

FETAL POSITION

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Obstetrics and Gynecology

Reproductive Endocrinology and Infertility

Laparoscopy and Hysteroscopy



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The screenshot shows a WordPress profile page for 'Doc Ina OB Gyne'. The header is blue with 'My Site' and 'React' buttons. The profile picture is a circular image of a woman. The bio states: 'Thanks for visiting my site! I regularly upload my lecture slides/deck through slideshare or wordpress, so you can have free access to my lectures anytime you wish to review on a specific topic in OB GYN or Reproductive Endocrinology.' Below the bio, it says 'For any queries, you may contact me through my email address: ina.scullymdd@gmail.com'. The main content area features a video thumbnail of a woman in a red beanie looking out at the Washington Monument. There is a '1 follower' and 'Following' button. A blue speech bubble icon is in the bottom right corner of the page.



REFERENCE

- Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey BM, Sheffield JS (eds). William's Obstetrics 24th edition (2014); chapter 22 Normal Labor
- Sumpaico WW, Ocampo-Andres IS, Blanco-Capito LR, Diamante An, Gamilla ZN. (eds). Textbook of Obstetrics 3rd edition. Chapter 24 The Passenger

OUTLINE

1. Fetal attitude
2. Fetal lie
 - transverse
 - longitudinal
3. Fetal presentation
 - Cephalic
 - breech
 - compound
 - shoulder
4. Fetal position
5. Leopold's maneuvers

THE PASSENGER

- **Fetal attitude:**

- Fetal posture or habitus
- Relationship of the fetal head to fetal back or extremities

- "universal flexion"

- *As a rule, the fetus forms an ovoid mass that corresponds roughly to the shape of the uterine cavity – fetus becomes folded or bent upon itself in such a manner that the back becomes markedly convex; the head is sharply flexed so that the chin is almost in contact with the chest; the thighs are flexed over the abdomen; and the legs are bent at the knees.*



FETAL ATTITUDE

Head flexed

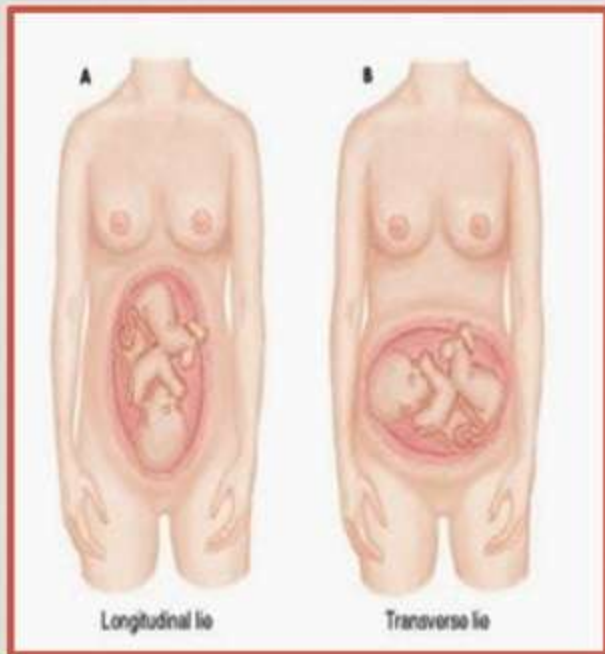


Head extended



THE PASSENGER

- **Fetal Lie:**
- Relationship of the long axis of the fetus to the long axis of the maternal abdomen



- Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey BM, Sheffield JS (eds). William's Obstetrics 24th edition (2014); chapter 22 Normal Labor
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- Fetal lie: oblique



