Fetal Position and Presentation

OVERVIEW

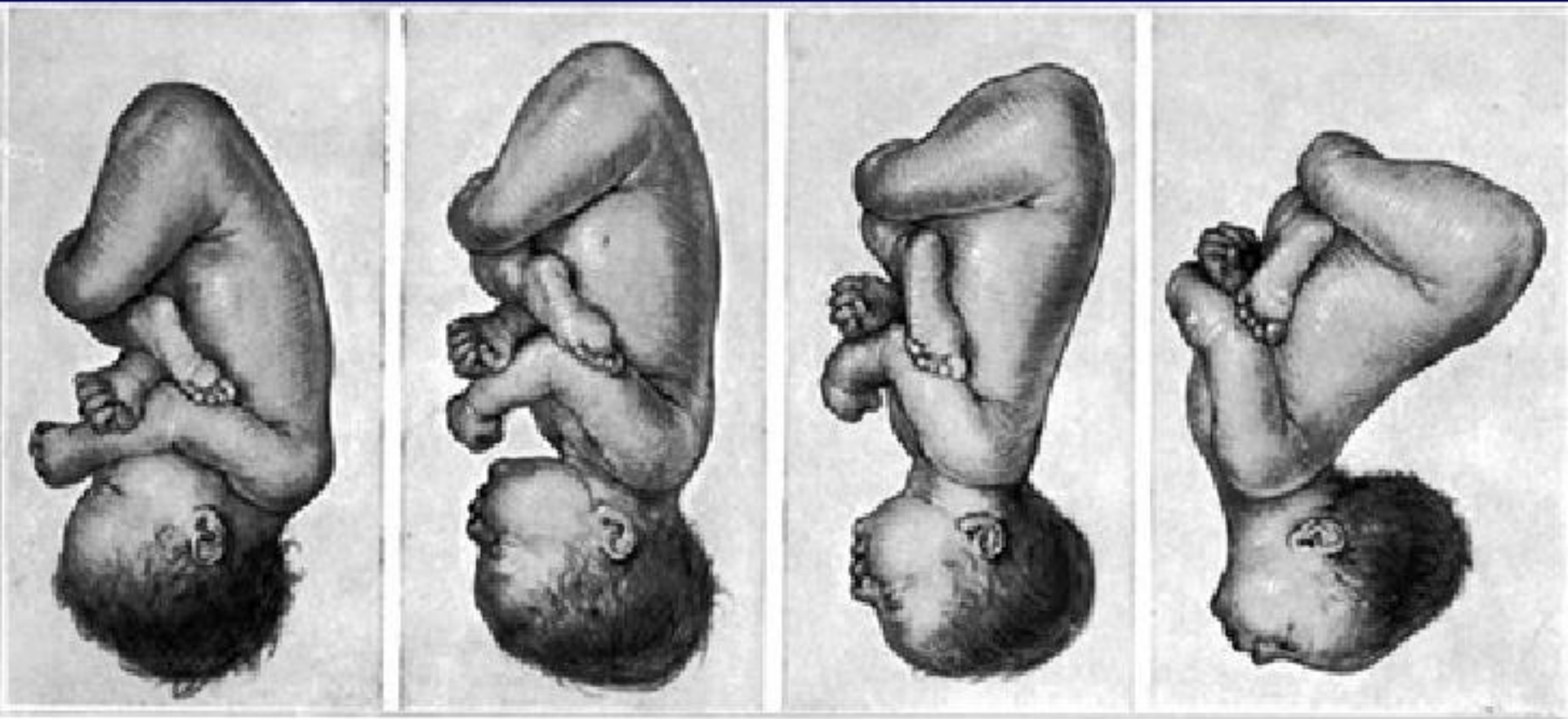
- This lecture discusses how to define, diagnose, and manage the abnormalities of fetal lie, position, and presentation.

Definitions

- **Fetal attitude:** Relationship of fetal head to spine:

