Antenatal/Antepartum Care

Time between conception and onset of True labor

Pregnancy span 9 months divided to:

First trimester last from 1 to 13 weeks

Second trimester last from 14 to 26 weeks

Third trimester from week 27 through 40

Signs Of Pregnancy

→ How is pregnancy diagnosed.

1. Presumptive sign→ Is subjective symptoms are reported by the women .

Such as:

→ Amenorrhea.

→ Nausea and vomiting (morning sickness).

→ Fatigue.

→ Quickening: the mother first perception of fetal movement, may noted between week 14-16 by multiparous women, but the nulliparous women may not notice it until 18th week or later.

→ Abdominal enlargement .

Signs Of Pregnancy

→ How is pregnancy diagnosed.

- **2. Probable sign→** is objective which detected by examiner and are related mainly to physical changes in the uterus .

Such as:

→ Uterine enlargement.

→ Softening of the cervix.

→ Positive pregnancy test (HCG hormone) in urine or blood.

Signs Of Pregnancy

→ How is pregnancy diagnosed.

3. Positive sign→ are directly attributed to the fetus and include the presence of:

Such as:

→ Auscultation of fetal heartbeat.
→ Visualization of the fetus by ultrasound confirms a pregnancy.
→ Fetal movement felt by some one other than the mother like ultrasound.

***Fetal Heartbeat start at ~ 6 weeks of gestational age AND it may detect at 10 to 12 weeks gestation.**

Physiological Changes During Pregnancy

***General appearance and mental status** (which they address, way they speak…)

***Head and scalp** (, hair growth increase during pregnancy …)

***Eyes** (teach the woman to recognize symptom of poor vision as potential danger sign of pregnancy)

***Nose** (an increase of estrogen level during pregnancy make nasal congestion)

***Ears** (feeling of fullness in the ear due to nasal congestion)

***Mouth, teeth and throat(** gum hypertrophy may result from estrogen stimulation the gum is slightly swollen and tender but red , notice the cracks on the corners of the m mouth, herpes , dental hygiene is important

Physiological Changes During Pregnancy

Neck (slight thyroid hypertrophy may result form increase metabolic rate , so instruct the woman to eat sea food once weekly)

Breasts (many breasts changes like darkening in the nibbles , secondary areola, increase in the size of the breasts and firm consistency ,presence of colostrums at the 16 weeks of pregnancy…)

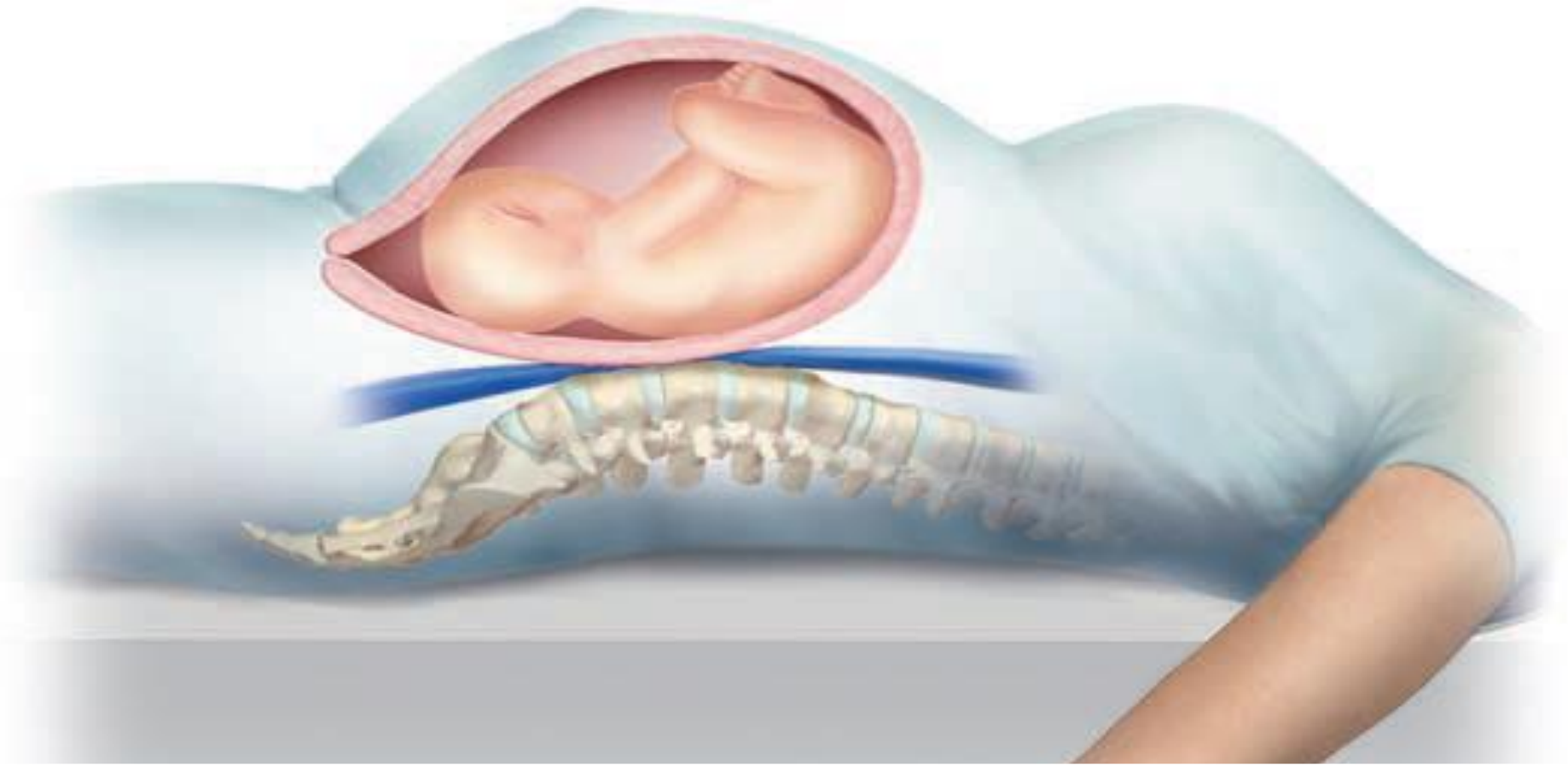
Lungs (assess the rate and rhythm late in pregnancy diaphragmatic excursion decrease

Extremities and skin (palmer erythema and itching in the early pregnancy , assess for varicosities ,edema and gait.)

Rectum (assess for hemorrhoid)

Back (assess for scoliosis to be certain that their condition is not worsening during pregnancy)

Heart (occasionally functional heart murmurs may heard because of increase in blood volume, palpitation especially when lying supine so instruct the woman to lay on the left side)



■ **Vena caval syndrome or aortocaval compression. The gravid uterus compresses the vena cava when the woman is supine. This reduces the blood flow returning to the heart and may cause maternal hypotension.**

Psychological changes of pregnancy:

*** First trimester**

→ accepting of pregnancy (accepting the reality of the pregnancy).

*** Second trimester**

→ accepting the baby (the turning point in this trimester is quickening which give identity for her baby. The women start imagine herself as a mother).

*** Third trimester**

→Preparing for the baby and end pregnancy.

→They seek the best caregiver possible for advice, monitoring , and caring.

→Education by the nurse can alleviated many of these fears about labor and newborn care.

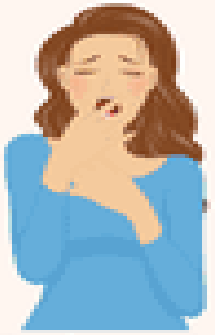
Common Pregnancy Discomforts and How to Deal with Them

Blocked Nose

Backache

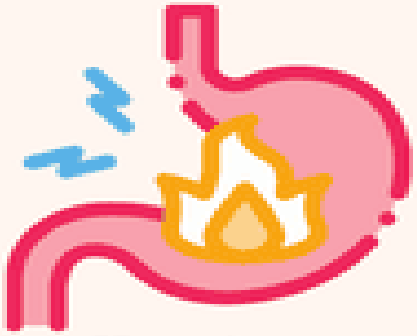
Insomnia

Cramps



Fatigue & Tiredness

Swollen Hands & Feet



Heartburn

Constipation

Bladder Problems

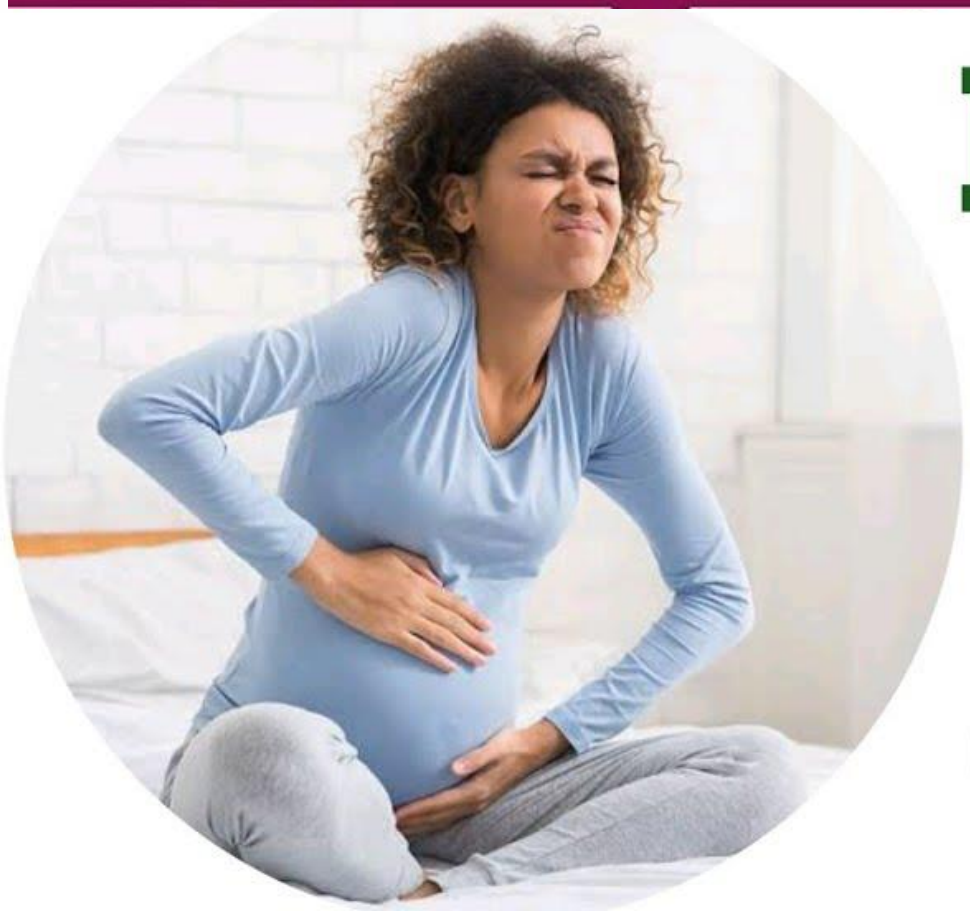
Nausea & Vomiting

Discomfort	Education for Self-Management
First month: ➧Breast change, pain. tingling and tenderness.	• Wear supportive maternity bras with pads to absorb discharge, may be worn at night; wash with warm water and keep dry;
➧Urgency and frequency of urination.	• Empty bladder regularly; perform Kegel exercises; limit fluid intake before bedtime; avoid caffeine; wear perineal pad; report pain or burning sensation to obstetric care provider.
➧Malaise and fatigue.	•Rest as needed; eat well-balanced diet to prevent anemia
➧Nausea and vomiting (morning sickness) .	• Avoid empty or overloaded stomach; maintain good posture, stop smoking; eat dry carbohydrate on awakening; remain in bed until feeling subsides, or alternate dry carbohydrate every other hour with fluids such as hot herbal decaffeinated tea, milk, or clear coffee until feeling subsides; eat five or six small meals per day; avoid fried, odorous, spicy, greasy, or gas-forming foods; wear acupressure bands used to treat motion sickness; ginger or acupuncture may be helpful; vitamin B6 and doxylamine (Diclegis) may be ordered if weight loss occurs; consult primary health care provider if intractable vomiting occurs.
➧Nasal stiffness, epistaxis.	• Use humidifier; avoid trauma; normal saline nose drops or spray may be used.
➧Psychosocial dynamics, mood swing, mixed feeling	• Participate in pregnancy support group; communicate concerns to partner, family, and health care provider;

Discomfort	Education for Self-Management
Second trimester Palpitation .	• Not preventable; contact primary health care provider if Accompanied by symptoms of cardiac decompensation.
Supine hypotension (vena cava syndrome) and bradycardia .	• Side-lying position or semi-sitting posture with knees slightly flexed
Food craving.	• Not preventable; satisfy craving unless it interferes with well-balanced diet; report unusual cravings to obstetric health care provider.
Heartburn.	• Limit or avoid gas-producing or fatty foods and large meals; maintain good posture; sip milk for temporary relief; drink hot herbal tea; obstetric care provider may prescribe antacid between meals; contact health care provider for persistent symptoms.
Constipation.	• Drink 2 L (8-10 glasses) of water per day; include high-fiber foods in diet; engage in moderate exercise; maintain regular schedule for bowel movements; use relaxation techniques and deep breathing; do not take stool softener, laxatives, mineral oil, other drugs, or enemas without first consulting obstetric care provider.
leukorrhea	• Not preventable; do not douche; wear perineal pads; perform hygienic practices such as wiping front to back; report to obstetric care provider if accompanied by pruritus, foul odor, or change in character or color.

