



Malpresentation

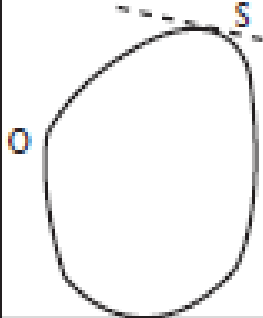
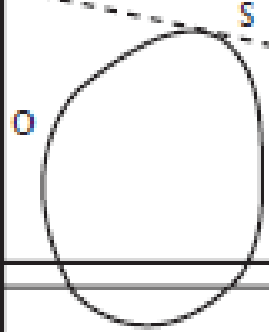
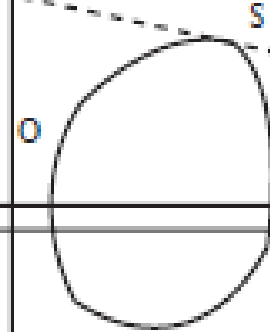
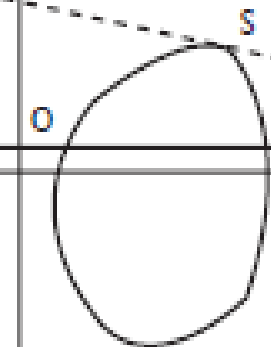
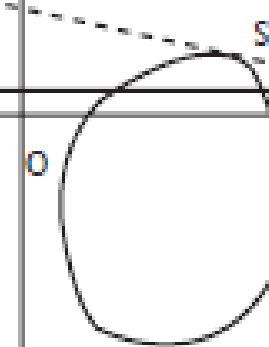
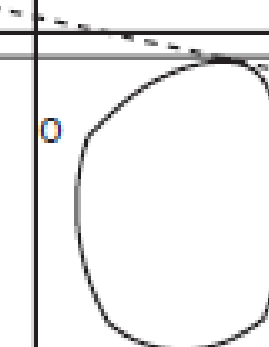
Engagement: refers to passage of the widest diameter of the fetal presenting part to a level below the plane of the pelvic inlet.

estimated using the palm width of the five fingers of the hand ,If five fingers are needed to cover the head above the pelvic brim, it is five-fifths palpable, and if no head is palpable, it is zero-fifths palpable.