1. Flexed, (this is the normal situation)
2. Neutral (“military”),
3. Extended.

Variations in Fetal Attitude



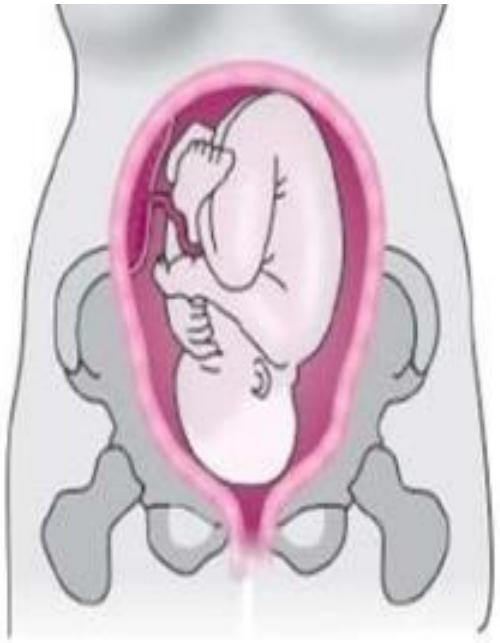
VERTEX, FLEXED | SINCIPUT, MILITARY | BROW | FACE

Definitions

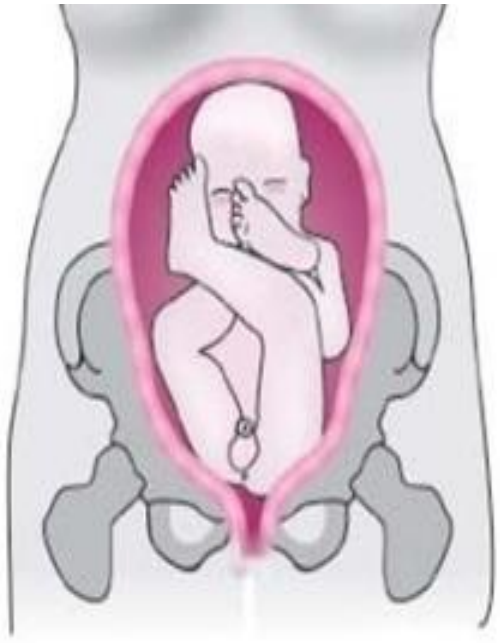
- **Fetal lie:** the relationship between the longitudinal axis of the fetus with respect to the long axis of the mother.

1. Longitudinal: resulting in either cephalic or breech presentation.
2. Oblique
3. Transverse .

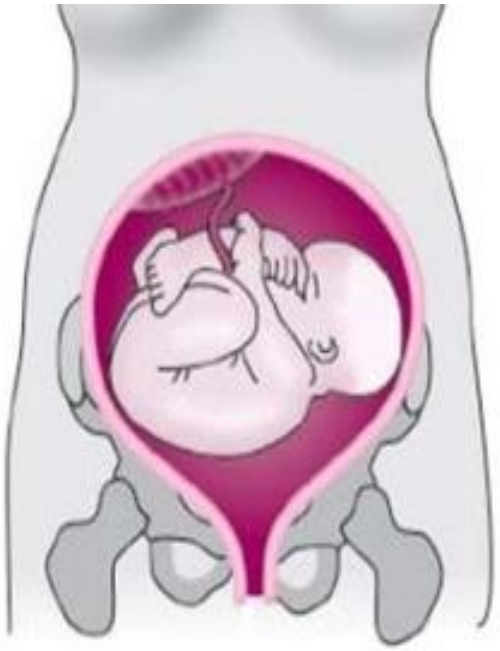
Fetal lie



Longitudinal lie
Vertex presentation



Longitudinal lie
Breech presentation



Transverse lie
shoulder presentation

Definitions

- **Fetal presentation:** to which anatomical part of the fetus is leading, that is, is closest to the pelvic inlet of the birth canal.

Classification of presentation

1. **Cephalic presentation (head first): 95%**

- vertex (crown) — the most common and associated with the fewest complications
- sinciput (forehead)
- brow (eyebrows)
- face
- chin

Classification of presentation

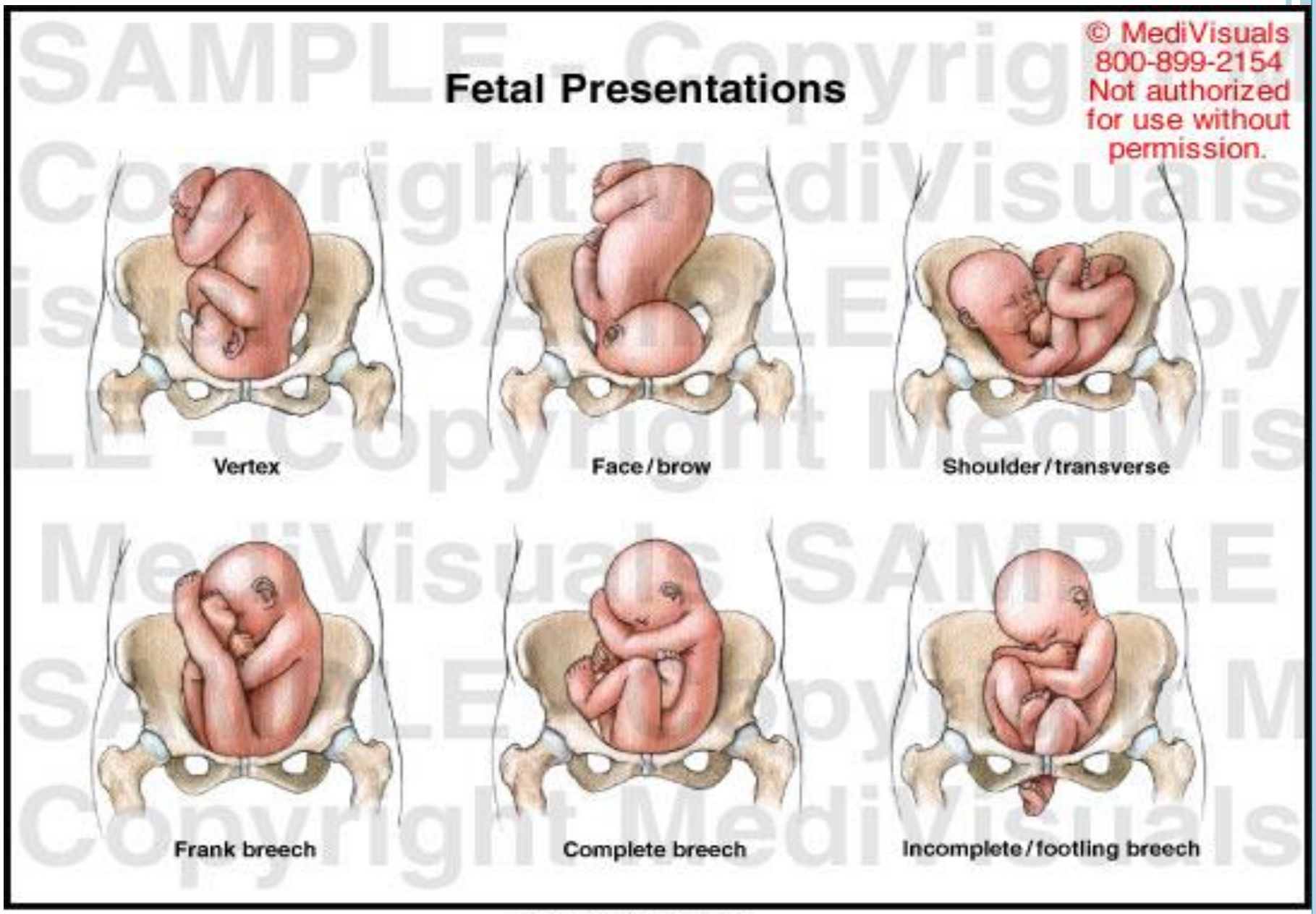
2. breech presentation (buttocks or feet first): 4%