Discomfort	Education for Self-Management
Third trimester Shortness of breath and dyspnea.	• Maintain good posture; sleep with extra pillows; avoid overloading stomach; stop smoking; contact health care provider if symptoms worsen
insomnia.(later week of pregnancy).	• Reassurance; conscious relaxation; back massage or effleurage; support of body parts with pillows; warm milk or warm shower or bath before bedtime; n TV or other screen devices in the bedroom or 1 h before bedtime
Urinary frequency and urgency return.	• Empty bladder regularly; Kegel exercises; limit fluid intake before bedtime; avoid caffeine; wear perineal pad; contact health care provider for pain or burning sensation
Braxton Hicks contractions.	• Reassurance; rest; change of position; practice breathing techniques when contractions are bothersome; effleurage; differentiate from preterm labor
Leg cramps.	• Dorsiflex foot until spasm relaxes ; stand on cold surface; consult obstetric health care provider to take oral supplementation with calcium carbonate or calcium lactate tablets;
Ankle edema	Ample fluid intake for natural diuretic effect; put on support stockings before arising; rest periodically with legs and hips elevated , exercise moderately; contact health care provider if generalized edema develops; diuretics are contraindicated

Danger sign of Pregnancy



First trimester:

1. Persistent vomiting.

2. Chills and fever.

3.vaginal bleeding

4.burning on urination, Chills and fever.

5. Sever Abdominal pain

Second or third trimester:

1. Sudden discharge of fluid from vagina before 37 weeks.
2. Chills , fever , burning sensation on urination .
3. Severe backache or flank pain.
4. Change on fetal movement
5. Uterine contraction or cramping before 37 week.
6. Visual disturbances, Severe headache frequent and continuous, Epigastric pain and edema in the face and hand.
7. Muscular irritability or convulsion.

8. Vaginal bleeding
9. Glucosuria, positive GTT, Proteinuria.
10. Increase weight more than 2 kg in week.
11. Generalized edema .

Increase systolic blood pressure more than 140 and diastolic more than 90.

Antenatal care:

Is essential healthcare provided to pregnant women to ensure the health and well-being of both the mother and the unborn baby throughout pregnancy.

The purpose of antenatal care

- Establish baseline of present health.
- Determine the gestational age (GA) of fetus.
- Monitor fetal development.
- Identify women at risk for complication.
- Minimize the risk of possible complication by anticipating and preventing problem before they occur.
- Provide time for education about changes during pregnancy, lactation and newborn care

Interview:

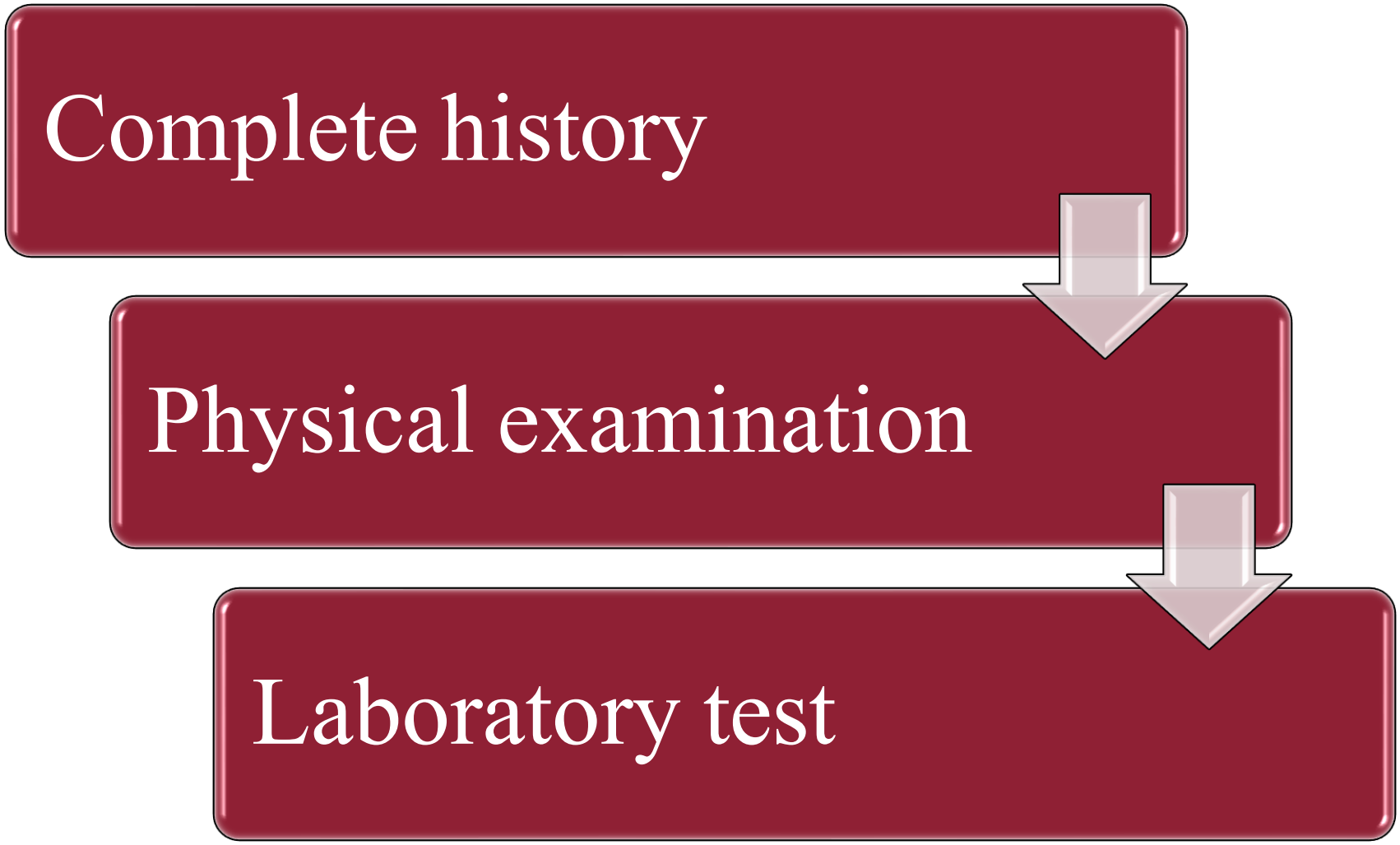
- It consider as baseline data for the women, privacy, therapeutic relationship and active listening is required.
- Communications should be focused and purposeful.

Schedule for antenatal visits:

First 28 weeks → Monthly visit.
28 – 36 weeks → Biweekly visit.
36 – Delivery → Weekly .

”Individual needs, complications , and risks of the pregnant woman may warrant visits more or less often”

During the interview the following details should taken:



Complete history

Taking History

The following data could help the student when taking patient's history

- **Demographical data**

Client name:-……Ward:……

Admission date: …… Receiving date: ……
Age: …… Medical Dx: ……
Educational level: …… Occupation:- ……
Duration of marriage: …… Husband relative or not: ……
No. of children: …… Economic status:- ……
Type of delivery: …… Delivery date : ……
Blood group: …… Husband Education & occupation------

- **Chief complain**
- **Hx of present illness**
- **Family profile**
  - **Type of family**
  - **Genetic Hx**
  - **Medical surgical family Hx**
  - **Support system**
- **Social profile/day Hx**
- **Hx of past illness (medical & surgical)**
- **Gynecological Hx:**
  - **Menstrual Hx**
  - **Family planning**
  - **Fertility**
  - **Screening test**
  - **Medical & surgical Hx (reproductive system)**
- **Obstetrical Hx: -**
  - **G :-… T :-… P :- … A :- … L :- … M :-…**
  - **Previous period of pregnancies, deliveries& postpartum**

Current pregnancy

- **LMP EDD GA**
- **Minor discomforts**
- **Danger signs**
- **Medication during pregnancy**
- **Antenatal visits**

Nutrition (Wight gain)

Assessment of fetal growth and development:

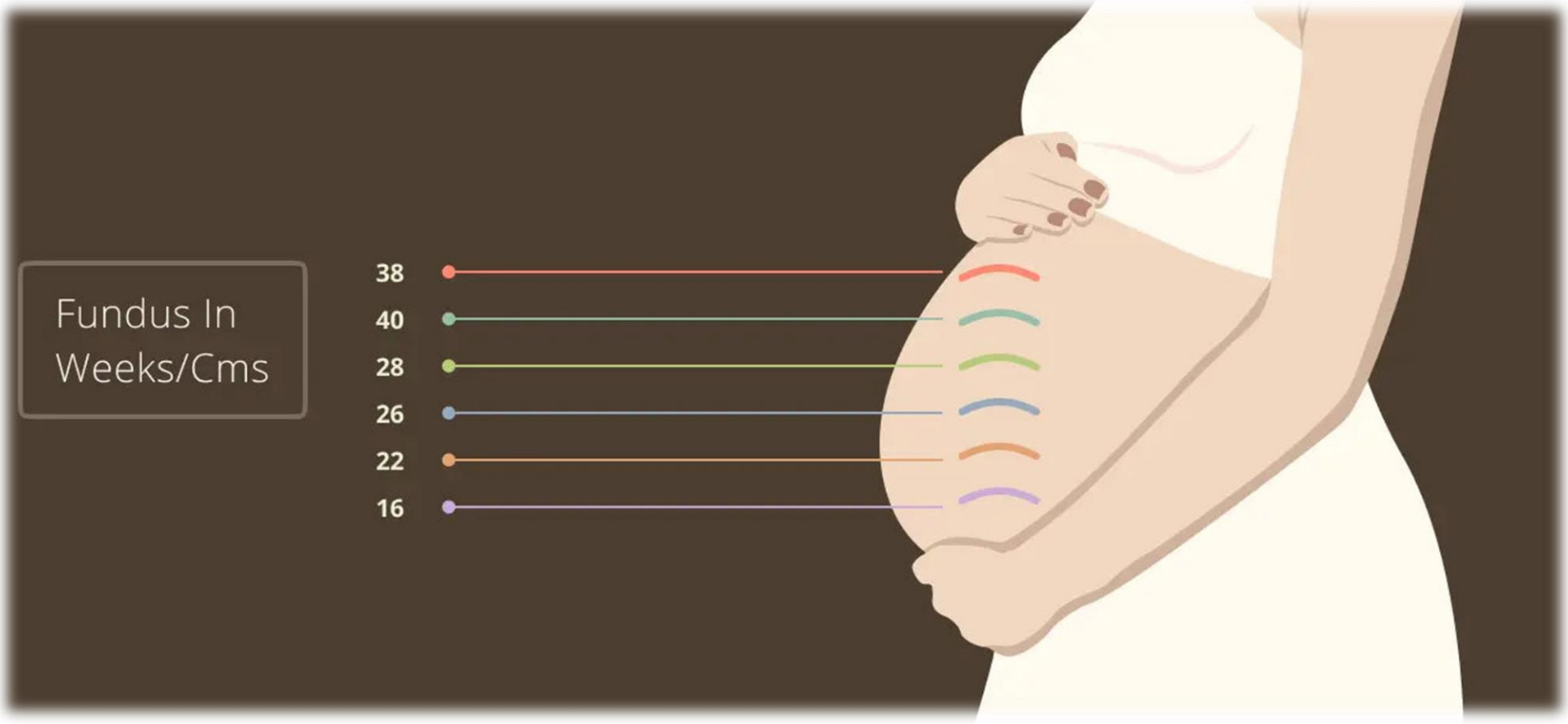
*** Assess fetal well being include:**

- Fundal Height
- Fetal Movement/ Fetal Heart Rate (FHR).
- Ultrasound.
- Abdominal Examination “Leopold Maneuver”.