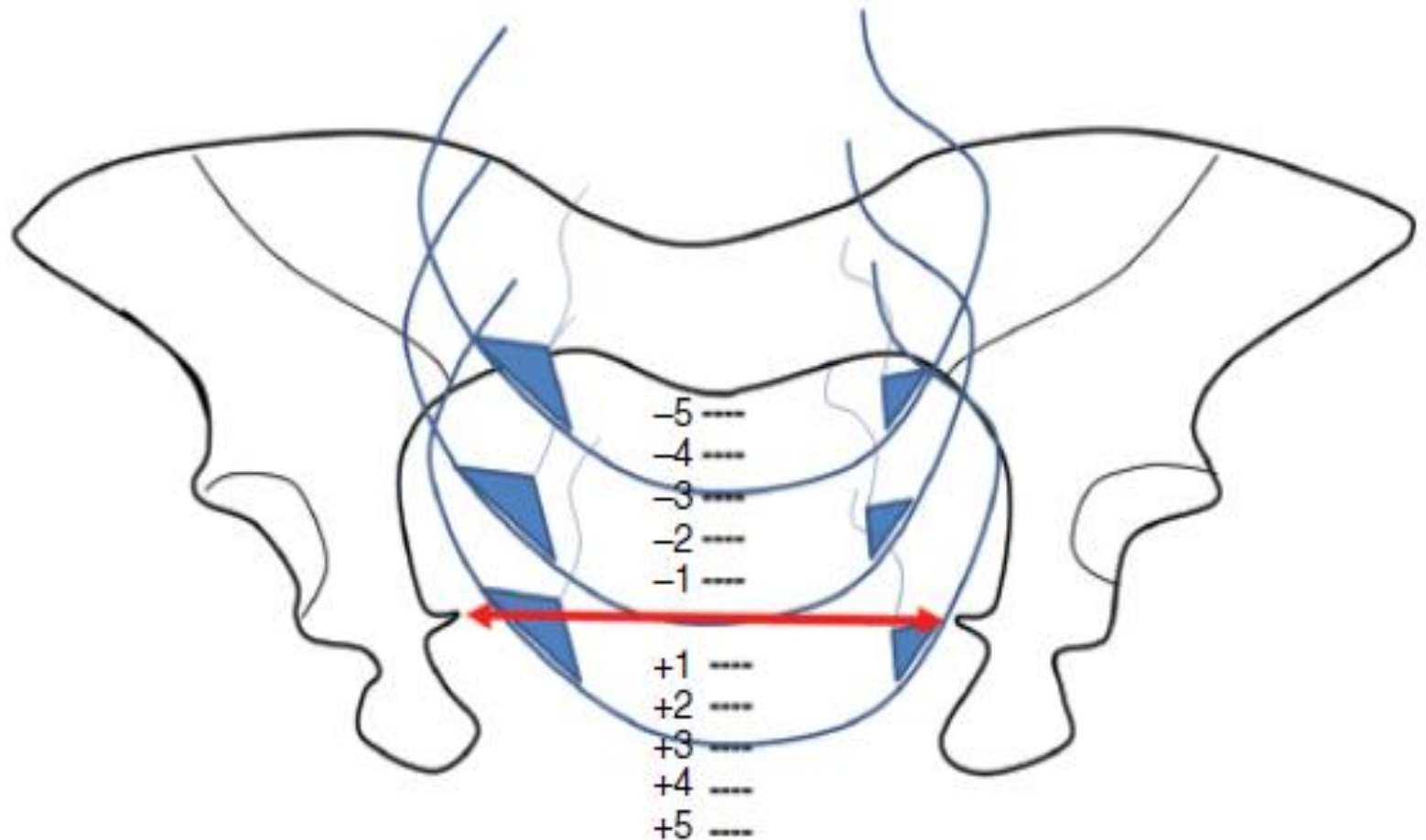
- **Normally**, the fetus engages in an attitude of flexion in the larger transverse diameter of the pelvic inlet, unless the pelvis is very roomy where it may engage in any diameter.
- In nulliparous women, engagement usually (not in all) occurs beyond **37wks**, but in multiparous women it may not occur until the onset of labour.

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- Rare causes of non-engagement should always be considered and investigated with an ultrasound scan (USS) (including placenta praevia and fetal abnormality).
 - In women of Afro-Caribbean origin, engagement **may only occur at the onset or during the course of labour**, even in nulliparous women due to the shape of the pelvic inlet

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- . A head that is only two-fifths palpable is usually considered to be engaged. Put simply, an easily palpable head is not engaged, whereas a head more difficult to palpate is more likely to be deeply engaged.
 - Care must be taken, as a breech presentation can sometimes be mistaken for a deeply engaged head


5/5	4/5	3/5	2/5	1/5	0/5
					
Pelvic brim					
			Pelvic cavity		
Completely above	Sinciput high Occiput easily felt	Sinciput easily felt Occiput felt	Sinciput felt Occiput just felt	Sinciput felt Occiput not felt	None of head palpable

Station is the relationship of the most prominent leading part of the presenting part to the ischial spines expressed as $\pm 1,2,3\text{cm}$.



