

## Diagnostic and Imaging procedures.

- **Physical examination**

1. Inspection.to see by necked eye to see any mass, any color changes, any deformities
2. Palpation.by use hands to fell organs( liver, spleen, abdominal viscera....) any tenderness
3. Auscultation.to hear by stethoscope heart sounds, any sounds in chest or abdominal cavity
4. Percussion.by tapping by the tips of fingers to hear the sound weather dull or resonant.

- **Endoscope**

A thin, flexible tube with a light and a lens on the end used to look into the esophagus, stomach, duodenum, small intestine, colon, or rectum.

- **Endoscopy**

A procedure that uses an endoscope to diagnose or treat a condition. There are many types of endoscopy; examples include:-

- colonoscopy to examine the inside of colon by endoscopy.
- sigmoidoscopy to examine the inside of sigmoid
- gastroscopy to examine the inside of stomach
- enteroscopy Examination of the inside of the small intestine using an endoscope.
- esophagogastroduodenoscopy to examine the inside of esophagus, stomach and duodenum. . (EGD).

- **Enteral nutrition**

***Food provided through a tube placed in the nose, stomach, or small intestine.***

# **Centesis.....> to introduce a needle to aspirate Fluid.**

Critical care nurses have a vital role in caring for patients undergoing centesis studies. Any centesis procedure involves puncturing a body cavity, joint, organ, or space with a hollow needle to withdraw fluid.

All centesis studies are invasive procedures, typically performed for either therapeutic or diagnostic purposes. Because there are a variety of centesis procedures that the critical care nurse might encounter, the following centesis procedures are discussed in depth:

Amniocentesis.....Amniotic cavity

Arthrocentesis.....the joints

lumbar puncture .....the spinal canal from lumbar region

paracentesis.....abdominal or peritoneal cavity

pericardiocentesis.....pericardium and

thoracentesis.....the chest cavity

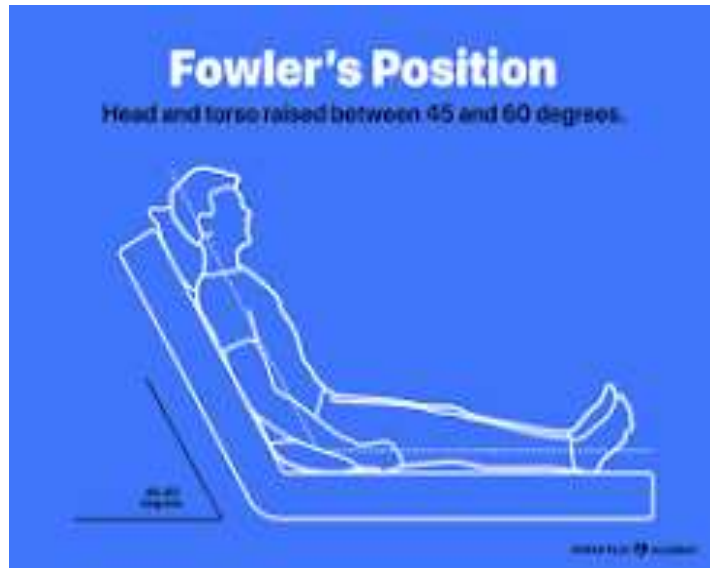
By becoming more familiar with each of these procedures, the critical care nurse gains confidence in caring for clients when these procedures are indicated.

## Common Lab Tests

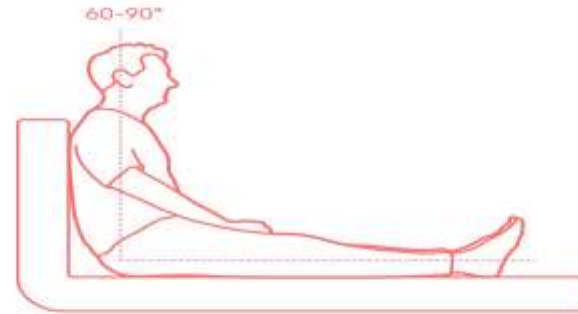
- Complete Blood Count. This test, also known as a CBC, is the most common blood test performed. ...
- Prothrombin Time. ...
- Renal function ( urea & creatinine)
- General Urine examination & general stool examination
- Lipid Panel( triglycerides, Total cholesterol, LDL, VLDL, HDL)
- Liver Panel. ...
- Thyroid Stimulating Hormone. , T3, T4...
- Fasting blood sugar, random blood sugar Hemoglobin A1C.

## COMMON PATIENT POSITIONS

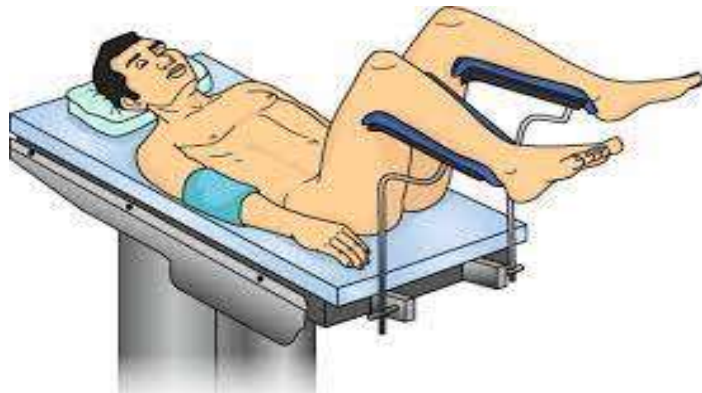
- **Fowler's Position** . where the patient is seated in a semi-upright position at an angle between 30 and 90 degrees, with legs either bent or straight.
- **High Fowler's Position** the patient is usually seated upright with their spine straight. The upper body is between 60 degrees and 90 degrees. The legs of the patient may be straight or bent. This Position is commonly used when the patient is defecating, eating, swallowing, taking X-Rays, or to help with breathing.