Fundal Height

Assess **fundal height** is used as indicator of fetal growth.

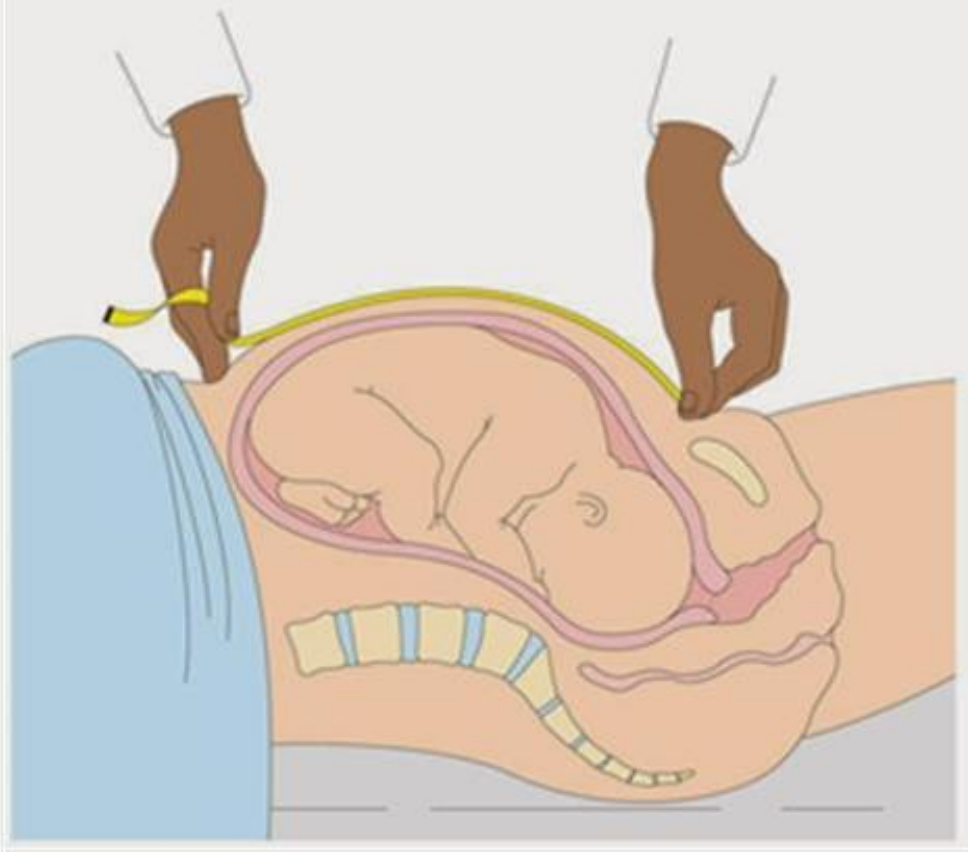
From approximately gestational weeks 18-30 ,the height in the fundus in centimeters is approximately the same as the # of week of gestation (± 2GW).



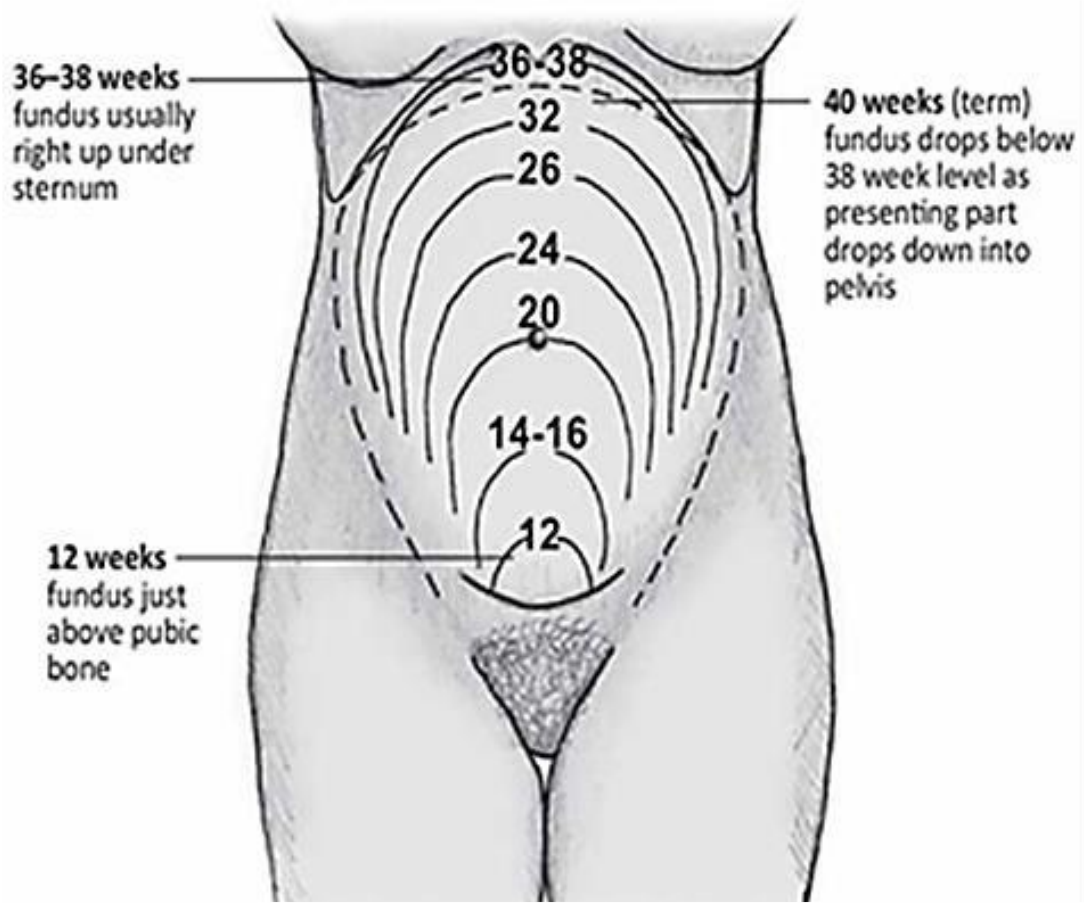
ASSESSMENT OF FUNDAL HEIGHT:

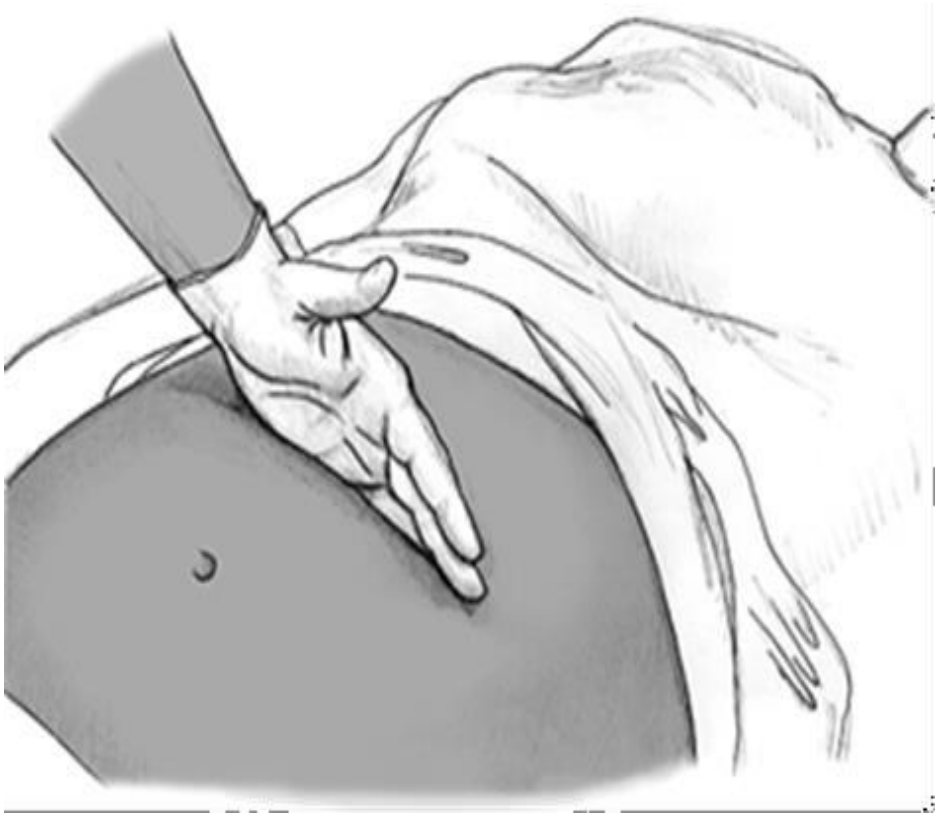
- Explain the procedure to the woman
- **Ask the woman to empty her bladder just prior to the procedure
- **Place woman in left lateral or semi-fowler position - flexion to the knee
- Wash and dry hands
- Draw the curtains around the bed and expose the woman's abdomen only

- **Symphysis-fundal height (McDonald's method):** Estimate fundal height which can assist with determining pregnancy gestation, a tape measure is used to measure the distance in centimeters from the top of the symphysis pubis over the curve of the abdomen to the top of the uterine fundus with 1cm equaling approximately 1 week. Fundal height in cm correlate well with weeks of gestation between 22 weeks and 34 weeks.



- **Fundal height in relation to anatomical landmarks:** use ulnar part of the non-dominant hand, start from the xiphoid process and move downward stop when you palpate an edge of the fundus, determine gestational age (with each finger equaling 1 week below umbilical, and 2 weeks above umbilical).





Fetal Movement/ Fetal Heart Rate (FHR).

- Quickening → start 14-16 weeks in multiparous women and at18th week in nulliparous women).

- **Fetal movement 10 times at least /12 hrs.**
- To assess the movement ask the mother to lie in a left recumbent position after a meal and record how many movement it should be **(4 fetal movement/hr),** nurse should instruct the mother to immediately report any change in fetal movement.

- **Fetal heart rate →** FHR range from 110 to 160b/m .

Ultrasound:

→To diagnose pregnancy as early as 6 weeks gestation.

→To confirm the presence, size, and location of the placenta and amniotic fluid.

→ Assessment of fetal growth and development

→ also provide information about fetus well-being

Laboratory test:

1. HCG → We must detecting the presence of human chorionic gonadotropin (HCG).It appear in serum as early as 24 to 48hr after implantation. HCG levels usually double approximately every 2 days for the first 4 weeks of pregnancy.

2. Maternal serum for alpha-feto-protein → this level will be elevated if a neural tube or abdominal defect is present in fetus, low level may be associated with down syndrome and other chromosomal abnormalities. (done in 16-18 week).

