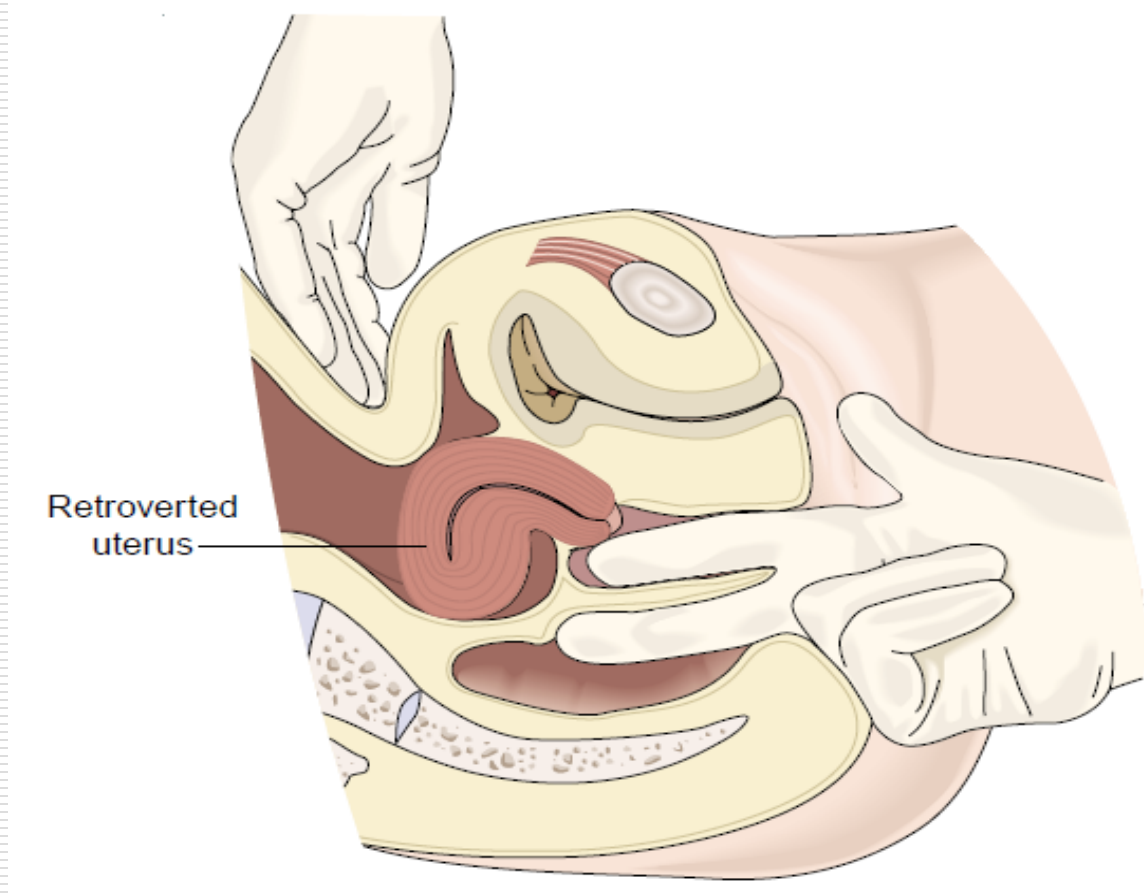


Internal Genital Examination...

Rectovaginal;

- Rectovaginal palpation is especially valuable in assessing a retro-displaced uterus (an abnormal position of the uterus in which it is tilted back ward).

Internal Genital Examination...



Internal Genital Examination...

Pelvic muscles;

- Ask the patient to squeeze her muscles around them as hard and long as she can.
- A squeeze that compresses your fingers snugly, moves them upward and inward, and lasts 3 seconds or more is full strength.

Internal Genital Examination...