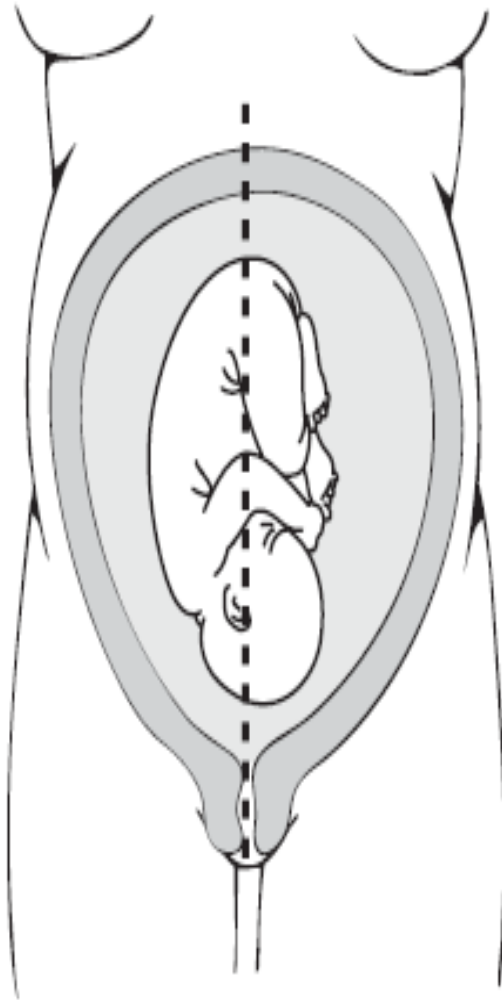
Fetal lie :relationship of longitudinal axis of fetus to that of the uterus. could be

1. **Vertical or Longitudinal**(99.5%) : fetal head or breech palpable over pelvic inlet
2. **Transverse** : fetal poles felt in flanks and nothing above the brim occurs when the axis of the fetus is across the axis of the uterus. This is common before term, but occurs in only 1% of fetuses after 37wks.
3. **Oblique** : the fetal and the maternal axes may cross at a 45-degree angle, forming an oblique lie, which is unstable *the head or breech is palpable in the iliac fossa and nothing felt in the lower uterus*

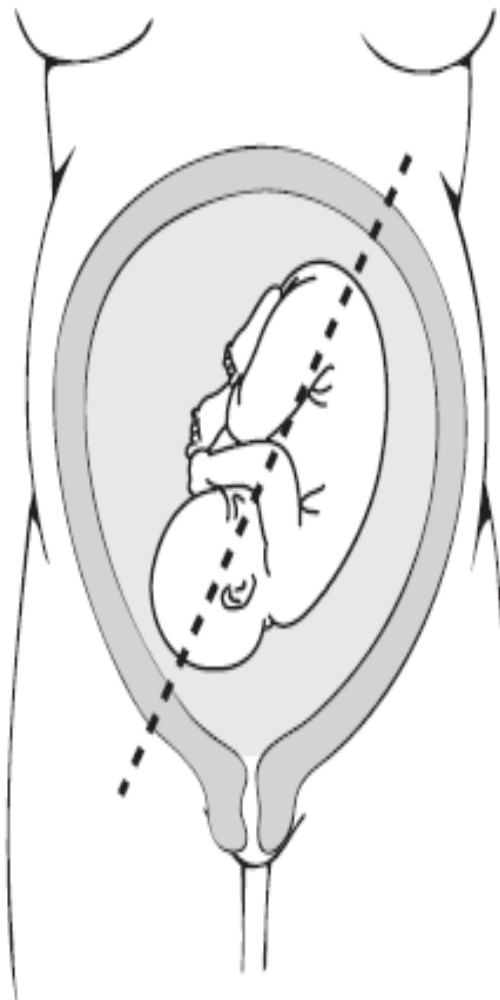
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- **Unstable lie** occurs when the lie is still changing, usually several times a day, and may be transverse or longitudinal lie, and cephalic or breech presentation