**This Position Is Very Rare And Occurs
In Fewer Than 5% Of Pregnancies**

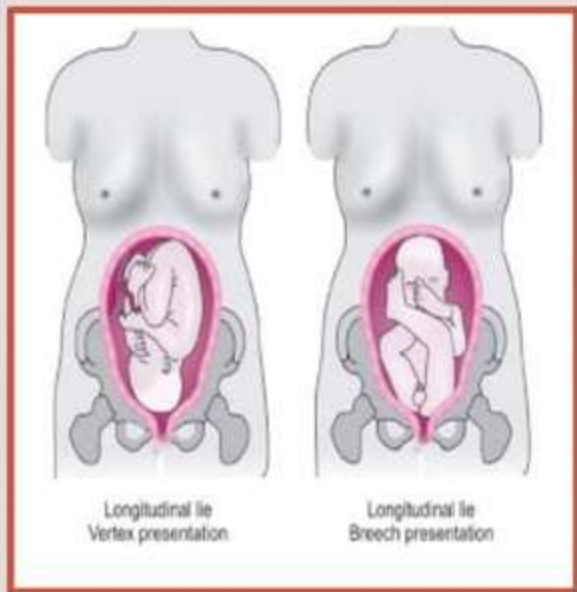


THE PASSENGER

- **Fetal presentation**

- Portion of the body of the fetus that is foremost within the birth canal or in closest proximity to it

- Cephalic, breech, shoulder, compound

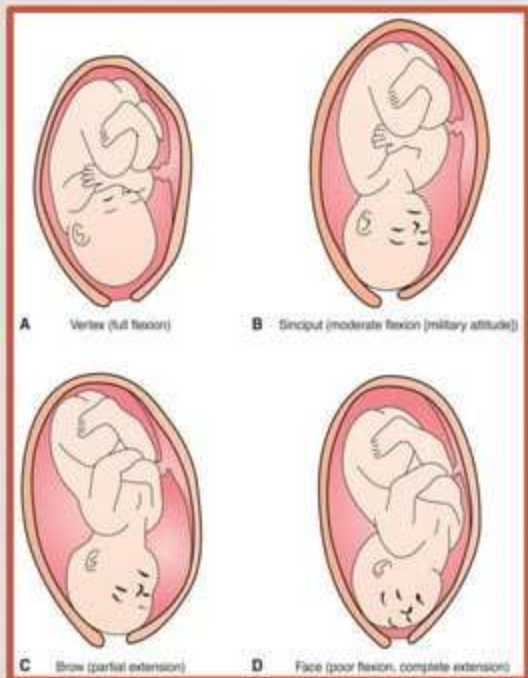
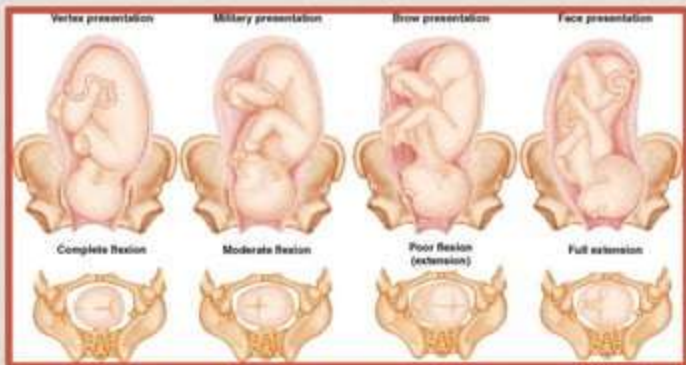


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THE PASSENGER

- Cephalic presentation

1. Vertex/occiput
2. Sinciput/military
3. Brow
4. Face



CEPHALIC PRESENTATION

- vertex or occiput presentation - occipital fontanel is the presenting part
 - Face presentation - face is foremost in the birth canal; fetal neck may be sharply extended so that the occiput and back come in contact.
 -
 - Sinciput presentation- fetal head partially flexed, with the anterior (large) fontanel, or bregma, presenting
 - Brow presentation –fetal head partially extended, with the brow presenting
- Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey BM, Sheffield JS (eds). William's Obstetrics 24th edition (2014): chapter 22 Normal Labor.
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THE PASSENGER

- Breech presentation
- → bitronchanteric diameter presents

1. Frank
2. Complete
3. Incomplete/
footling

Variations of the breech presentation



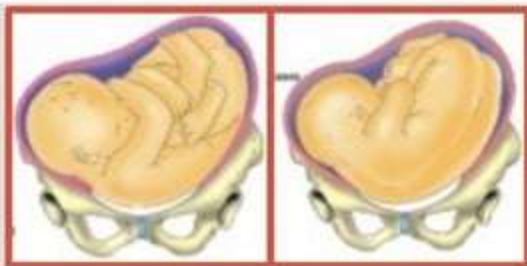
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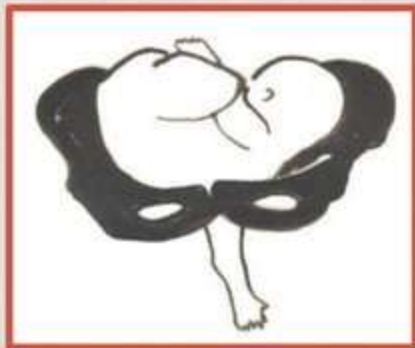
THE PASSENGER