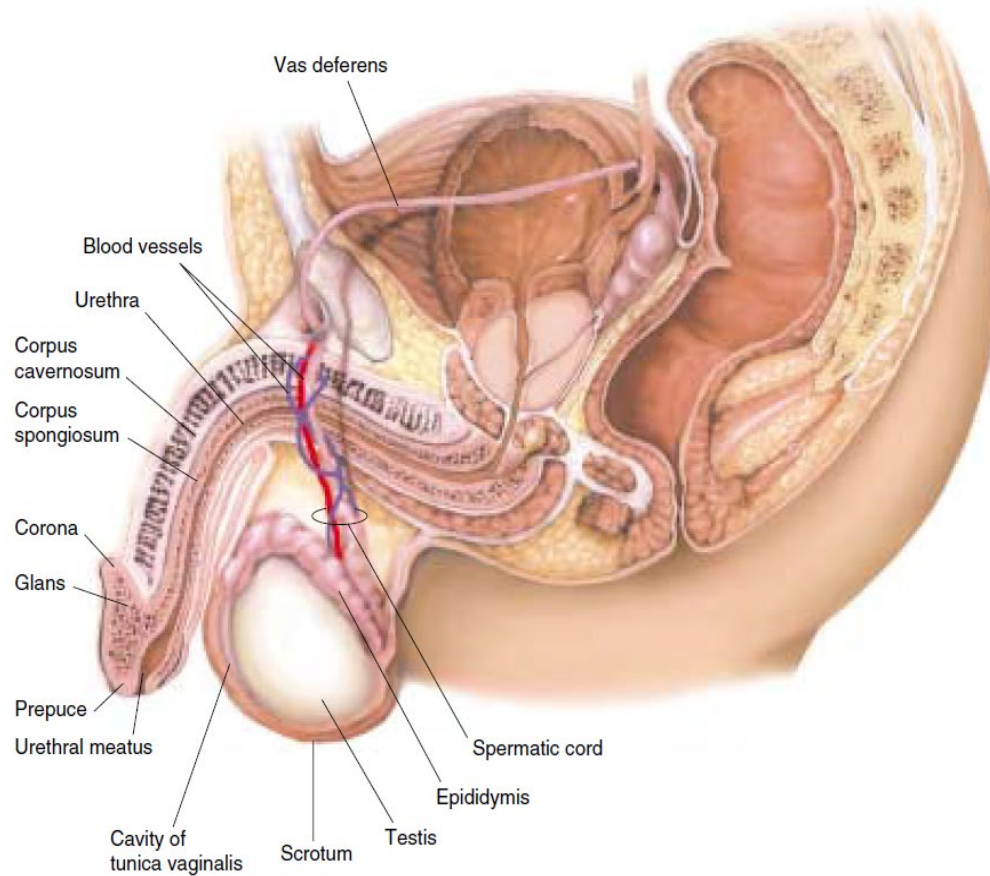
- Impaired strength may be due to age, vaginal deliveries, or neurologic deficits. Weakness may be associated with urinary stress incontinence.

Nursing Diagnosis

- ❑ Sexual dysfunction related to depression as evidenced by decreased sexual desire.
- ❑ Functional incontinence related to cognitive deficit as evidenced by unpredictable voiding pattern.
- ❑ Rape trauma syndrome related to rape event as evidenced by anger.

Male Genito-Urinary System

Anatomy and Physiology



Anatomy and Physiology...

- ❖ Scrotum: Sac that contains testes.
- ❖ Testes: Produces sperm and testosterone.
- ❖ Vas deferens: Duct from epididymis to ejaculatory duct.
- ❖ Spermatic cord: Protective sheath around the vas deferens, artery, vein, nerve, and lymphatics.

Anatomy and Physiology...

- ✓ Seminal vesicles: Production of semen.
- ✓ Bulbourethral gland: Secretes alkaline substance to neutralize vaginal secretions.
- ✓ Prostate: Produces of semen.
- ✓ Epididymis: Stores sperm until it is mature.

Anatomy and Physiology...

- Kidney: Filters blood and removes wastes.
- Ureter: Tube connecting kidney to bladder
- Bladder: Hollow, muscular structure, holds urine.
- Urethra: Passageway for urine.

Anatomy and Physiology...

- Penis: Male sex organ and urine elimination.
- Glans penis: Important for sexual arousal.
- Inguinal area: Canal for vas deferens from scrotum through the abdominal muscles, inguinal lymph nodes.

Examination

- Subjective data
- Objective data

Subjective data

- Frequency, urgency, nocturia;
 - CVD, habit, diuretic use, high fluid intake.
- Dysuria;
 - Cystitis, prostatitis, urethritis.

Subjective data...

- Hesitancy, dribbling, and straining;
 - Acute cystitis.

- Urine color, smell;
 - UTI, STIs, trauma, calculi, DKA.

Subjective data...

- Past GU hx;
 - Acute cystitis, neurologic dr, UTI, prostatitis, BPH.
- Penis-pain, lesion, discharge;
 - STIs, penile Ca.

Subjective data...

- STD contact;
- Scrotum, self care behavior-lump;
 - Testicular Ca, hernia,
- Sexual activity and contraceptive use;
 - Bisexual, homosexual (lesbian, guys).