Causes and associations of abnormal fetal lie

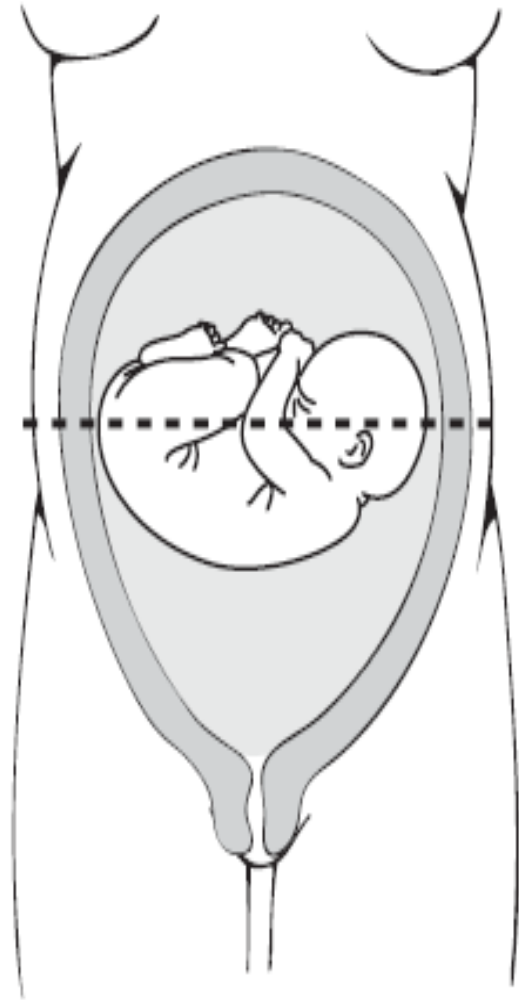
- Multiparity (particularly >para 2) with lax uterus (common).
- Polyhydramnios.
- Uterine abnormalities, e.g. fibroids and Müllerian duct abnormalities.
- Placenta praevia and obstructions to the pelvis.
- Fetal abnormalities.
- Multiple pregnancy



Longitudinal
(normal) lie



Oblique lie



Transverse lie

Assessment of abnormal lie

- Ascertain stability from the history: has the presentation been changing?
- Ascertain fetal lie by palpation.
- Neither the head nor buttocks will be presenting.
- Also assess the laxity of the uterine wall.
- Does the presenting part move easily?
- Ultrasound should be performed to help ascertain the cause.



Risks of abnormal lie


- Labour with a non-longitudinal lie will result in obstructed labour and potential uterine rupture.
- Membrane rupture risks cord prolapse because with longitudinal lie, the presenting part usually prevents descent of the cord through the cervix



Management of abnormal lie

- Admission to hospital from 37wks is usually recommended with unstable lie, so that CS can be carried out if labour starts or the membranes rupture and the lie is not longitudinal.
- Whilst the lie remains unstable, the woman should remain in hospital.
- With increasing gestation the lie will usually revert to longitudinal and in these circumstances she can be discharged.

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- If the lie does not stabilize, a CS is usually performed at 41wks.
 - Some advocate a stabilizing induction whereby the fetus is turned to cephalic and an amniotomy immediately performed. This requires expertise.
 - If the lie is stable but not longitudinal, a CS should be considered at 39wks

Presentation is the lowermost part of the fetus presenting to the pelvis.

In more than 95% of cases **the vertex** is the presenting part and is called **normal presentation**. Any other presentation (e.g. face, brow, breech, and shoulder) is called malpresentation.

The *vertex* is a diamond-shaped area on the fetal skull bounded by the anterior and posterior fontanelles and laterally by the parietal eminences.



Attitude: refers to the position of the head with regard to the fetal spine (i.e. the degree of flexion and/or extension of the fetal head)

- ❑ flexed, (this is the normal situation)
 - ❑ neutral ("military"),
 - ❑ extended.
 - ❑ hyperextended.

Some causes of malpresentation

1. *Maternal*

- Multiparity.
- Pelvic tumours.
- Congenital uterine anomalies.
- Contracted pelvis.