3. Blood typing (include Rh typing)→ An indirect coombs test (determination if Rh antibody are present in Rh negative women)
→ Give Anti-D prophylaxis at 28 weeks to Rh-negative mother.

→ **After birth:** check baby's blood group, If baby is Rh-positive → give Anti-D within 72 hours.

Laboratory test:

4. Glucose challenges is usually done between 24-28 weeks of gestation.

5. CBC→ We must check for hemoglobin concentration ,WBC,RBC.

6. Urinalysis → Is performed to test for proteinuria, glycosuria and offer screening for asymptomatic bacteriuria (ASB).

Assessment of Fetal Position & Engagement & Leopold Maneuvers

Fetal attitude

- **Fetal attitude**: the relationship of fetal body parts to one another.

- **Normal attitude (general flexion)**:

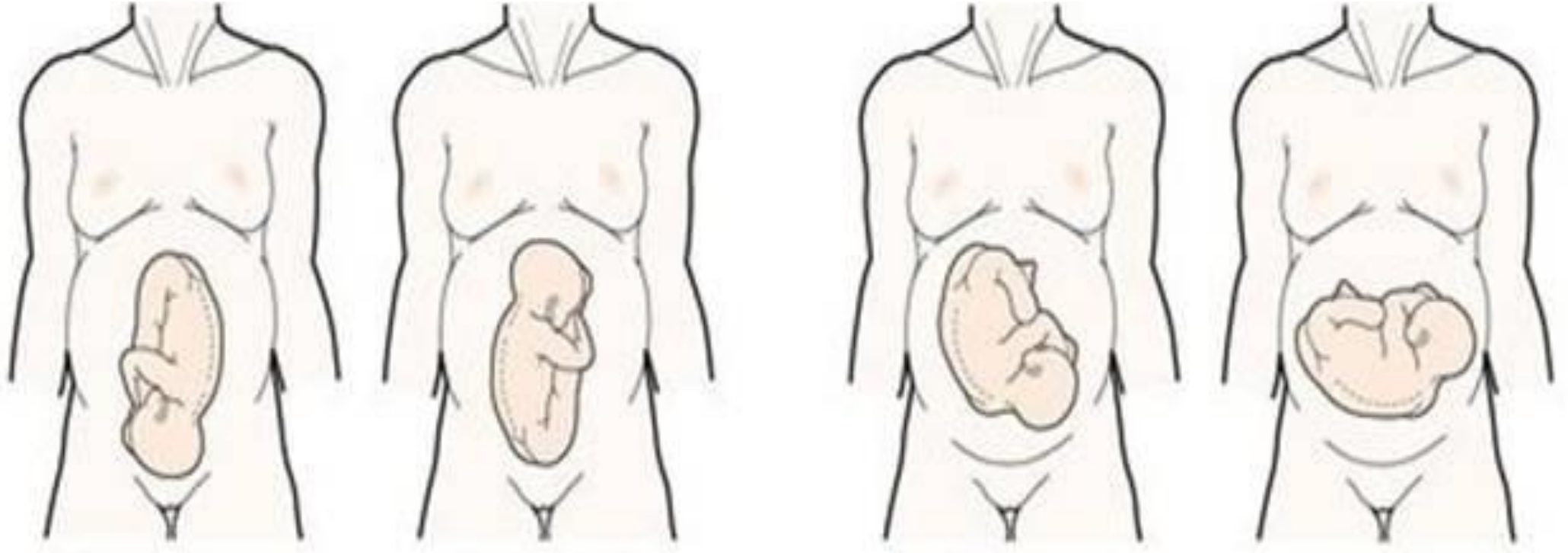
  head flexed with chin on chest,

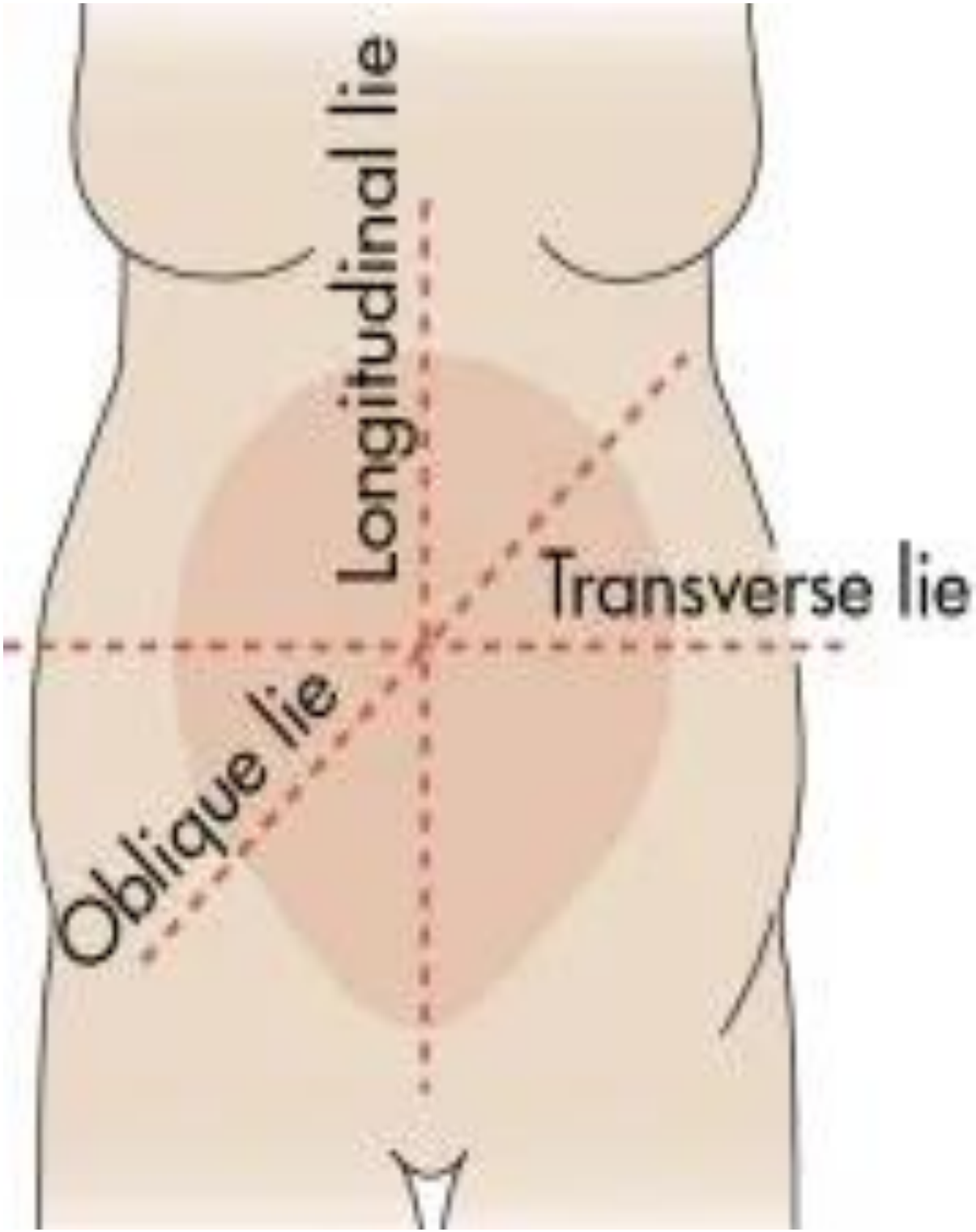
  arms crossed over chest, and

  legs flexed toward the abdomen

Poor fetal attitude: the **head is tilted** to one side, with **arms flexed** but **legs extended**, indicating **imperfect flexion** of the fetal body.

2. **Fetal lie:** refer to the relationship of the long, or cephalocaudal, axis (spinal column) of the fetus to the long, or cephalocaudal, axis of the mother.