- complete breech
- footling breech
- frank breech

3. shoulder presentation: 0.5%

- arm
- shoulder
- Trunk

4. Oblique presentation: 0.5%



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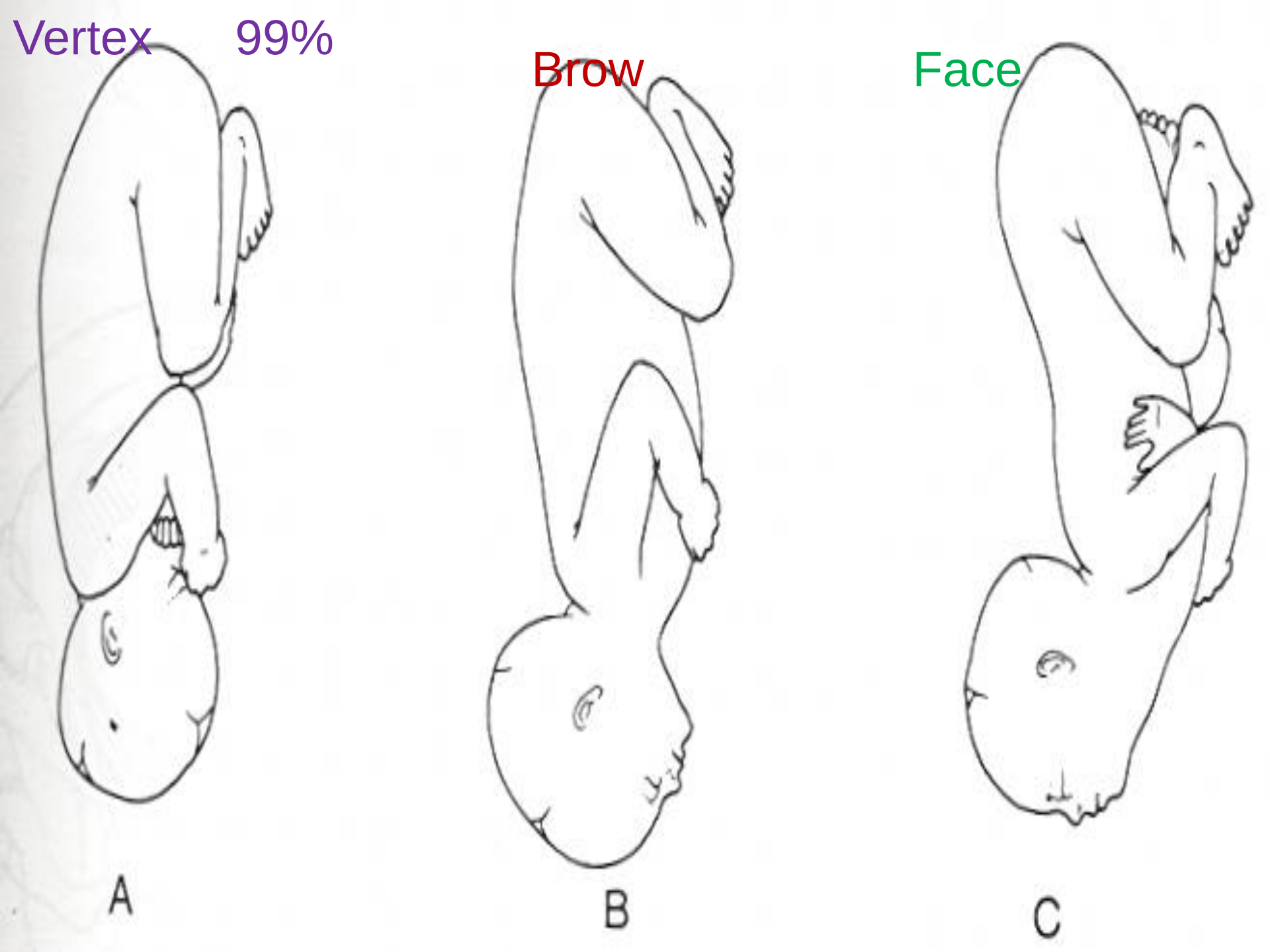
Vertex 99%