Objective data

□ Preparation;

- Approach: IPA.
- Position: standing, supine, leaning over table or Sim's position.
- Tools: gloves, lubricant, pen light, slides & swabs for specimen collection, and stethoscope.

Method of Examination

Inspection

Penis;

- ✓ Condition of skin, color, lesions, discharge, size, position of urinary meatus, and the prepuce (foreskin).

Method of Examination...

- ✓ Glans look for any ulcers, scars, nodules, or signs of inflammation.
- ✓ Skin normally looks wrinkled, hairless, with out lesions.
- ✓ Abnormal-chancres, wart, cancer, phimosis, paraphimosis, balanoposthitis, balanitis, pypospadias, epispadias, urethritis, stricture.

Method of Examination...

- Compress the glans gently between your index finger above and your thumb below.



Method of Examination...

Scrotum;

- Size, position, color, hair distribution, lesions, swelling, lumps and pediculosis.
- Normal-symmetrical.
- Abnormal -scrotal swelling, lesion, asymmetry.

Method of Examination...

- Inspect the inguinal and femoral areas carefully for bulges.
- A bulge that appears on straining suggests a hernia.

Method of Examination...

Palpation

Penis;

- Tenderness, consistency, masses, discharge.



© 2003, F.A. Davis Company

Method of Examination...

Scrotum;

- Normally the scrotum varies in shape and size.
- The left side of the scrotum is usually lower than the right.
- The skin should be thin and rugated, causing a wrinkled appearance.

Method of Examination...



Method of Examination...

- Note the size, shape, consistency, tenderness, symmetry, mobility, masses.
- The normal testis are ovoid, smooth and homogeneous in consistency and palpate through the scrotal skin.

Method of Examination...

- Testicles should be freely moveable, equal in size and slightly sensitive to compression.
- The epididymis are normally firm, comma like structures and may be located in the postero-superior, anterolateral or anterior (6-7% of population) areas of the testes.

Method of Examination...

- The vas difference are palpated by moving our thumb and forefinger from the epididymis to the vas in an anterior direction in the spermatic cord.
- Normally it should feel cord like and move freely. It should also discrete, smooth, non tender and with out mass.

Method of Examination...



Method of Examination...

- ❑ Absence of rugated skin, redness, warmth and enlargement indicates inflammation and possibly infection.
- ❑ A non firm or very tender epididymis may indicate inflammation.

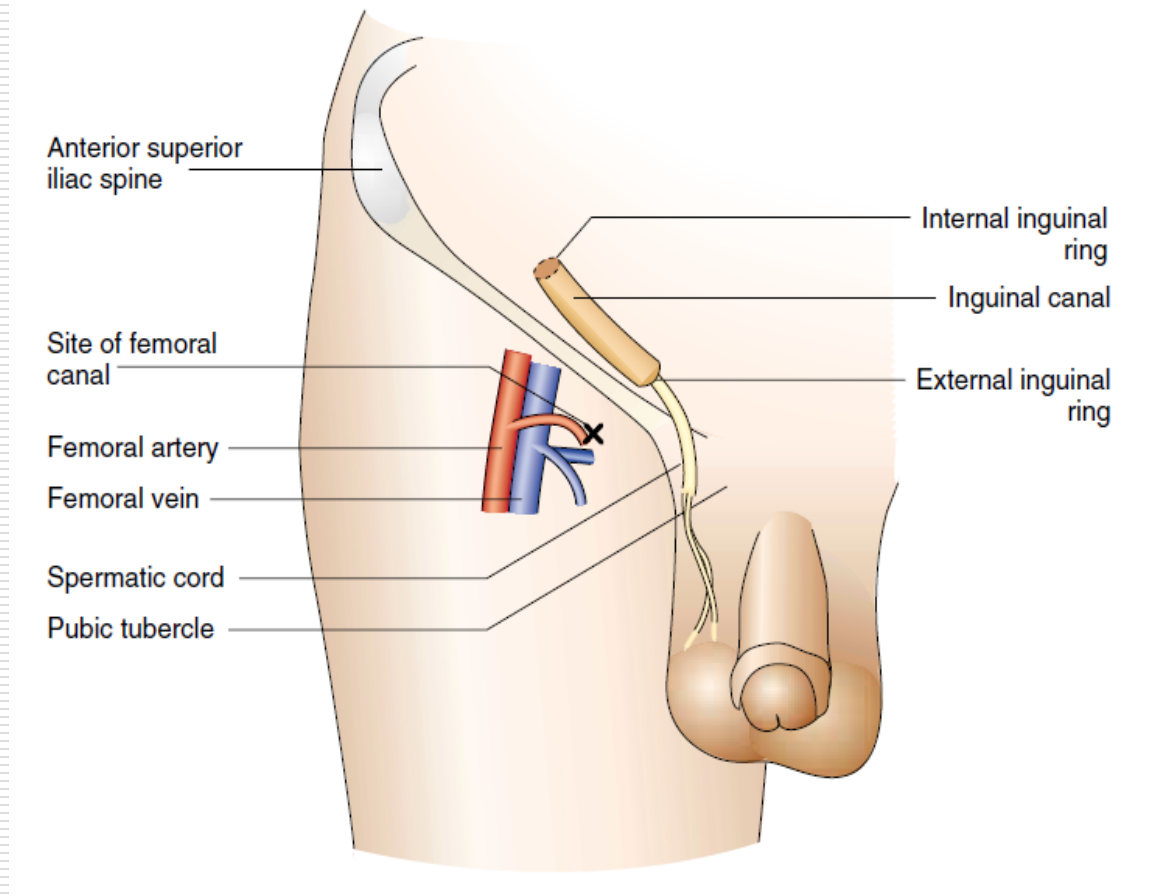
Method of Examination...