2-*fetal*

- Prematurity.
- Multiple pregnancy.
- Intrauterine death.
- Macrosomia.
- Fetal abnormality including:

A. hydrocephalus

B. anencephaly

C. cystic hygroma.

3-Placental

- Placenta praevia.
- Polyhydramnios.
- Amniotic bands

Breech presentation occurs when the baby's buttocks lie over the maternal pelvis. The lie is longitudinal, and the head is found in the fundus.

The **incidence** of breech presentation varies according to gestation: 20% at 30 weeks falling to 4% by term.

Causes and associations of breech presentation

- Idiopathic (most common).
- Preterm delivery.
- Previous breech presentation.
- Uterine abnormalities, e.g. fibroids and Müllerian duct abnormalities.
- Placenta praevia and obstructions to the pelvis.
- Fetal abnormalities.
- Multiple pregnancy

Types of breech presentation

- **extended breech**: constitute between 50 and 70% of breech presentations manifest with hips flexed and knees extended.
- **Complete (or flexed)** breech is more common in multiparous women and constitutes 5–10% at term (hips and knees flexed).
- **Incomplete or footling** breech (10–30%) presents with one or both hips extended, or one or both feet presenting and is most strongly associated with cord prolapse (5–10%).
- **Knee presentation** is rare.

Flexed breech



Footling presentation




Extended (frank) breech



Diagnosis

- Before 36wks breech presentation is not important unless the woman is in labour.
- Breech presentation is commonly undiagnosed before labour (20%).
- On examination:
 - lie is longitudinal
 - the head can be palpated at the fundus
 - the presenting part is not hard
 - the fetal heart is best heard high up on the uterus.

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- Ultrasound confirms the diagnosis and ultrasound *assessment is recommended as it* allows
 - a comprehensive assessment of the type of breech,
 - placental site,
 - estimated fetal weight,
 - confirmation of normality
 - and exclusion of nuchal cord or hyperextension of the fetal neck
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Antenatal management

TERM BREECH DELIVERY OPTIONS


Women with a breech presentation at term should be offered **external cephalic version** (ECV) unless there is an absolute contraindication which are relatively few but include

- 1-placenta praevia.**
- 2- bleeding within the last 7 days.**
- 3-abnormal cardiotocograph (CTG).**
- 4-major uterine anomaly. 5-ruptured membranes 6- multiple pregnancy. 7- mother declines or is unable to give informed consent.**

ECV should be performed with additional caution where there is oligohydramnios or hypertension.

ECV after one caesarean delivery appears to have no greater risk than with an unscarred uterus.

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- Women who have a breech presentation at term following an unsuccessful or declined offer of ECV should be counselled on the risks and benefits of **planned vaginal breech delivery** versus **planned caesarean section**




Couples should receive counselling about the procedure and its success rates and complications, and the subsequent management of persistent breech presentation

External cephalic version ECV) It is a manual procedure by which a breech baby can sometimes be turned from buttocks or foot first to head first.

risk with an ECV.

- The most common **risk** with an ECV is a temporary change in fetal heart rate, which occurs in about 5 percent of cases .
- Serious complications are extremely rare but can include the need for emergency C-section ,
- vaginal bleeding,
- loss of amniotic fluid ,
- and umbilical cord prolapse.

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It is performed from **36wks** in nulliparous women and **37wks** in multiparous ones. The aim is to reduce the need for delivery by CS.