Brow

Face

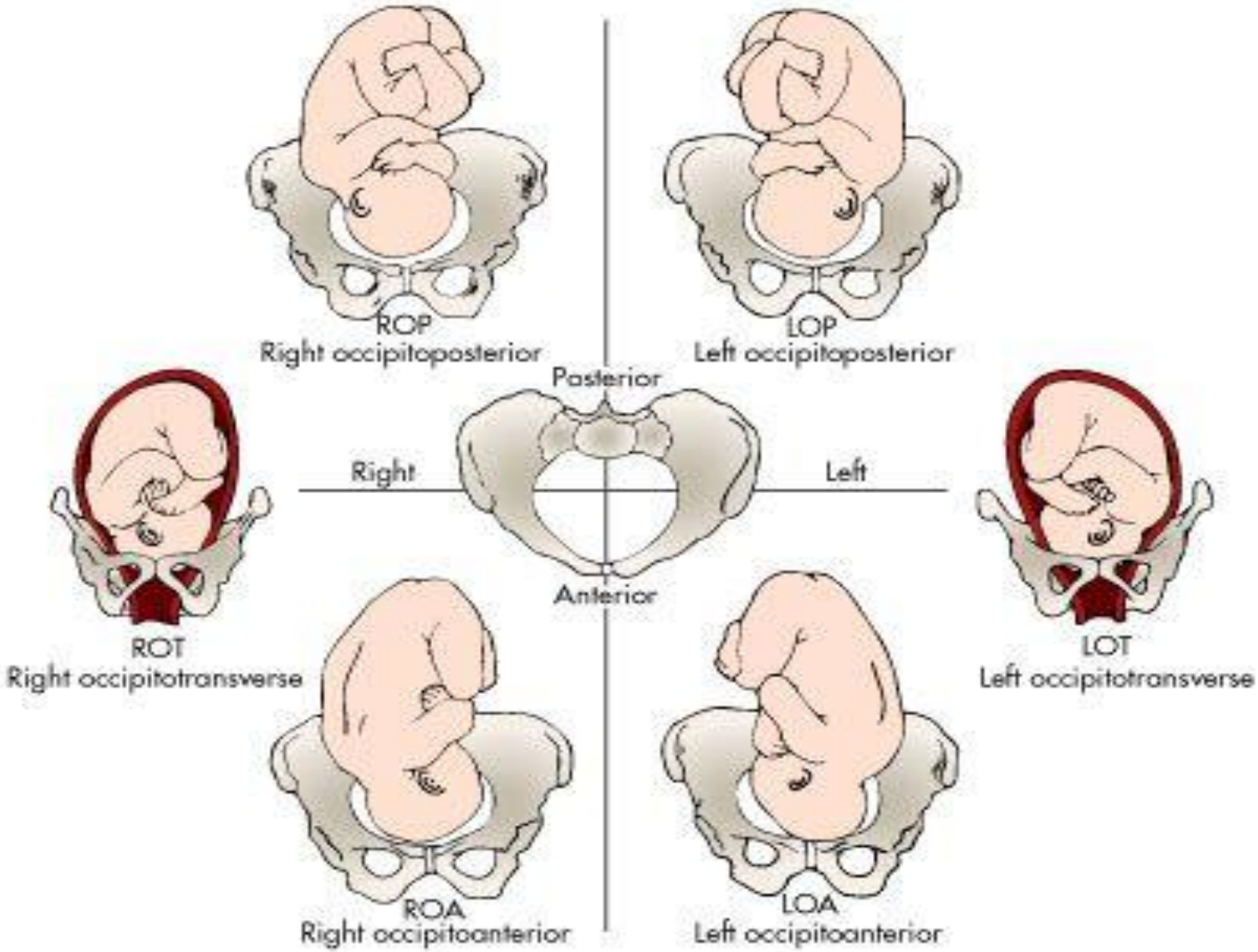


Definitions

- **Point of direction:** The most dependent portion of the presenting part

Definitions

- **The fetal position:** the location of the point of direction with reference to the pelvis of the mother as viewed by the examiner. position may be right or left as well as anterior or posterior.
- Note: fetus enters pelvis in occipito-transverse plane (left or right), descent and flexion then rotates 90 degrees to occipito-anterior (most commonly)