- Abnormal- hydrocele, scrotal edema, acute epididymitis, acute orchitis, torsion of the spermatic cord, or a strangulated, indirect inguinal hernia, cryptorchidism, spermatocele, varicocele, filariasis.

Assessment of hernias in the groin

- Hernia is the protrusion of loops of bowel through weak areas of either the inguinal canal or the femoral canal form the hernias in the groin.
- Inguinal canal lies above and approximately parallel to the inguinal ligament.

Assessment of hernias...



Assessment of hernias...

- ❑ It forms a tunnel for the vas difference as it pass through the abdominal muscle.
- ❑ Both the canal and the internal ring are not palpable through the abdominal examination.
- ❑ The techniques used are inspection, palpation and some times auscultation for bowel sounds.

Assessment of hernias...

Inspection

- Note any bulges, while asking the patient to strain down. A bulge that appears or increases on straining suggests a hernia.

Assessment of hernias...

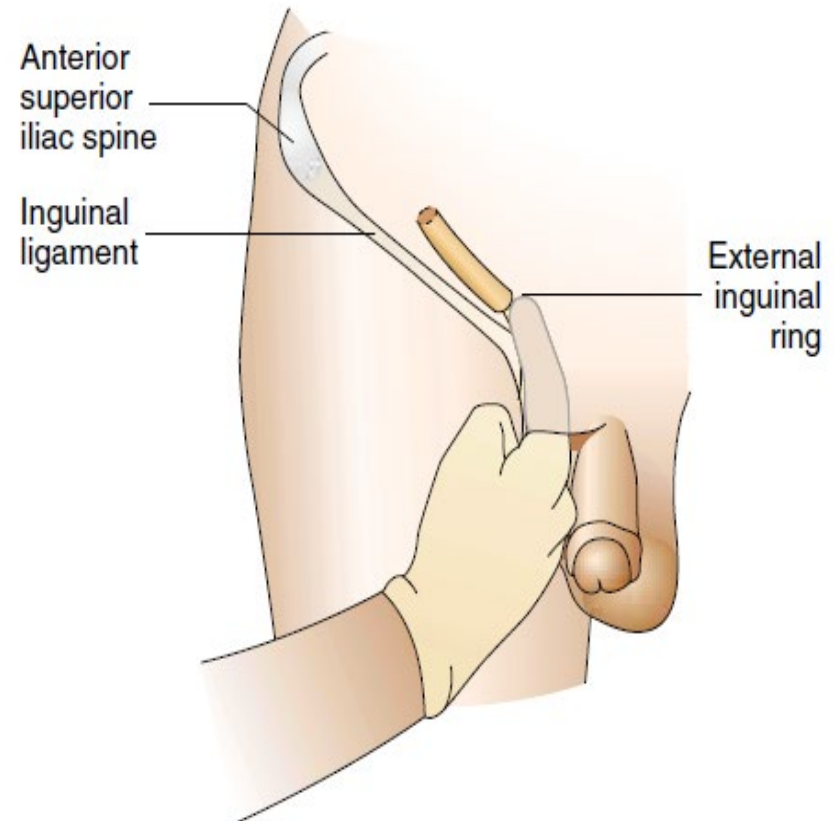
Palpation

- ❑ To palpate the right inguinal hernia use the right hand.
- ❑ Invaginate loose scrotal skin with your index fingers and follow the spermatic cord up ward to the inguinal ligament and find the triangular slit like opening of the external inguinal ring.