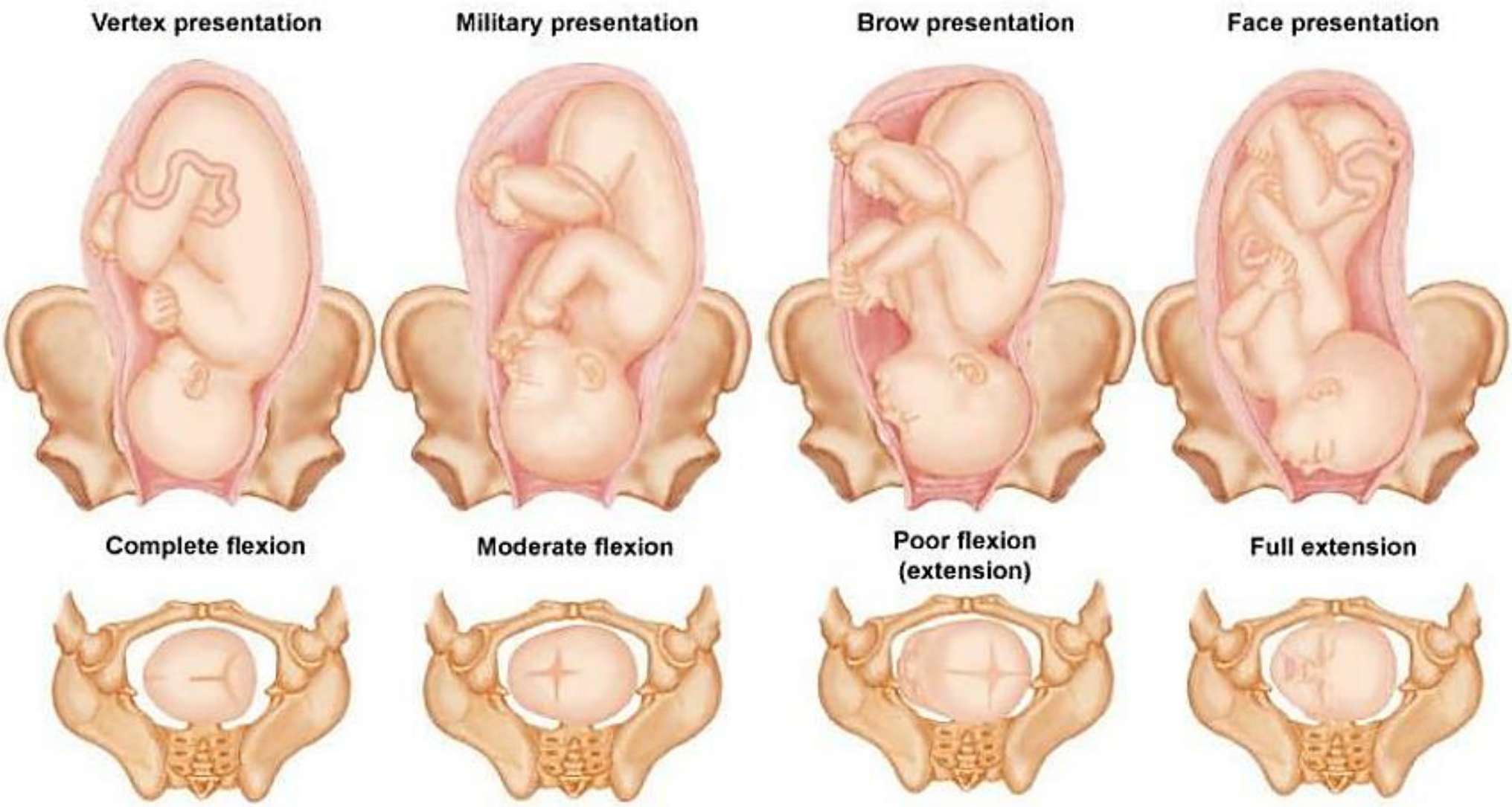


Fetal lie

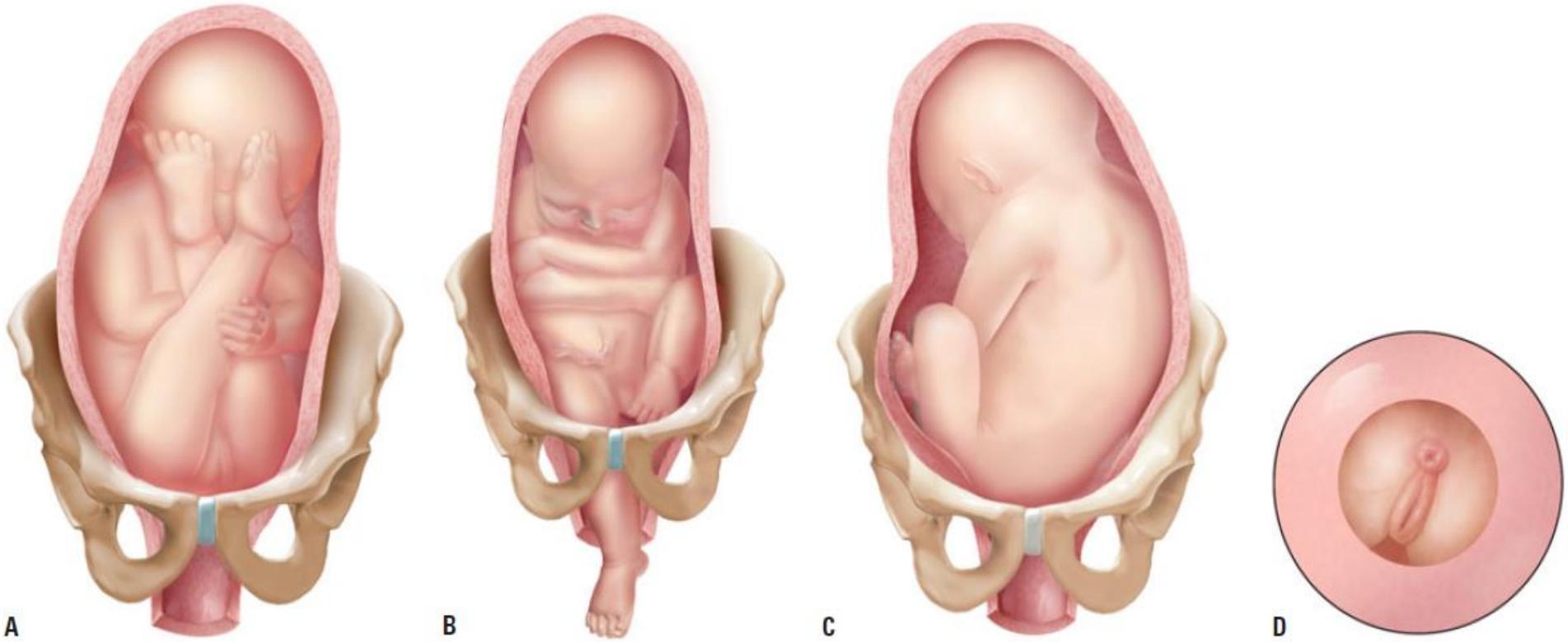
3. Fetal presentation: is determined by fetal lie and refers to the **body part of the fetus** that **enters** the maternal **pelvis first** and leads through the birth canal during labor.

- ***The presenting part*** or the portion of the fetus that is felt through cervix on vaginal examination determines the presentation. Fetal presentation may be ***cephalic*** **(head first),** ***breech*** **(buttocks or feet first)**, or ***shoulder.***
  - Breech and shoulder presentation are associated with difficulties during labor and do not proceed normal; therefore, they are **called** ***malpresentations*****.**

Cephalic presentation: (≈97% of term births).

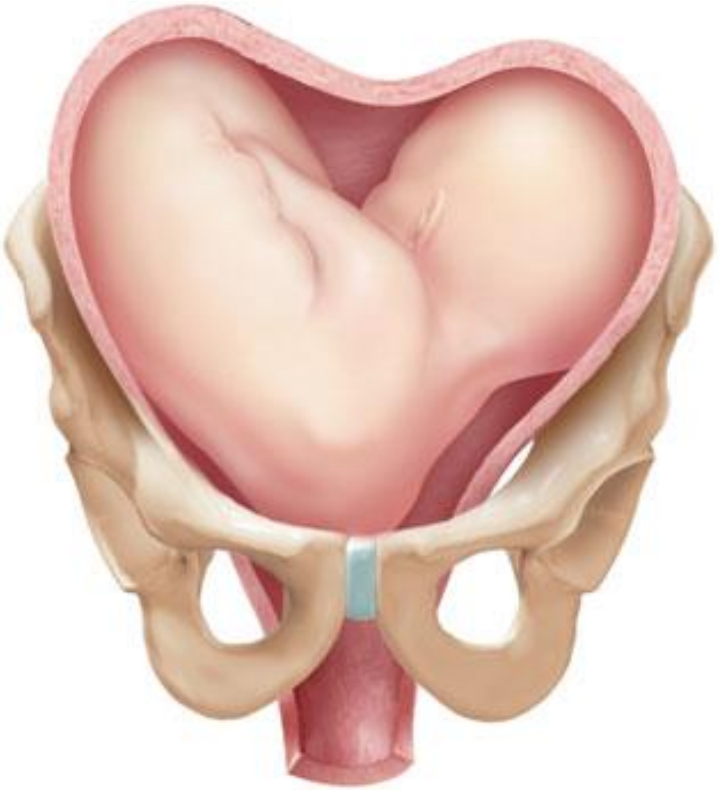


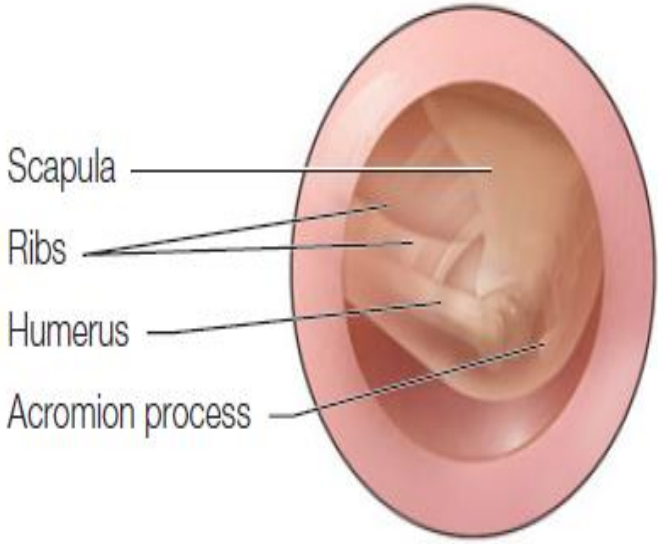
Breech Presentation (≈3-4% of term births).



A. Frank breech.
B. Incomplete (footling) breech.
C. Complete breech
D. On vaginal examination, the nurse may feel the anal sphincter. The tissue of the fetal buttocks feels soft.

Shoulder presentation



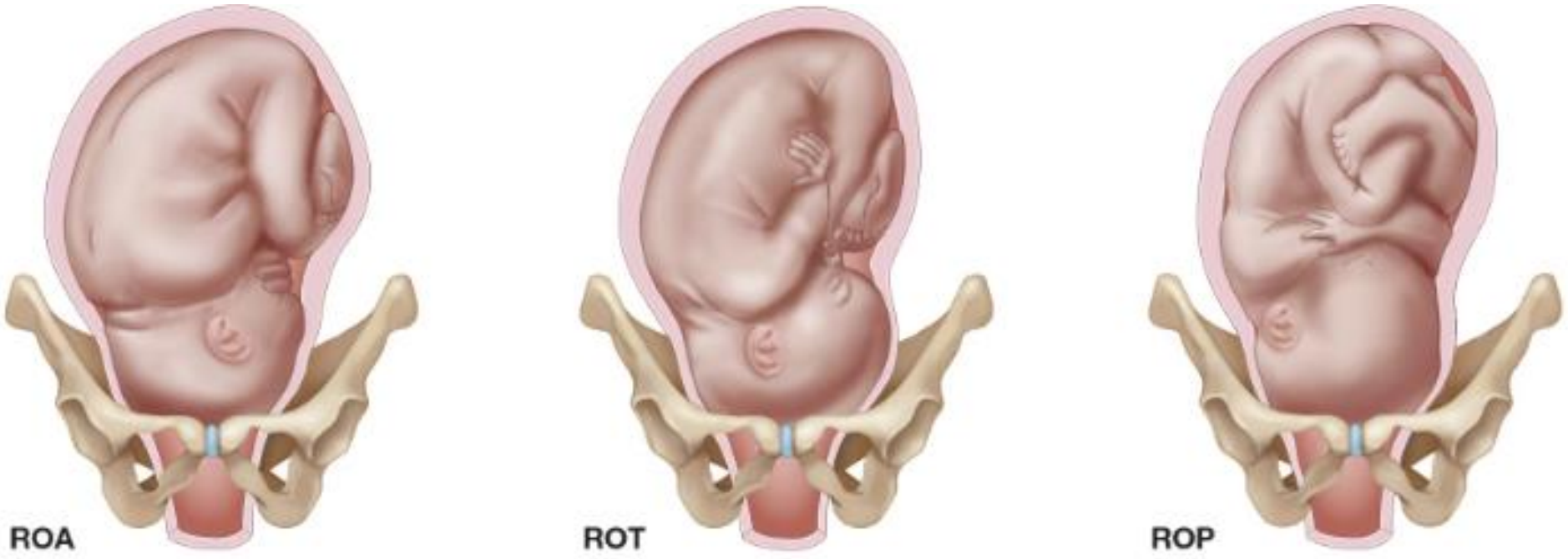


A. Shoulder presentation.
B. On vaginal examination, the nurse may feel the acromion process as the fetal presenting part.

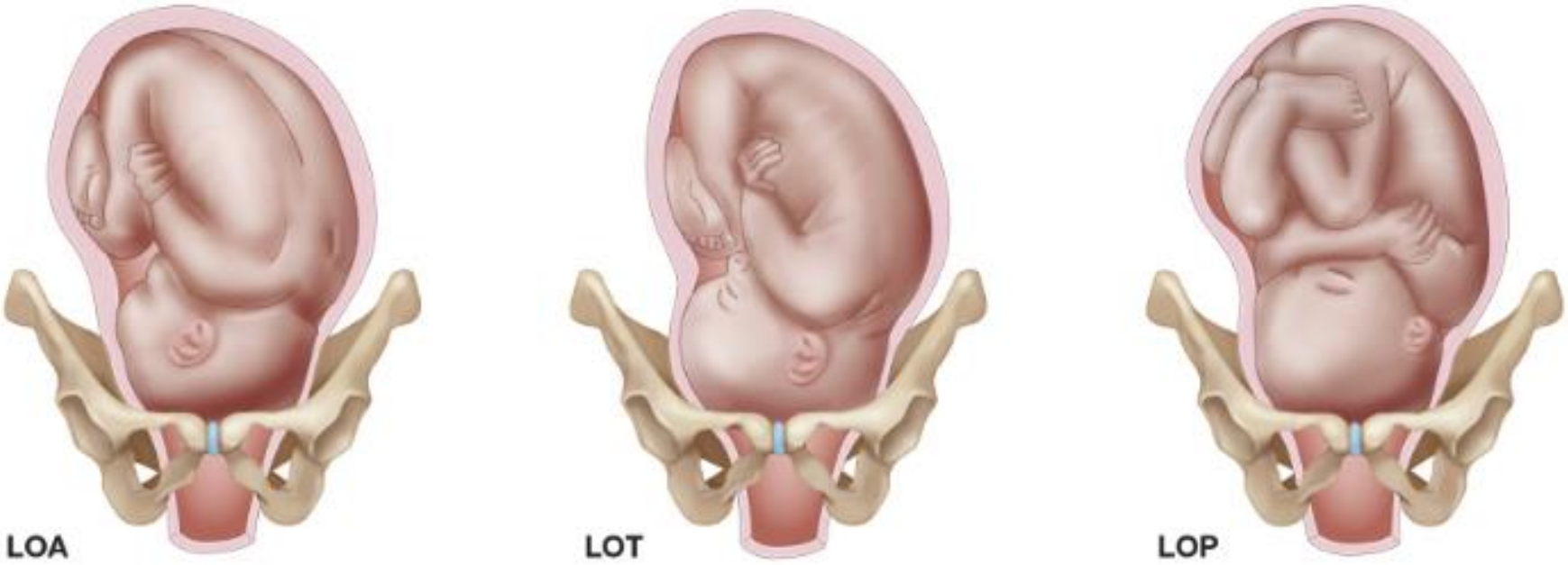
4. Fetal position: refers to the relationship of the **landmark** on the presenting fetal part to the anterior, posterior, or sides (right or left) of the maternal pelvis.