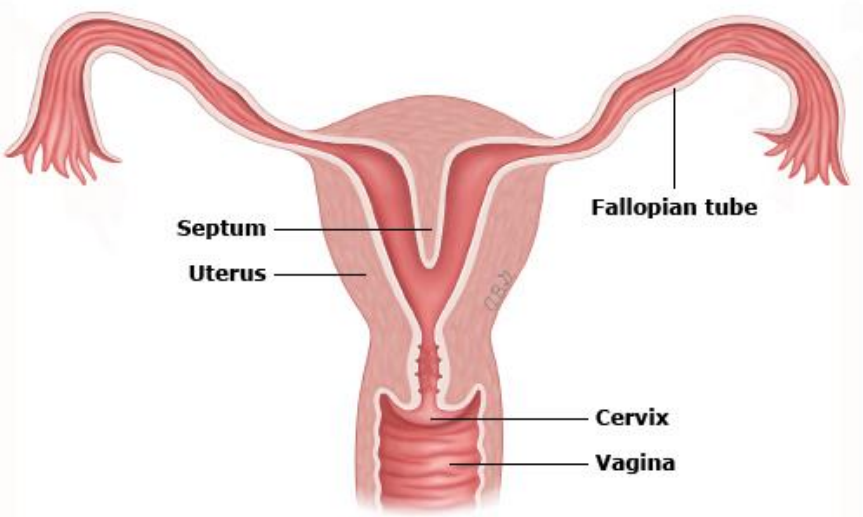
Lie: Longitudinal or vertical
Presentation: Vertex
Reference point: Occiput
Attitude: Complete flexion

Definitions

- **Malpresentation:** is any presentation other than a vertex presentation (with the top of the head first). In other words: It is the situation where the fetus within the uterus is in any position that is not cephalic "head down".

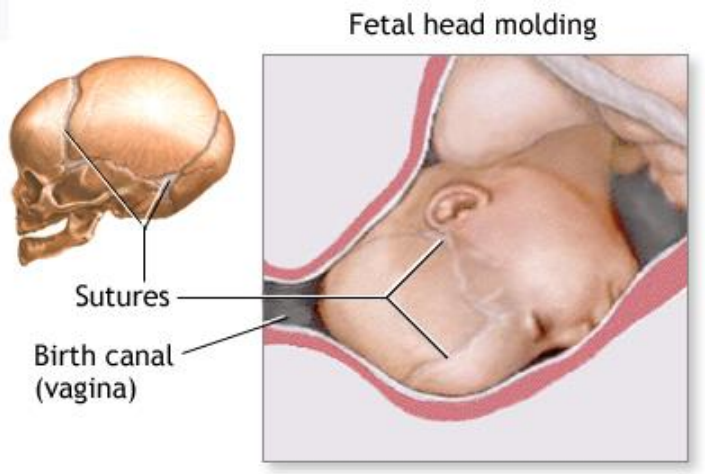
PREDISPOSING FACTORS TO MALPRESENTATION

- Premature
- Multiple pregnancy.
- Abnormalities of the uterus, eg fibroids.
- Partial septate uterus
- Abnormal fetus.
- Placenta previa.



Predisposing factors to malpresentation

- Oligohydramnios
- Large Fetus
- Large Fetal head
- Congenital Abnormalities
- Cord around the neck