Assessment of hernias...

- ❑ If the ring is enlarged, it admits your index finger.
- ❑ If possible gently follow the inguinal canal laterally in its oblique course.
- ❑ With your finger locate either the canal or the external ring, ask the patient to strain down or cough.

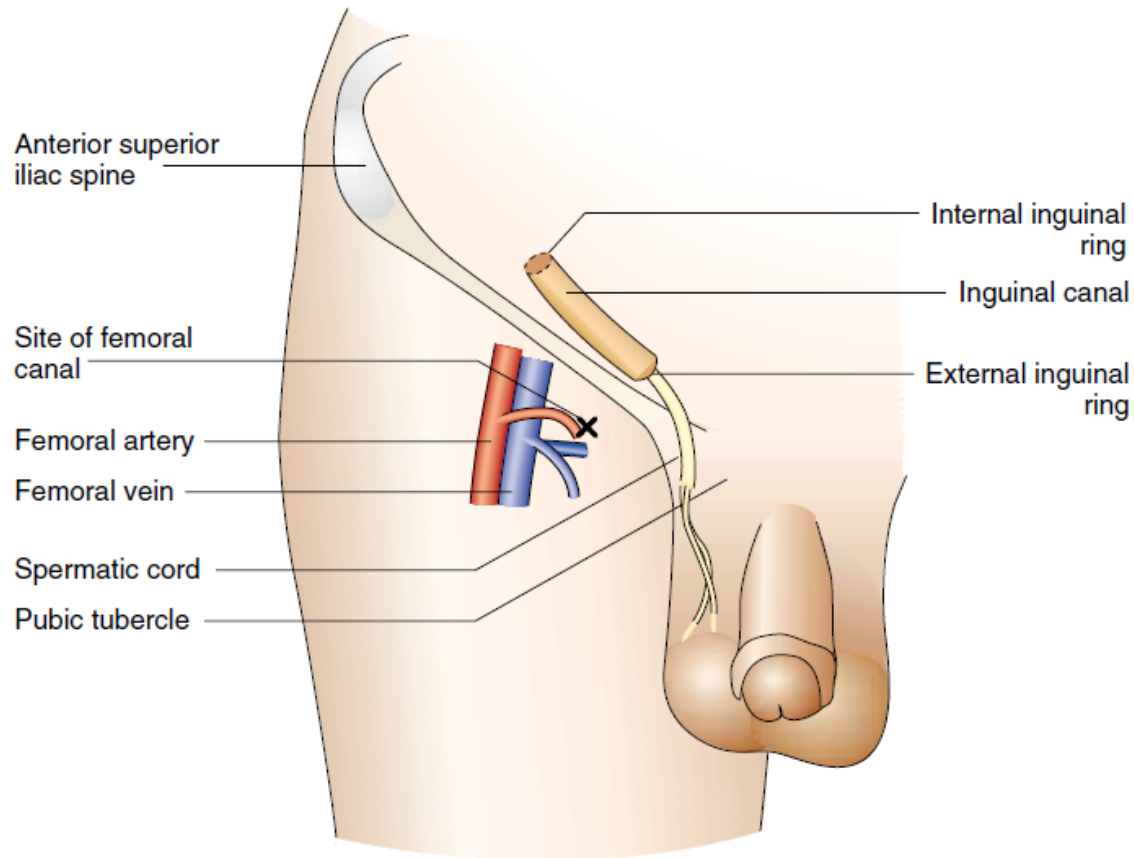
Assessment of hernias...



Assessment of hernias...

- ❑ To palpate the femoral hernia, place your fingers on the femoral canal and ask the patient to strain.
- ❑ Note swelling or tenderness.
- ❑ Tenderness, nausea and vomiting suggest strangulation.

Assessment of hernias...



Assessment of hernias...

- ❑ Enlarged scrotum that is not red may suggest excessive fluid or mass in the scrotum.
- ❑ If the scrotal mass returns when the patient lies, it is hernia.

Assessment of hernias...

- ❑ If not try to get your fingers above the mass in to the inguinal canal. If you can it is not a hernia.
- ❑ Listen to the scrotal mass with your stethoscope, if you hear bowel sound it is hernia.

Assessment of the prostate

- ❑ The prostate gland is a solid, bilobbed, heart shaped structure about 2.5 cm in length and 4cm diameter.
- ❑ It lies in the pelvis 2 cm posterior to the symphysis pubis.
- ❑ The posterior surface is in contact with the rectal wall (<1cm projection).