- Shoulder presentation
shoulder or acromion is presenting
into the pelvic inlet;

Bisacromial diameter (11cm)
presents



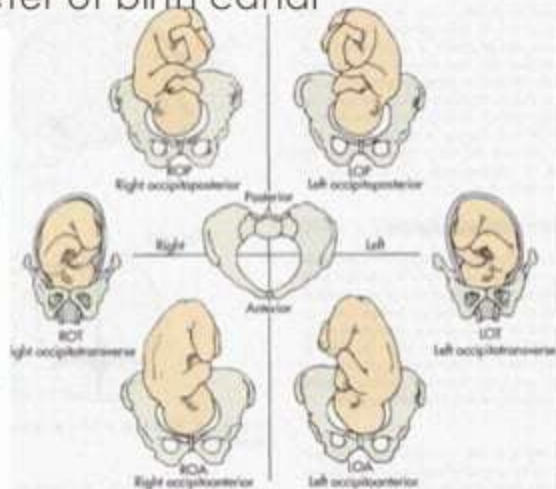
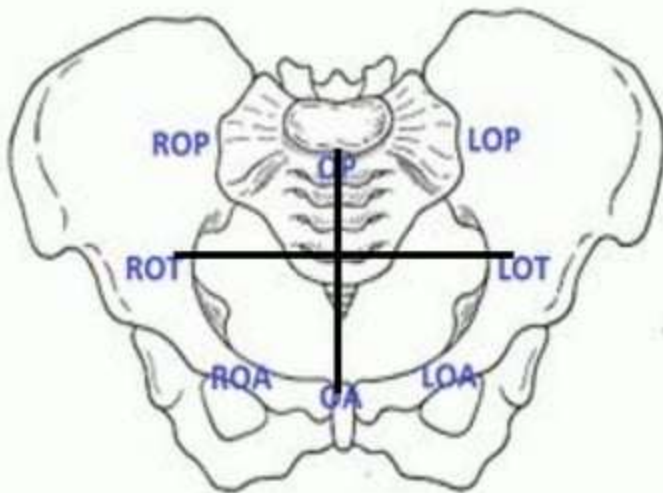
- Compound Presentation
Fetal hand or foot prolapses
alongside the presenting vertex or
breech



- Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey RM, Sheffield JS (eds). William's Obstetrics 24th edition [2014]; chapter 22 Normal Labor
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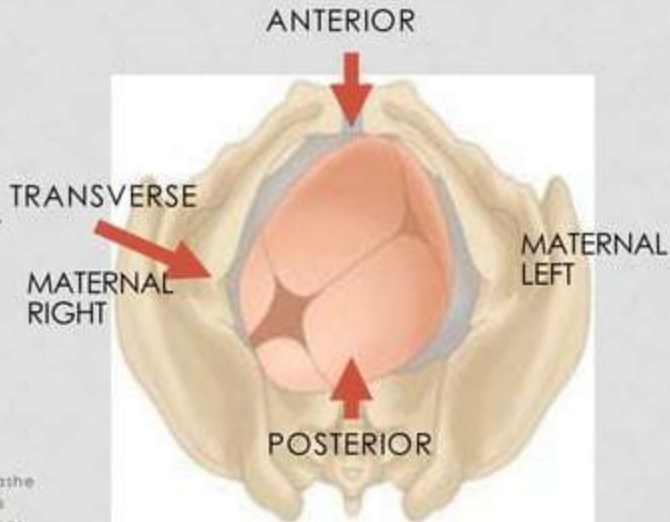
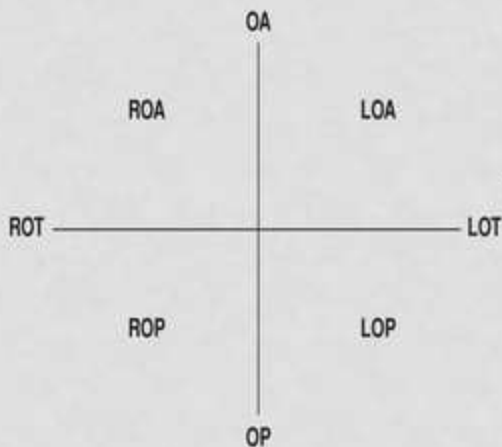
THE PASSENGER