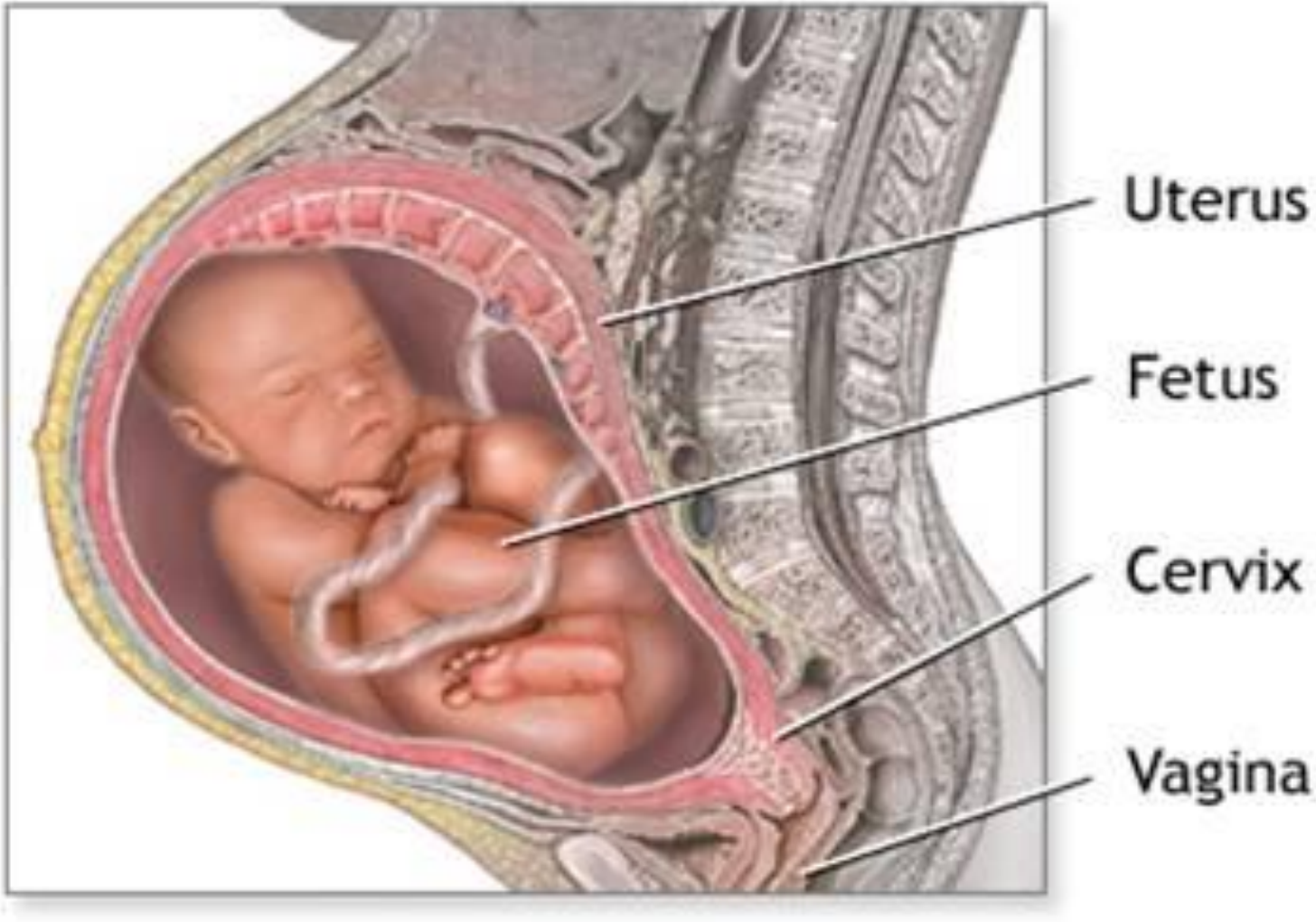


- The problem in malposition and malpresentation is the fetus is in an abnormal position or presentation that may result in prolonged or obstructed labor.

Breech presentation

- Breech pregnancy is a condition of pregnancyin which the fetus is not in the head-down position in the uterus.
- Breech presentation is the most common malpresentation,
- by about 36 weeks of pregnancy, the baby should have moved into the head-down position
- If this has not happened, it is called a breech presentation.

Fetus in breech presentation



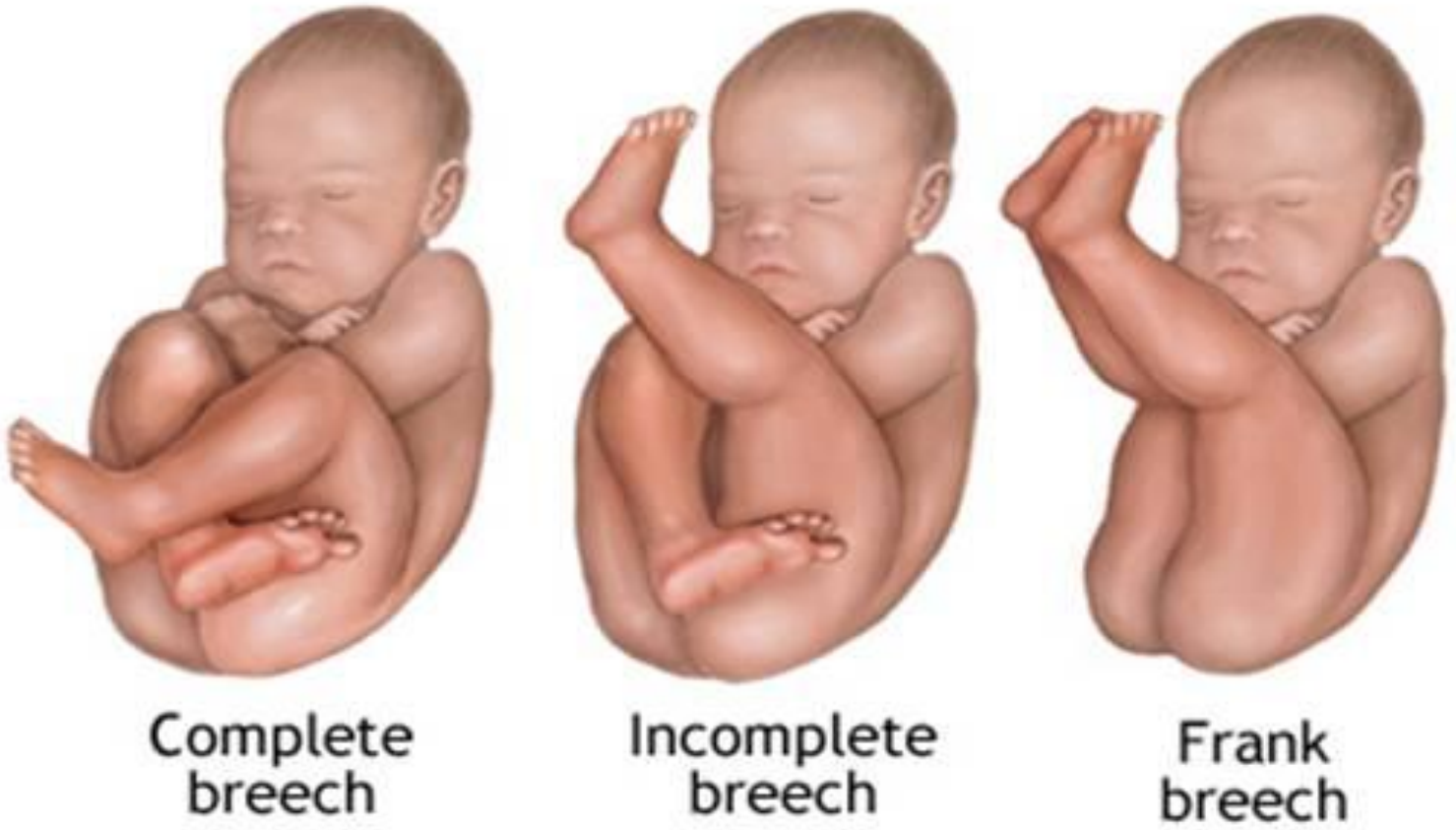
A.D.A.M.