Assessment technique

- Ask the patient to empty his bladder.
- Position the patient lateral Sim's position, knee-chest, squatting, standing.
- Observe the anus for fissure, haemorrhoids, and bleeding.

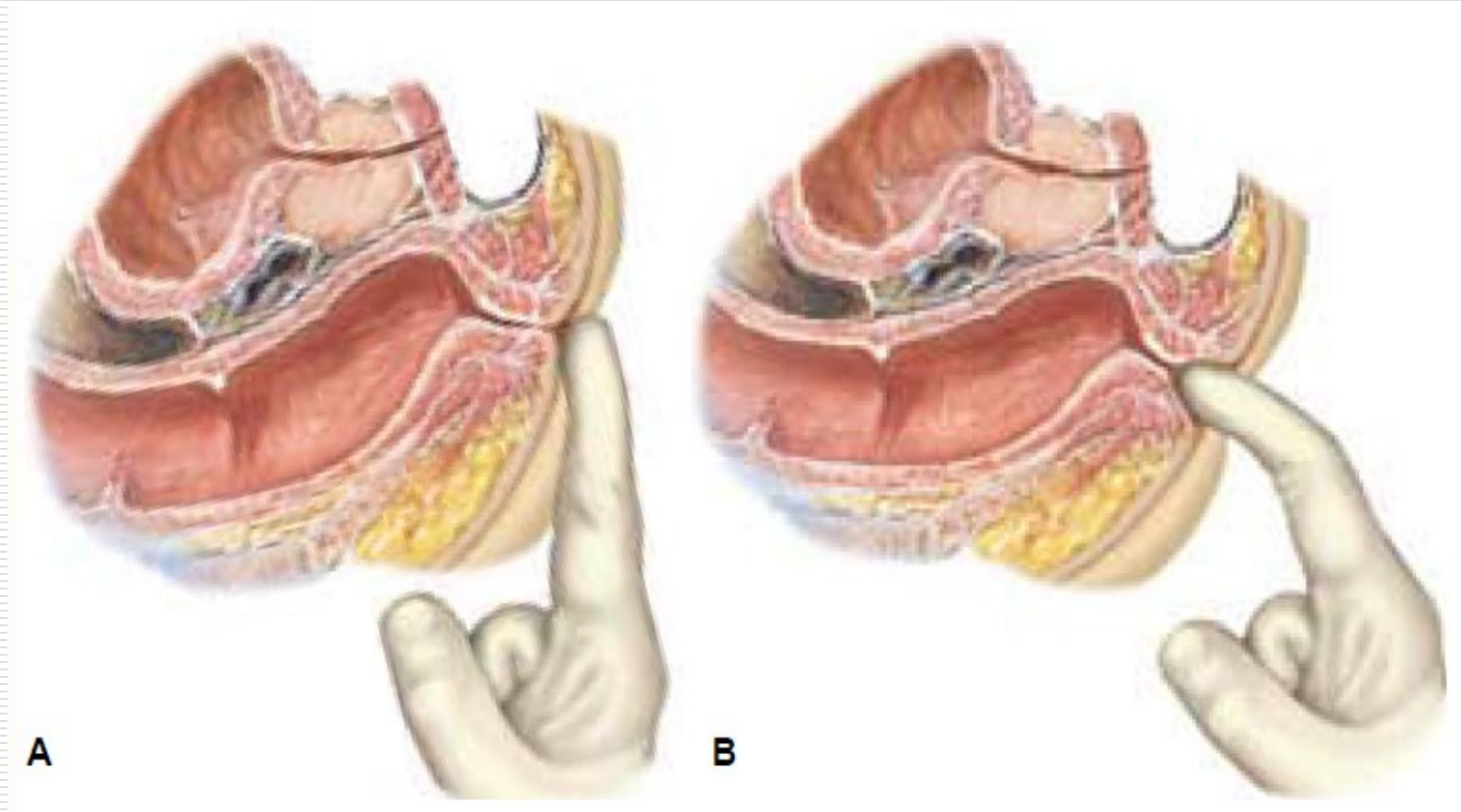
Assessment technique...



Assessment technique...

- Place a gloved and lubricated finger on the anus and wait a few second to relax the sphincter and gently insert the finger noting muscle tone, sphincter tone and tenderness.
- Palpate the lateral and posterior walls symmetrically for tumour and polyps.