- Three notations are used to describe the fetal position:
  - Right (R) or left (L) side of the maternal pelvis
  - The landmark of the fetal presenting part: occiput (O), Mentum (M), sacrum (S), or acromion (scapula {Sc}) process (A)
  - Anterior (A), Posterior (P), or transverse (T), depending on whether the landmark is in the front, back, or side of the pelvis.

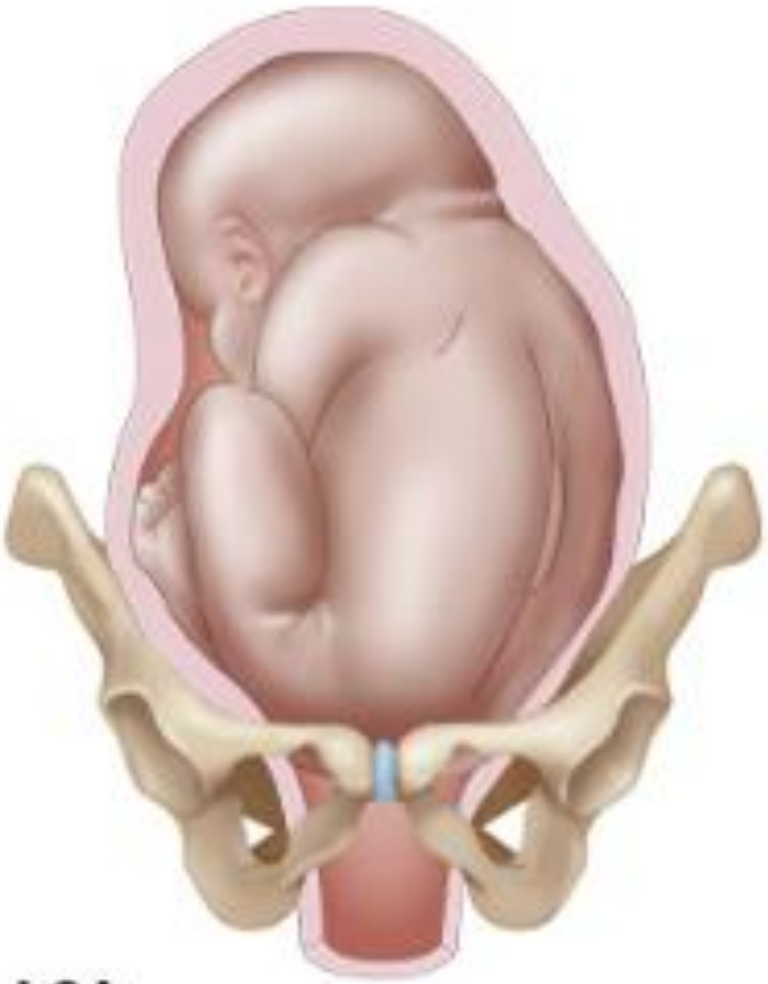
Fetal position



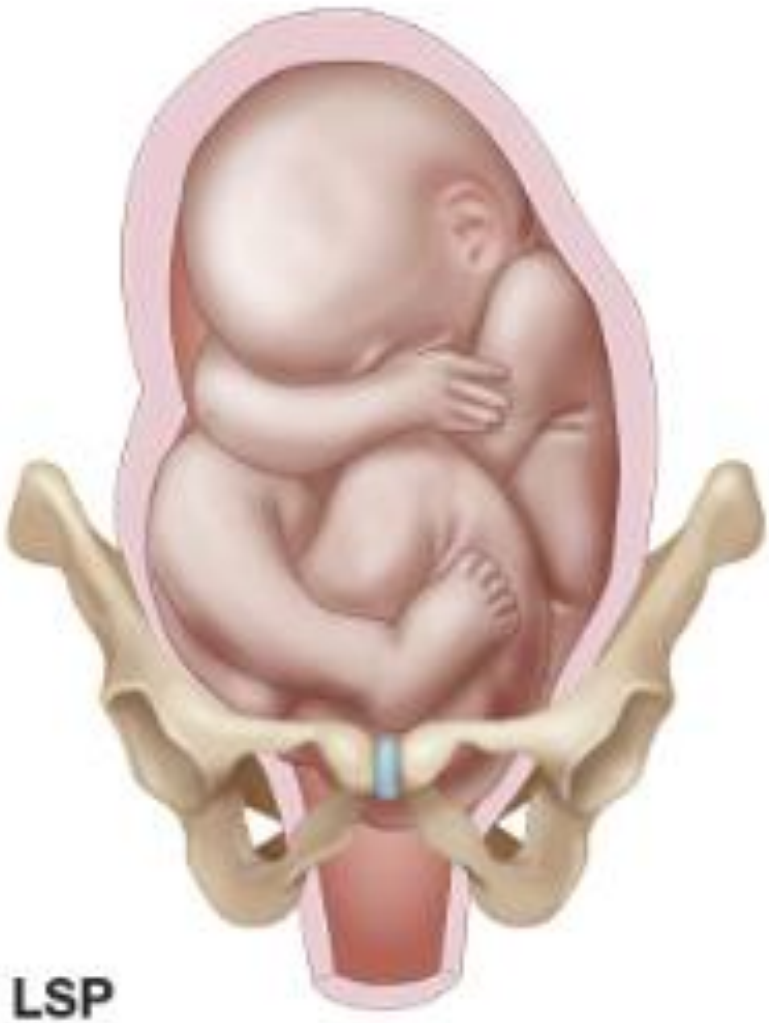
Fetal position



Fetal position



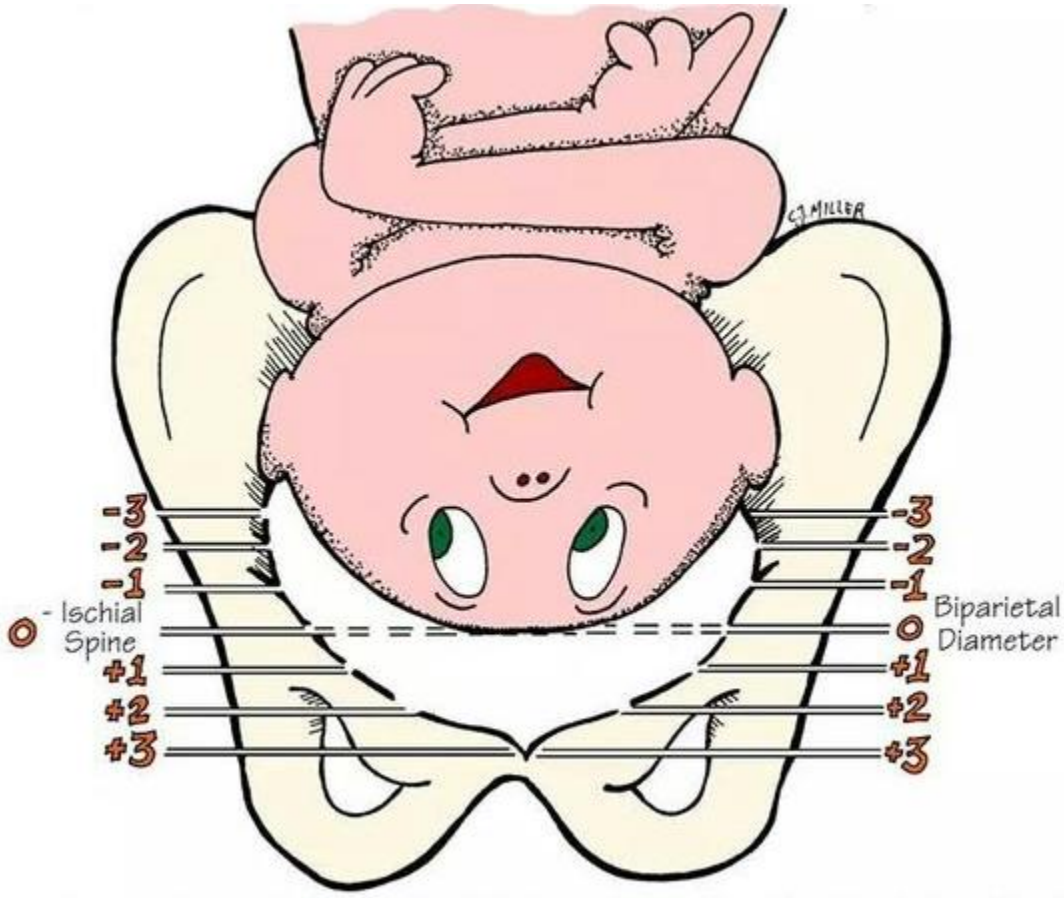
LSA



LSP

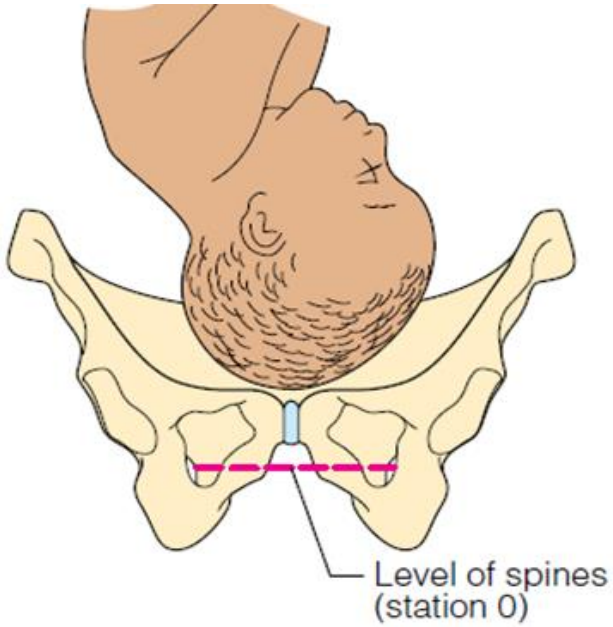
Relationship of maternal pelvis and presenting part

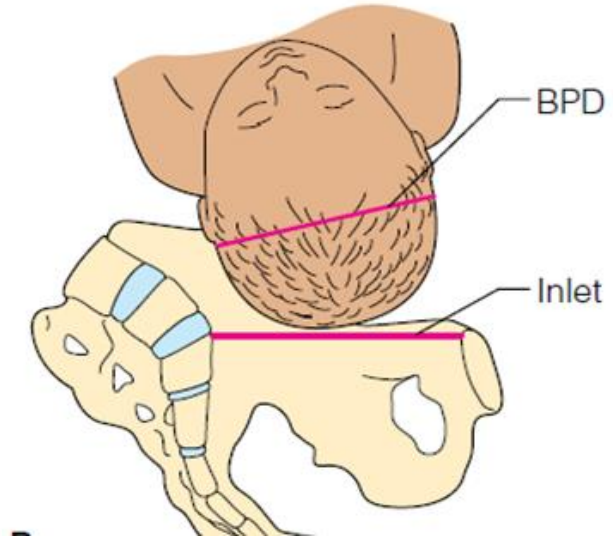
Entrance of the presenting part of the fetus into the true pelvis or the largest diameter of the presenting part into the true pelvis. In relation to the head, the fetus is said to be engaged when it reaches the midpelvis or at a zero (0) station.