TYPES OF BREECH PRESENTATION

There are three types of breech presentation:

1. **Complete:** both of the baby's knees are bent and his feet and bottom are closest to the birth canal.
2. **Incomplete:** one of the baby's knees is bent and his foot and bottom are closest to the birth canal.
3. **Frank:** baby's legs are folded flat up against his head and his bottom is closest to the birth canal.

Variations of the breech presentation



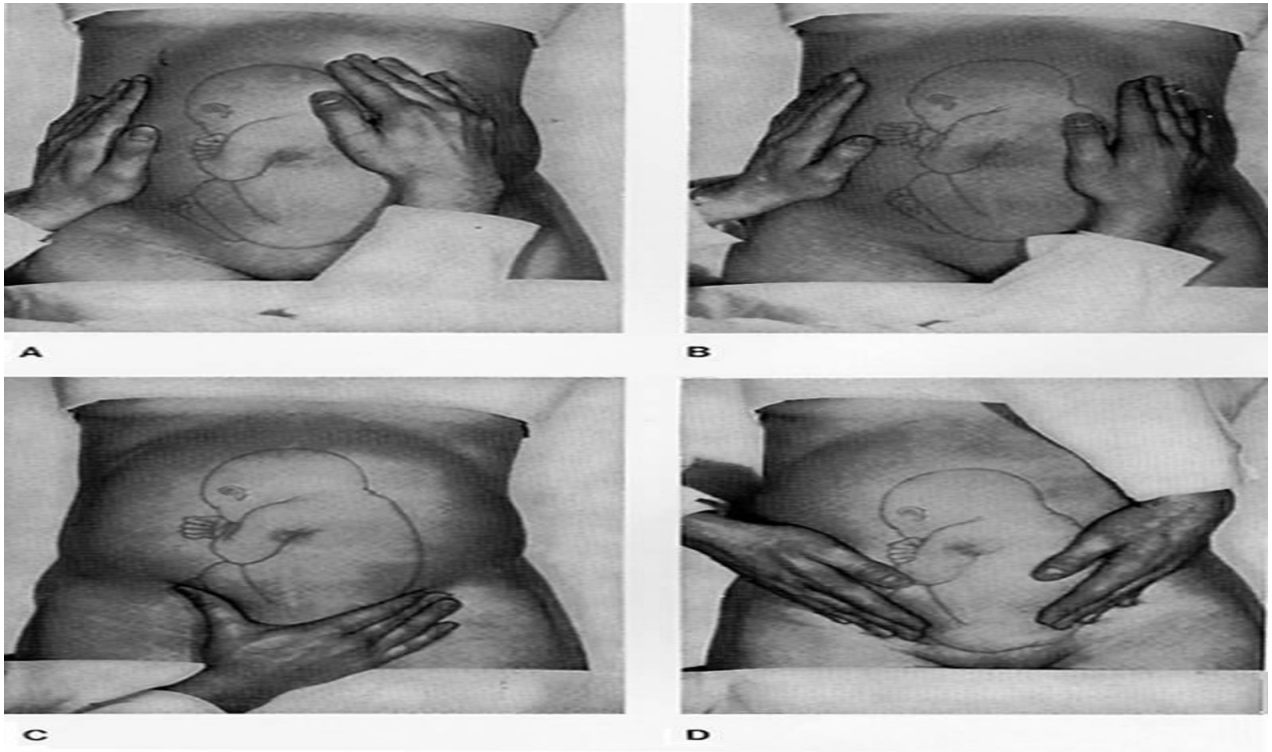
A.D.A.M.

Breech presentation

- Breech presentation is much more common in premature labour.
- the baby is positioned with the buttocks down and the head up.
- The mother may or may not be aware of any symptoms of a breech pregnancy
- Complications include difficult vaginal delivery, fetal distress, birth defects and compression of the umbilical cord.