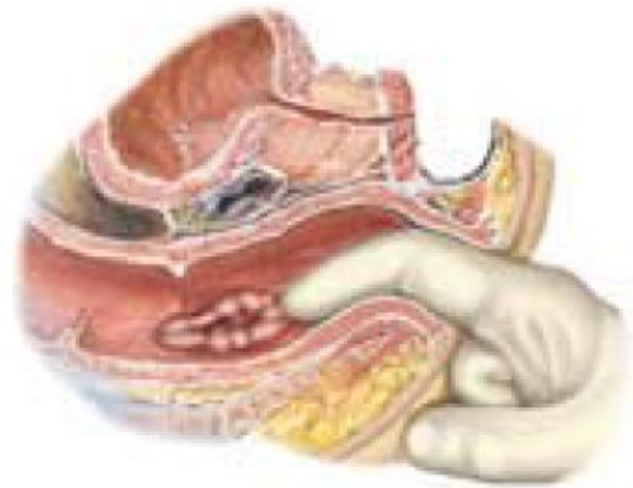
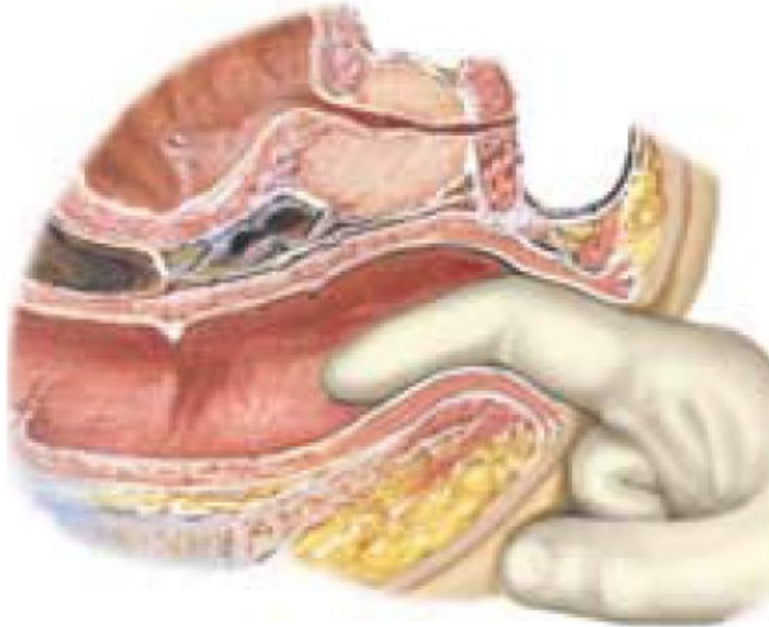
Assessment technique...



Assessment technique...

- ❑ The posterior gland is felt on the anterior wall of the rectum.
- ❑ Note the symmetry, shape, consistency, size, and tenderness of the gland.
- ❑ After completion of the examination inspect the stool left on the glove for the presence of bleeding.