- Fetal position: Relationship of the chosen portion of the fetal presenting part in reference to one of the 4 quadrants or tranverse diameter of birth canal



Lie: Longitudinal or vertical
Presentation: Vertex
Reference point: Occiput
Attitude: Complete flexion

FETAL POSITION



- Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman SL, Casey RM, Sheffield JS (eds). William's Obstetrics 24th edition [20140]: chapter 22 Normal Labor
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LEFT OCCIPUT ANTERIOR

FETAL POSITION

- Approximately two thirds of all vertex presentations are in the left occiput position, and one third in the right.

- Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey RM, Sheffield JS (eds). William's Obstetrics 24th edition [2014]: chapter 22 Normal Labor
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FIG. 323.—EPISIOTOMY INCISING SKIN, FOURCHET, AND URO-GENITAL SEPTUM.

This cut exposes the fascia over the left pillar of the levator ani, which may or may not be incised, depending on the size of the child and the distensibility of the tissues.

PRACTICE



A

LEFT OCCIPUT ANTERIOR



B

LEFT OCCIPUT POSTERIOR



A

RIGHT OCCIPUT POSTERIOR



B

RIGHT OCCIPUT TRANSVERSE

FETAL POSITION

- In defining position, the following determining points are used:
- **O** – occiput (cephalic/vertex presentation)
- **M** – mentum or chin (face presentation)
- **S** – sacrum (breech presentation)
- **A** – acromion or scapula (shoulder presentation)

- Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey BM, Sheffield JS (eds). William's Obstetrics 24th edition (2014); chapter 22 Normal Labor.
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PRACTICE

Left mentum
anterior



Right mentum
anterior



Right mentum
posterior



Right
dorsoacromion

DIAGNOSIS OF FETAL PRESENTATION AND POSITION

- **Several methods can be used to diagnose fetal presentation and position:**
 1. abdominal palpation: Leopold's maneuvers
 2. vaginal examination
 3. Auscultation
 4. Sonography/ultrasound
 5. Rarely: plain radiographs, computed tomography, or magnetic resonance imaging may be used.

- Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey BM, Sheffield JS (eds). *William's Obstetrics* 24th edition (2014): chapter 22 Normal Labor
- Sumalco WW, Ocampo-Andres IS, Blanco-Capillo LR, Diamante An, Gamilla ZN. (eds). *Textbook of Obstetrics* 3rd edition. Chapter 24 The Passenger

VAGINAL EXAMINATION

- With the onset of labor and after cervical dilatation, vertex presentations and their positions are recognized by palpation of the various fetal sutures and fontanelles.
- Face and breech presentations are identified by palpation of facial features and fetal sacrum

- Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey BM, Sheffield JS (eds). William's Obstetrics 24th edition [20140]; chapter 22 Normal Labor
- Sumalica WW, Ocampo-Andres S, Blanco-Capito LR, Diamante An, Gamilla ZH. (eds). Textbook of Obstetrics 3rd edition, Chapter 24 The Passenger

- First, the examiner inserts two fingers into the vagina and the presenting part is found.
- Second, if the vertex is presenting, the fingers are directed posteriorly and then swept forward over the fetal head toward the maternal symphysis pubis

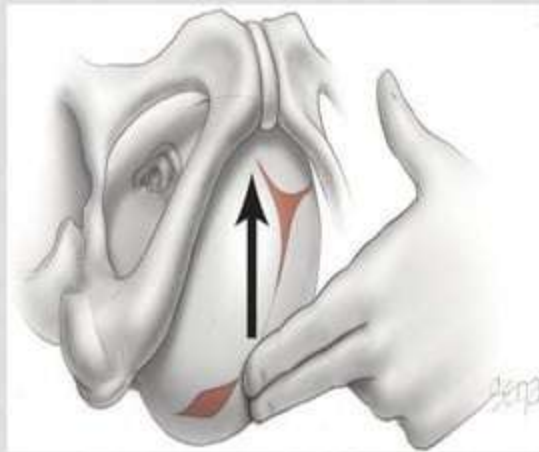


FIGURE 22-9 Locating the sagittal suture by vaginal examination.