Diagnosis of Breech Presentation

1. **Abdominal examination**



Diagnosis of Breech Presentation

2. Vaginal examination

when labor is prolonged, the buttocks may become markedly swollen, rendering differentiation of face and breech very difficult; the anus may be mistaken for the mouth.

3. Ultrasound

Sonography should ideally be used to confirm a clinically suspected breech presentation

MANAGEMENT

- Infants in a breech presentation that are unable to be repositioned into the vertex position are often delivered by cesarean section.
- In some cases it is possible to safely deliver an infant vaginally in abreech presentation.
- **External cephalic version**

MANAGEMENT

Breech allowed to deliver virginally when

- No other complication medical or obstetrical with breech
- Estimated Fetal size between 2.5 - 3.5 kg
- Adequate pelvis

COMPLICATIONS

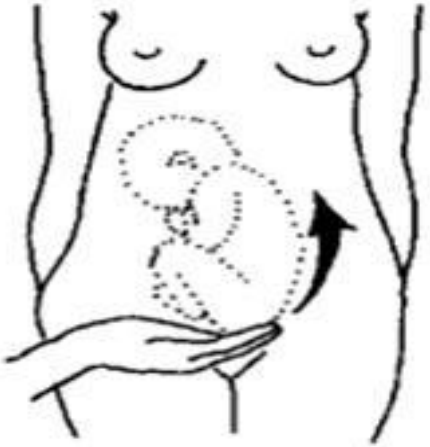
- Rupture of fetal membranes
- marked molding
- cord prolapsed → fetal distress →fetal death
- prolonged and complicated labour
- Maternal distress → dehydration → keto acidosis
- Infection
- obstructed labour → uterine rupture →maternal death
- Cord prolapse
- Asphyxia
- Fetal trauma

INDICATIONS TO THE CESAREAN SECTION

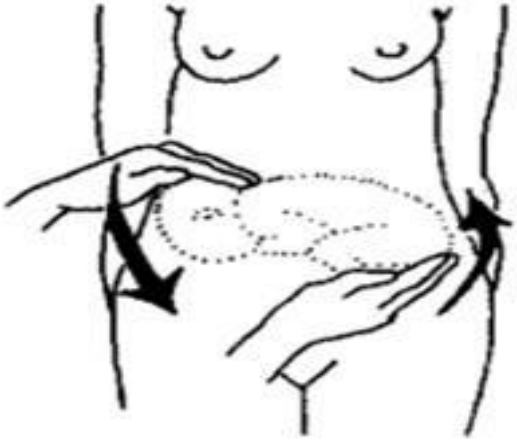
- large fetus
- Any degree of contraction or unfavorable shape of the pelvis.
- deflexed head.
- uterine dysfunction.
- previous perinatal death of children.
- fetal hypoxia.

External version

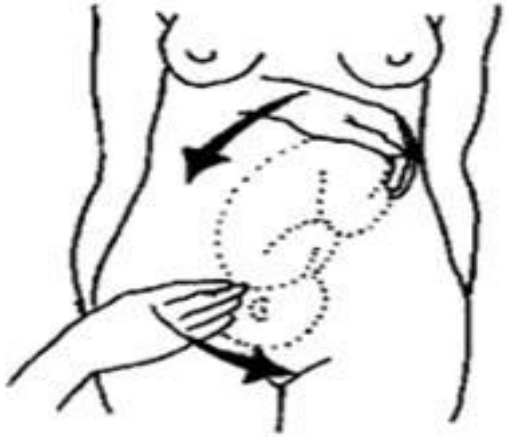
- attempt to substitute a cephalic presentation by external version.
- non-surgical technique to move the baby in the uterus between 37 and 39 weeks
- medication (B-agonists)is given to help relax the uterus.
- use of ultrasound to determine the position of the baby
- has a high success rate.



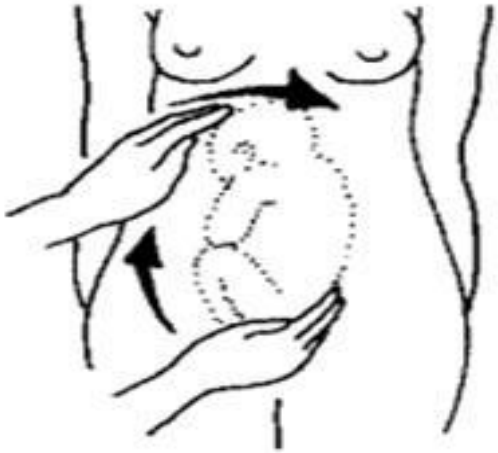
A. Mobilization of the breech



B. Manual forward rotation using both hands, one to push the breech and the other to guide the vertex



C. Completion of forward roll



D. Backward roll

RISKS OF EXTERNAL VERSION

- fractured fetal bones
- precipitation of labor
- premature rupture of membranes
- abruptio placentae
- fetomaternal hemorrhage (0-5%)
- cord entanglement (<1.5%)
- transient slowing of the fetal heart rate