Dimensions.Guide  
High-Fowler's Position



- **Supine Position** means lying horizontally with the face and torso facing up.
- **Jackknife Position** **A position in which the patient lies on the back, shoulders elevated, legs flexed on thighs, thighs at right angles to the abdomen.**
- **Kidney Position** **resembles lateral position, except the patient's abdomen is placed over a lift in the operating table that bends the body to allow access to the retroperitoneal space.** A kidney rest is placed under the patient at the location of the lift.
- **Prone Position** means lying horizontally with the face down.
- **Lithotomy Position** a supine position of the body with the legs separated, flexed, and supported in raised stirrups, originally used for lithotomy and later also for childbirth
  - **Sim's Position** The Sims position is a standard position in which the patient lies on their left side, with right hip and knees bent. The lower arm is behind the back, the thighs flexed. The left knee is slightly tilted. The right arm is positioned comfortably in front of the body, the right arm is rested behind the body..



- Radiography **a technique for generating and recording an x-ray pattern for the purpose of providing the user with a static image(s) after termination of the exposure.**
- Computed Tomography (CT) , refers to a computerized x-ray imaging procedure in which a narrow beam of x-rays is aimed at a patient and quickly
- Dental Cone-beam Computed Tomography Cone-beam computed tomography systems (CBCT) are a variation of traditional [computed tomography \(CT\)](#) systems. The CBCT systems used by dental professionals rotate around the patient, capturing data using a cone-shaped X-ray beam. These data are used to reconstruct a three-dimensional (3D) image of the following regions of the patient's anatomy: dental (teeth); oral and maxillofacial region (mouth, jaw, and neck); and ears, nose, and throat ("ENT")..
- Fluoroscopy **is a study of moving body structures**--similar to an X-ray "movie." A continuous X-ray beam is passed through the body part being examined. The beam is transmitted to a TV-like monitor so that the body part and its motion can be seen in detail..
- Mammography **is an X-ray picture of the breast..**
- Nuclear medicine **uses radioactive material inside the body to see how organs or tissue are functioning (for diagnosis) or to target and destroy damaged or diseased organs or tissue (for treatment).**

# Radiologic positioning and projections.

- **Basic terms of relations**

- **anterior** is towards the front of the body (Latin: before)
- **posterior** is towards the back of the body (Latin: after)
- **superior** is towards the top of the body (Latin: above)
- **inferior** is towards the bottom of the body (Latin: below)
- **medial** is towards the midline (Latin: middle)
  - compared with **median** which is in the midline rather than towards the midline
- **lateral** is away from the midline (Latin: side)
- **proximal** is towards the center of the body (Latin: near)
- **distal** is away from the center of the body (Latin: far)
- **superficial** is towards the surface of the body
- **deep** is away from the surface of the body
- **ipsilateral** is on the same side of the body
- **contralateral** is on the opposite side of the body

- **Body positions**

- **erect**: either standing or sitting
- **decubitus**: lying down
- **supine**: lying on back
- **Trendelenburg position**: the patient is supine (on an inclined radiographic table) with the head lower than the feet
- **prone**: lying face-down
- **lateral decubitus**: lying on one side
  - right lateral: right side touches the cassette
  - left lateral: left side touches the cassette

## • Movement

- **flexion:** decrease in the angle of the joint
- **extension:** increase in the angle of the joint
- **abduction:** movement of limb away from midline
- **adduction:** movement of limb towards the midline
- **pronation:** movement of hand and forearm to bring the palm facing posterior
- **supination:** movement of hand and forearm to bring the palm facing anterior
- **circumduction:** circular movement of a joint using a combination of flexion, abduction, extension and adduction such that the distal limb describes a circle
- **opposition:** thumb brought to oppose another digit
- **reposition:** thumb repositioned back to the anatomic position
- **elevation:** movement of the scapular superiorly
- **depression:** movement of the scapular inferiorly
- **eversion:** movement of the sole of the foot away from the median plane
- **inversion:** movement of the sole of the foot towards from the median plane
- **protrusion:** movement of the mandible, lips or tongue anteriorly
- **retraction:** movement of the mandible, lips or tongue posteriorly

## • Projections

- **antero-posterior (AP):** central ray passes, perpendicular to the coronal plane, from anterior to posterior
- **poster-anterior (PA):** central ray passes, perpendicular to the coronal plane, from posterior to anterior
  - depending on the anatomic segment to radiograph, synonyms can be used, for example: occipito-frontal (skull); dorso-ventral (thorax); dorso-palmar (hand)
- **lateral:** central ray, perpendicular to the sagittal plane and parallel to the coronal plane, passes from one side of body to the other
- **oblique:** central ray passes through the body/body part through a plane which is at an angle to the transverse plane/coronal plane
- **axial:** central ray passes through (or parallel) to the long axis of the body
  - in some cases, however, the central ray runs through (or parallel) to the long axis of the skeletal segment studied (for example, the axial view of the calcaneus)