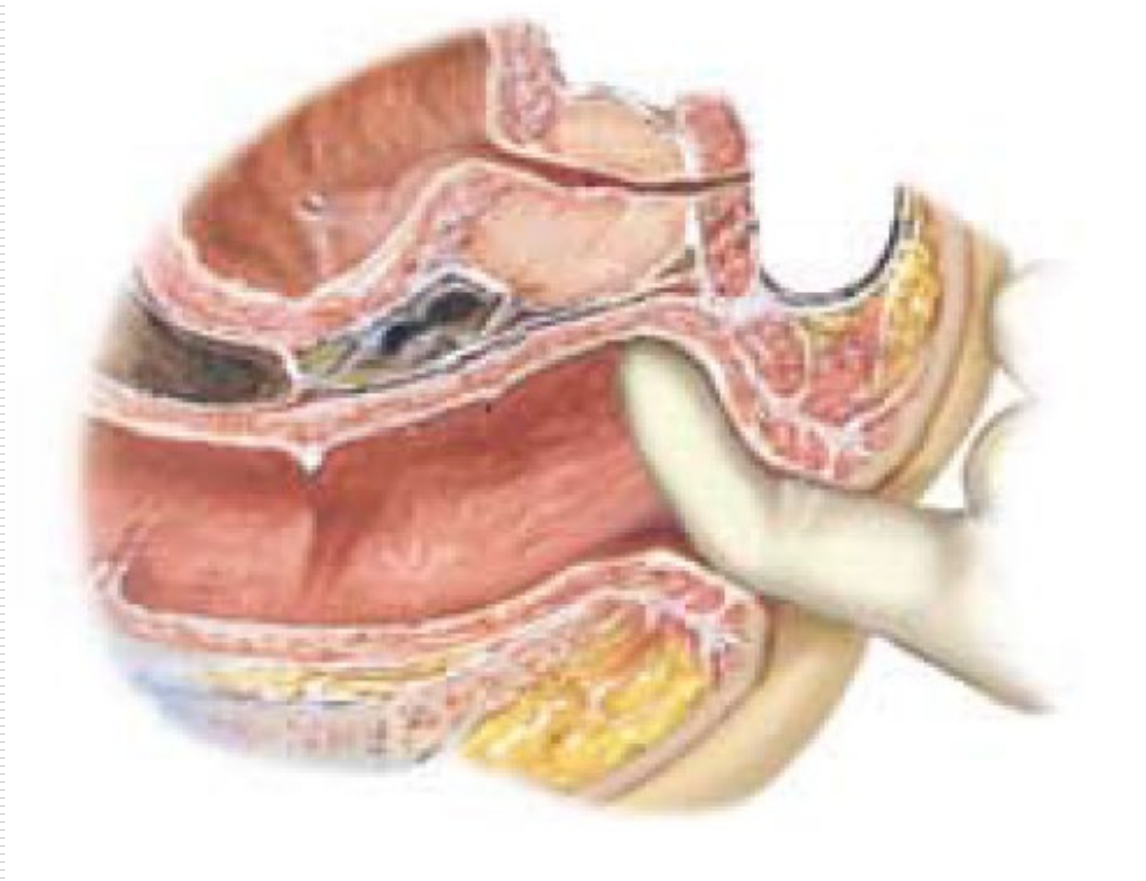
Assessment technique...



Assessment technique...

- Bright red blood on stool surface-rectal bleeding, but if mixed colonic bleeding.
- Black tarry stool- upper GI bleeding.
- Occult blood-colon ca.
- Pale yellow greasy stool- steatorrhea.
- Gray tan stool-obstructive jaundice.
- Black stool-bismuth salt intake.

Assessment technique...



Assessment technique...

- Normally the gland is symmetric, has a smooth, firm and rubbery consistency and the seminal vesicles are not palpable.
- Abnormal;
 - Boggy, exquisitely tender, swollen prostate it suggests prostatitis.

Assessment technique...

- Stony hard, often non tender, irregular, fixed nodules suggest cancer.
- Enlarged, firm, smooth, with central groove obliterated-BPH.

Teaching Testicular Self-Examination

- ❑ If detection early by palpation and treated. The cure rate is almost 100%.
- ❑ Teaching about prevention of STDs and HIV.
- ❑ To examine testicles, remember the following:

Self-Examination...

T= Timing (once a month).

S= Shower (warm water relaxes the scrotal sac and makes examination easier).

E= Examine (check for changes and report them immediately).

Self-Examination...

- ❑ Standing in front of a mirror, check for any swelling on the skin of the scrotum.
- ❑ Examine each testicle with both hands. Cup the index and middle fingers under the testicle and place the thumbs on top.

Self-Examination...

- Roll the testicle gently between the thumbs and fingers. One testicle may be larger than the other that's normal, but be concerned about any lump or area of pain.

Self-Examination...



Nursing Diagnosis

- ❑ Altered sexuality pattern related to pain/extreme fatigue/performance anxiety as manifested by identification of sexual difficulties, limitations, or changes.
- ❑ Urinary retention related to anxiety/diminished sensory response/effect of medication as evidenced by bladder distention.
- ❑ Impaired skin integrity related to infection as evidenced by lesion or pruritus.

Reference

- Jarvis C. (1996). 2nd edition. Physical Examination and Health assessment. Philadelphia, PA: W: B. Saunders Co.
- Barbara B. 8th edition. Guide to Physical Examination and History Taking.
- Mark H. S. (2002). 4th edition. Text book of Physical Diagnosis: History and Examination. Health Science Asia, Elsevier Science.

Reference...

- Gashaw M., Mensur O., Zeki A. (2005). Physical diagnosis Lecture Note for health Science students. In collaboration with the Ethiopia Public Health Training Initiative, The Carter Center, the Ethiopia Ministry of Health, and the Ethiopia Ministry of Education. University of Gondar.

Reference...

- Kathleen M.W. Expert Nurse Video Series: Performing Head-to-Toe Assessment Video. Springhouse Corporation.
- Barbra B. 4th edition. Visual Guide to Physical Examination Video. Lippincott Williams & Wilkins.