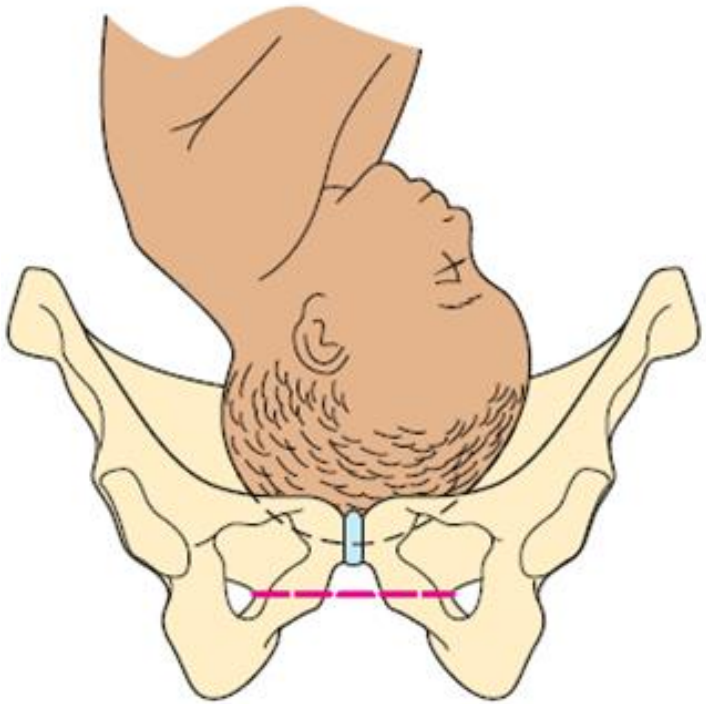
Process of engagement in cephalic presentation

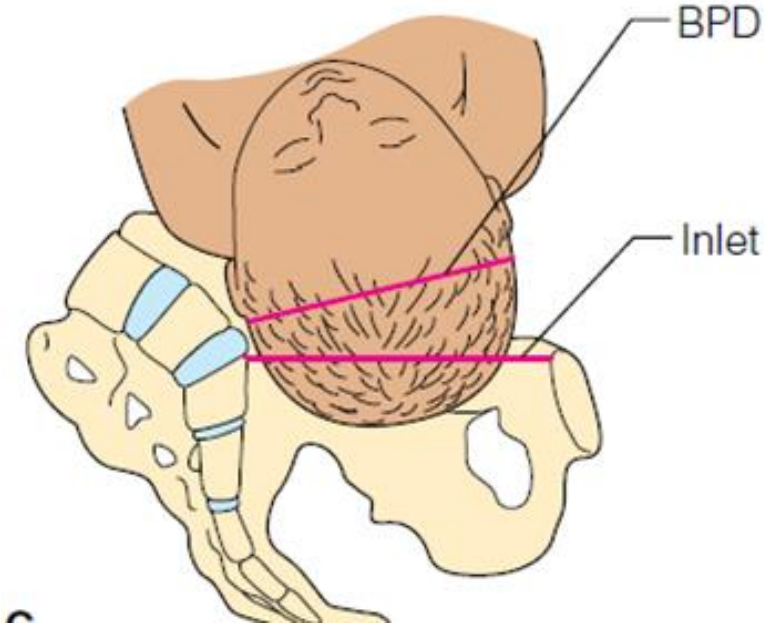
1. Floating. The fetal head is directed down toward the pelvis but can still easily move away from the inlet.



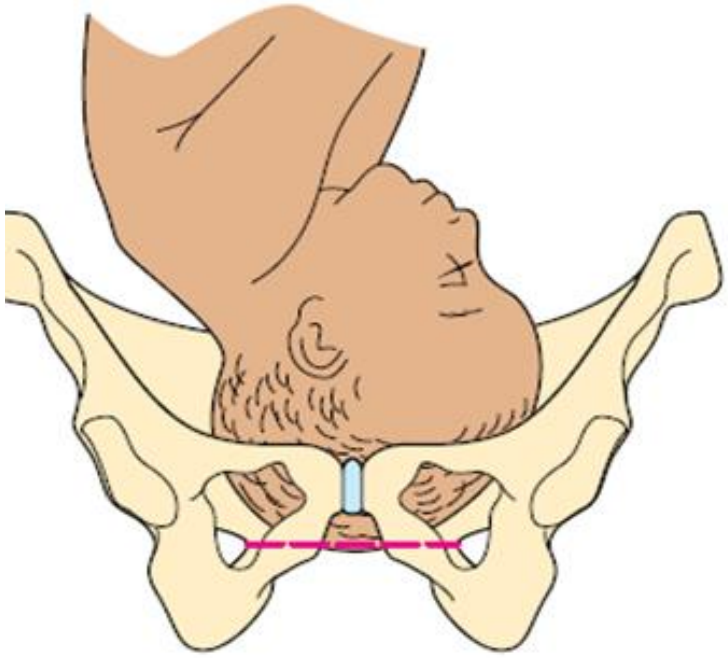


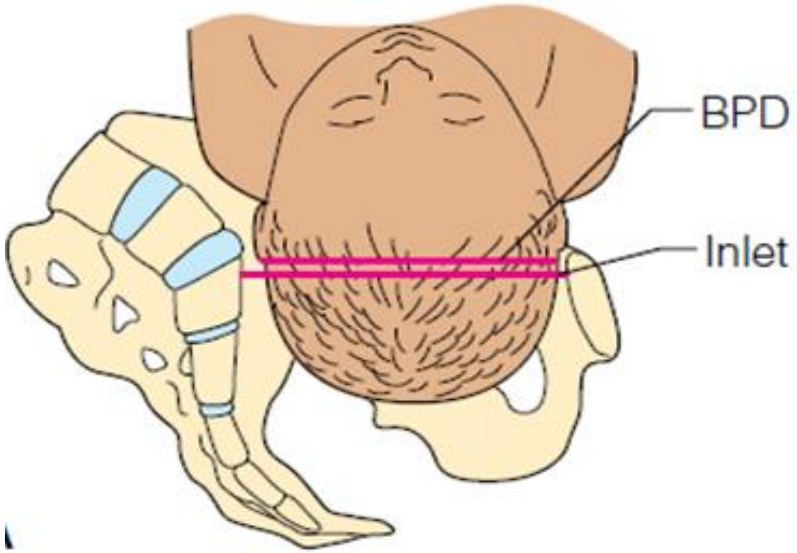
2. Dipping. The fetal head dips into the inlet but can be moved away by exerting pressure on the fetus.





3. Engaged. The biparietal diameter (BPD) of the fetal head is in the inlet of the pelvis. In most instances, the presenting part (occiput) will be at the level of the ischial spines (0 station).

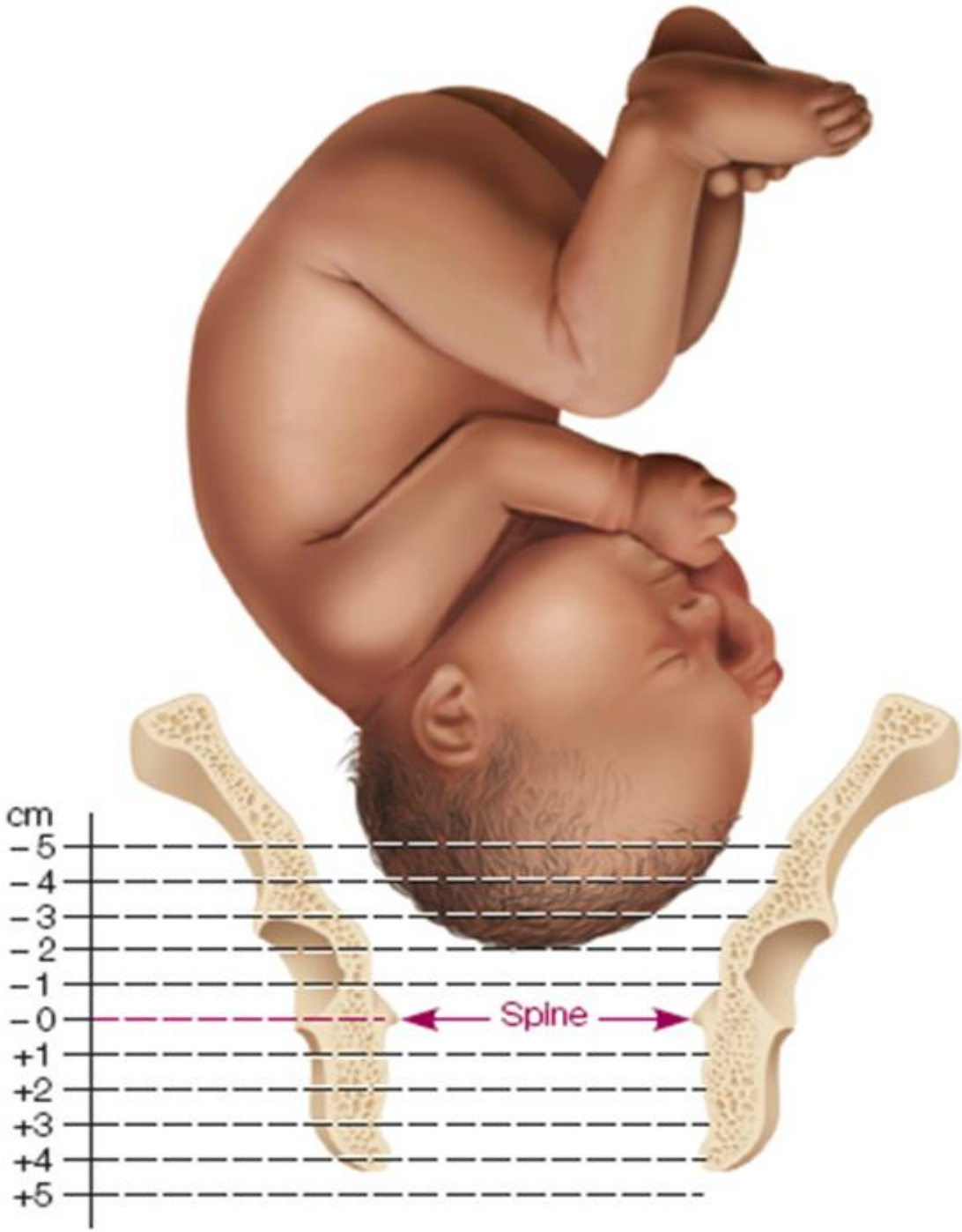




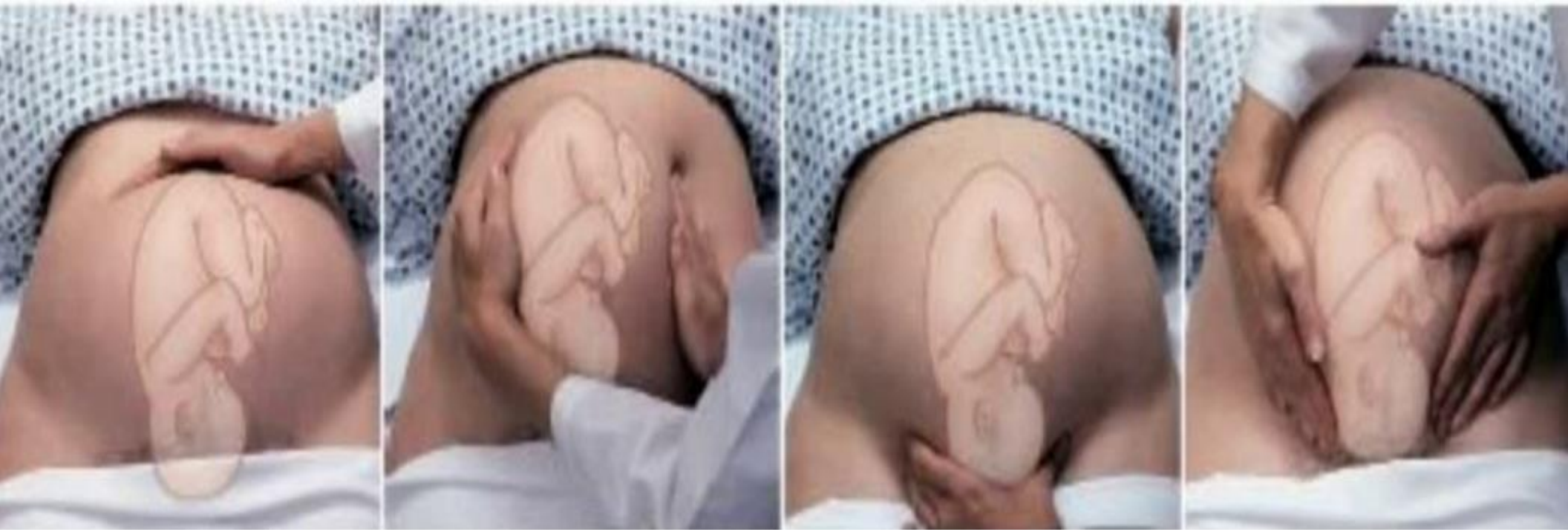
Station:

Station: refers to the relationship of the presenting part to an imaginary line draw between the ischial spines of the maternity pelvis.