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- Next, the positions of the two fontanelles are ascertained → fingers are passed to the most anterior extension of the sagittal suture, and the fontanel encountered there is examined and identified.
- With a sweeping motion, the fingers pass along the suture to the other end of the head until the other fontanel is felt and differentiated

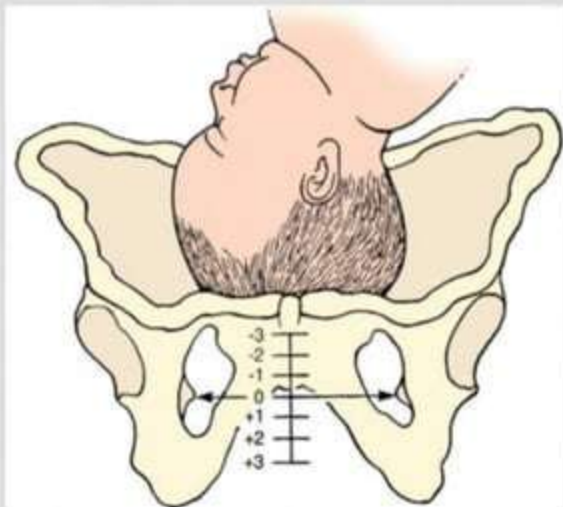


FIGURE 22-10 Differentiating the fontanelles by vaginal examination.

- Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey BM, Sheffield JS (eds). *William's Obstetrics* 24th edition [2014]; chapter 22 Normal Labor
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VAGINAL EXAMINATION

- Last, the station, or extent to which the presenting part has descended into the pelvis, can also be established at this time



- Iliac spines: station 0

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LEOPOLD'S MANEUVERS



LEOPOLD'S MANEUVER

- Abdominal exam to determine fetal presentation



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LEOPOLD'S MANEUVER

1. Leopold's maneuver #1 (LM1)

- "Fundal grip"
- Uterine fundus is palpated to determine which fetal part occupies the fundus
- Fetal head should be round and hard, ballotable
- Breech presents as a large nodular mass



- Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey BM, Sheffield JS (eds). *Williams's Obstetrics* 24th edition (2014); chapter 22 Normal Labor
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LEOPOLD'S MANEUVER

2. Leopold's maneuver #2 (LM2)

- "Umbilical grip"
- Palpation of paraumbilical areas or the sides of the uterus
- To determine which side is the fetal back
- Fetal back feels like a hard, resistant, convex structure
- Fetal small parts feel nodular, irregular



- Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey BM, Sheffield JS (eds). William's Obstetrics 24th edition (2014): chapter 22 Normal Labor
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LEOPOLD'S MANEUVER

3. Leopold's maneuver #3 (LM3)

- "Pawlik's grip"
- Suprapubic palpation using thumb and fingers just above the symphysis pubis, to *determine fetal presentation and station*
- the differentiation between head and breech is made as in LM1
- **If presenting part is not engaged, a movable structure can be palpated*



- Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey BM, Sheffield JS (eds). William's Obstetrics 24th edition (2014): chapter 22 Normal Labor
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LEOPOLD'S MANEUVER

4. Leopold's maneuver #4 (LM4)

- "Pelvic grip"
- Palpation of the bilateral lower quadrants to determine engagement of the fetal presenting part
- Fetal part is engaged: examiner's hands diverge
- Fetal head is not engaged: examiner's hands converge
- If fetal head is felt on same side of the fetal back → fetal head is well flexed



- Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey BM, Sheffield JS (eds). William's Obstetrics 24th edition (2014): chapter 22 Normal Labor
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SUMMARY / REVIEW

1. Fetal attitude
2. Fetal lie
 - transverse
 - longitudinal
3. Fetal presentation
 - Cephalic
 - breech
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 - shoulder
4. Fetal position
5. Leopold's maneuvers