- **The ischial spines** as a landmark have been designated as **zero station.**



Leopold maneuver

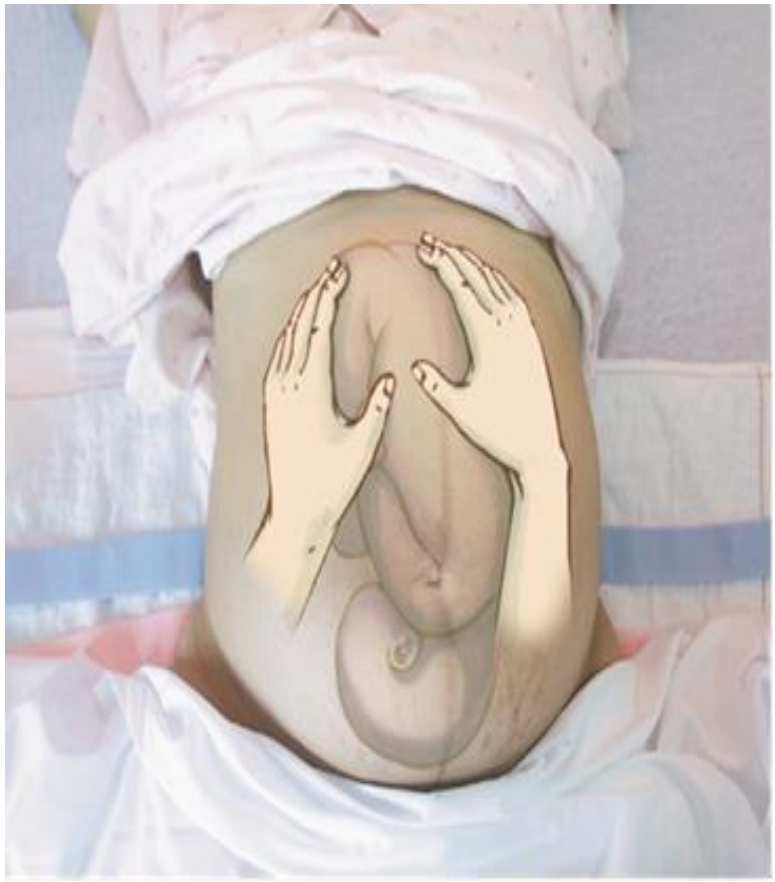


The Leopold maneuver is a systematic four-step abdominal palpation technique used to determine the position, presentation, and engagement of a fetus in the uterus after 24 of GA.

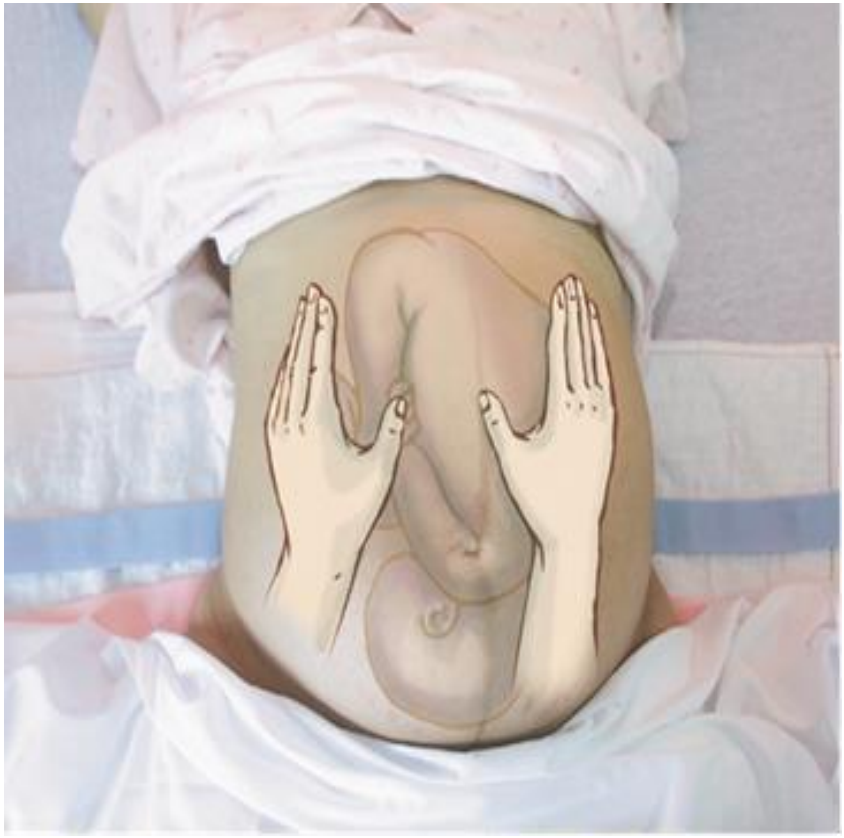
Leopold maneuver

- Explain the procedure to the woman
- **Ask the woman to empty her bladder just prior to the procedure
- **Place woman in left lateral or semi-fowler position - flexion to the knee
- Wash and dry hands
- Draw the curtains around the bed and expose the woman's abdomen only

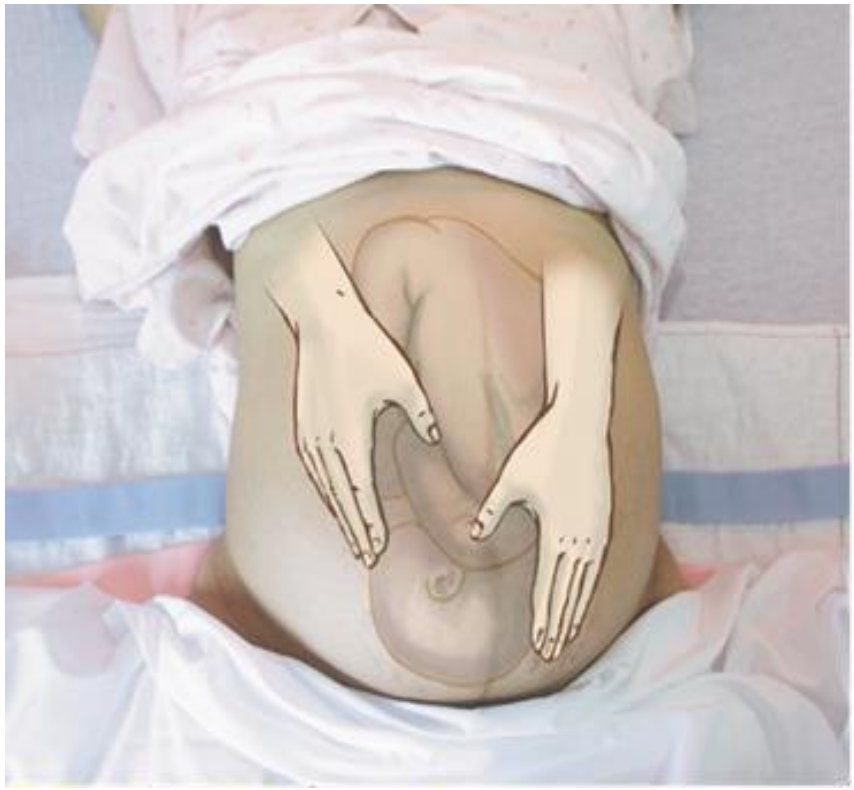
- **First maneuver (Fundal grip):** while facing the woman, palpate the upper abdomen (at the fundus) with both hands to determine which part of the fetus is lying in the fundus, determine the shape, size, consistency, and mobility of the part that is found. The fetal head is firm, hard, and round and moves independently of the trunk. The breech feels softer and symmetric and has small bony prominences; it moves with the trunk



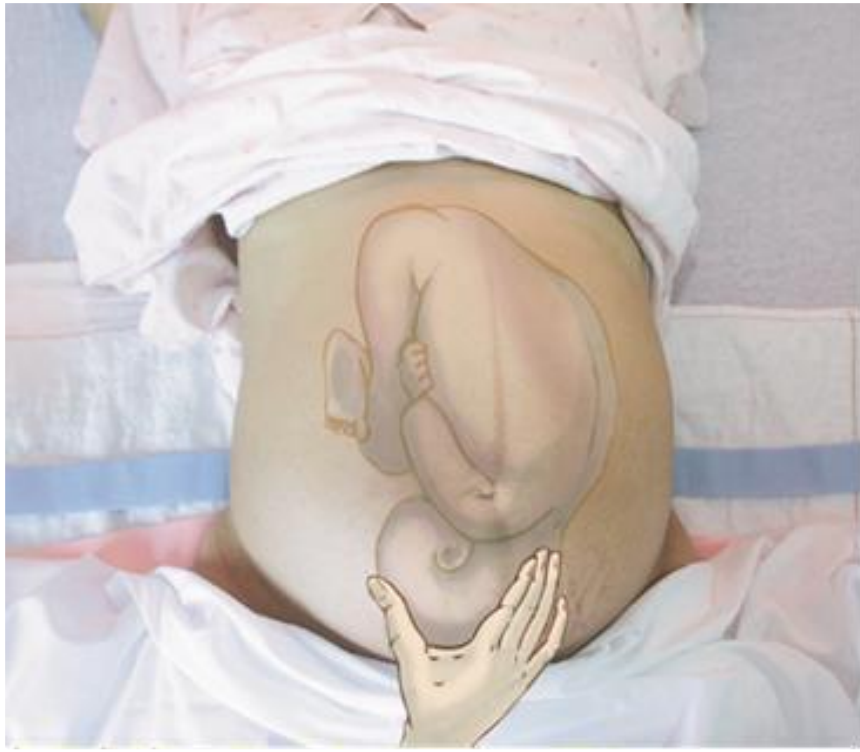
- **Second maneuver (lateral grip):** palpate laterally to locate the fetal back and notes whether it is on the right or left side of the maternal abdomen. Still facing the woman, palpate the abdomen with deep but gentle pressure, using the palms. One hand is used to palpate along one side of the abdomen while the other hand steadying the uterus. The fetal back should feel firm and smooth, validates finding by palpating the fetal extremities (small irregularities and protrusions) on the opposite side of the abdomen



- **Third maneuver (Pawlick's grip):** stand facing the woman's feet, move the fingers of both hands gently down the sides of the uterus toward the pubis. The cephalic prominence (brow) is located on the side where there is greatest resistance to the descent of the fingers toward pubis. It is located on the opposite side from the fetal back if the head is well flexed. However, when the fetal head is extended the



- **Fourth maneuver (pelvic grip):** determine what fetal part is lying above the inlet, or lower abdomen. grasp the lower portion of the abdomen just above the symphysis pubis with the thumb and fingers of the right hand. If the head is presenting and is not engaged, it may be gently pushed back and forth



Processes and Stages of labor

Maternal Health Nursing\Clinical