- ***Efficacy**: the success rate is about **50%**. Spontaneous reversion to breech presentation occurs in 3%. Attempting ECV halves the chance of non-cephalic presentation at delivery and greatly reduces the risk of CS.*

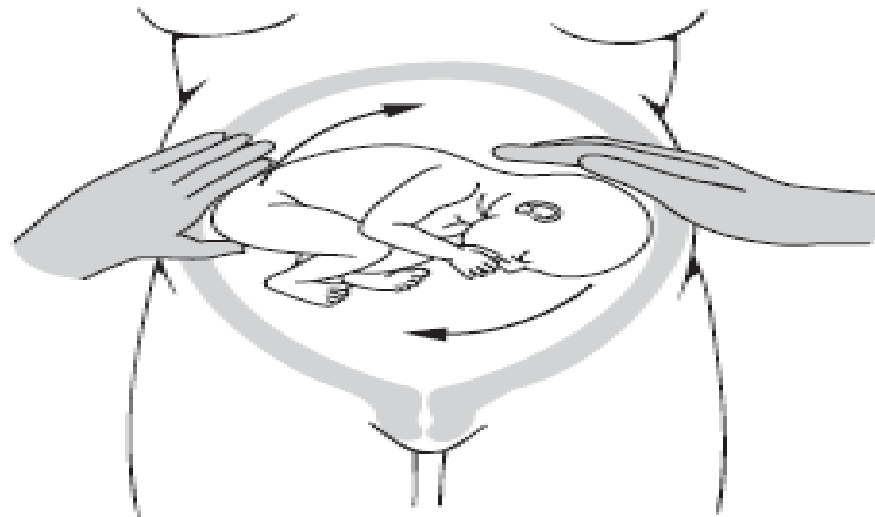
predictors for successful ECV.

- Multiparity
- Nonengagement of the breech ,
- Use of tocolysis,
- A palpable fetal head,
- maternal weight of less than 65 kg
- Other factors include posterior placental location, complete breech position and an amniotic fluid index greater than 10


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- • *Method: after USS, a forward roll technique is used. The breech is elevated from the pelvis, and pushed to the side where the back is; the head is then pushed forward and the roll completed. Excessive force must not be used*




1. Gently disimpact the breech from the pelvis, guiding it towards the iliac fossa.




2. Continue to guide the breech upwards until the baby is transverse, then gentle pressure on the occiput helps to complete the forward roll.



Women should be made aware that even with a cephalic presentation following ECV, labour is still associated with a higher rate of obstetric intervention than when ECV has not been required

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- . ECV should be performed in a setting where urgent caesarean section (CS) is available in case of fetal compromise during or soon after ECV. CTG for 30–40 min prior to and after ECV should provide confirmation of fetal health. The use of moxibustion at 33–35 weeks, in combination with acupuncture, may reduce the numbers of births by CS. Training specialist midwives is potentially cost-efficient with success rates comparable to consultant-led services (51–66%)




The need for **emergency delivery** by CS because of suspected fetal compromise is estimated to be 0.5%. Mothers who are rhesus-negative should have a Kleihauer–Betke test after the procedure and receive anti-D. If ECV is unsuccessful, women who are keen to avoid CS may be offered a repeat attempt under neuraxial blockade. Otherwise appropriate counselling about the options of elective CS or assisted vaginal breech delivery should be offered.

Vaginal delivery of the breech fetus

Knowledge and experience of this remains important because breech delivery requires skill and will occasionally be inevitable because of diagnosis in advanced labour or because of the mother's wishes.

- **Factors affect the safety of vaginal breech delivery?**
- Hyperextended neck on ultrasound.
- High estimated fetal weight (more than 3.8 kg).
- Low estimated weight (less than tenth centile).
- Footling presentation.
- Evidence of antenatal fetal compromise.
- The role of pelvimetry is unclear..


Oxytocin augmentation is not advised and failure of the buttocks to descend after full dilatation is a sign that delivery may be difficult



Spontaneous onset of labour is preferred and labour management is similar to vertex presentation. Successful outcome depends on a normal rate of cervical dilatation, descent of the breech and a normal fetal heart rate (FHR) pattern.

Where progress of labour is poor and uterine contractions are inadequate, oxytocin augmentation can be used judiciously with early resort to emergency CS if progress remains slow (<0.5 cm/hour), particularly in the late first stage.

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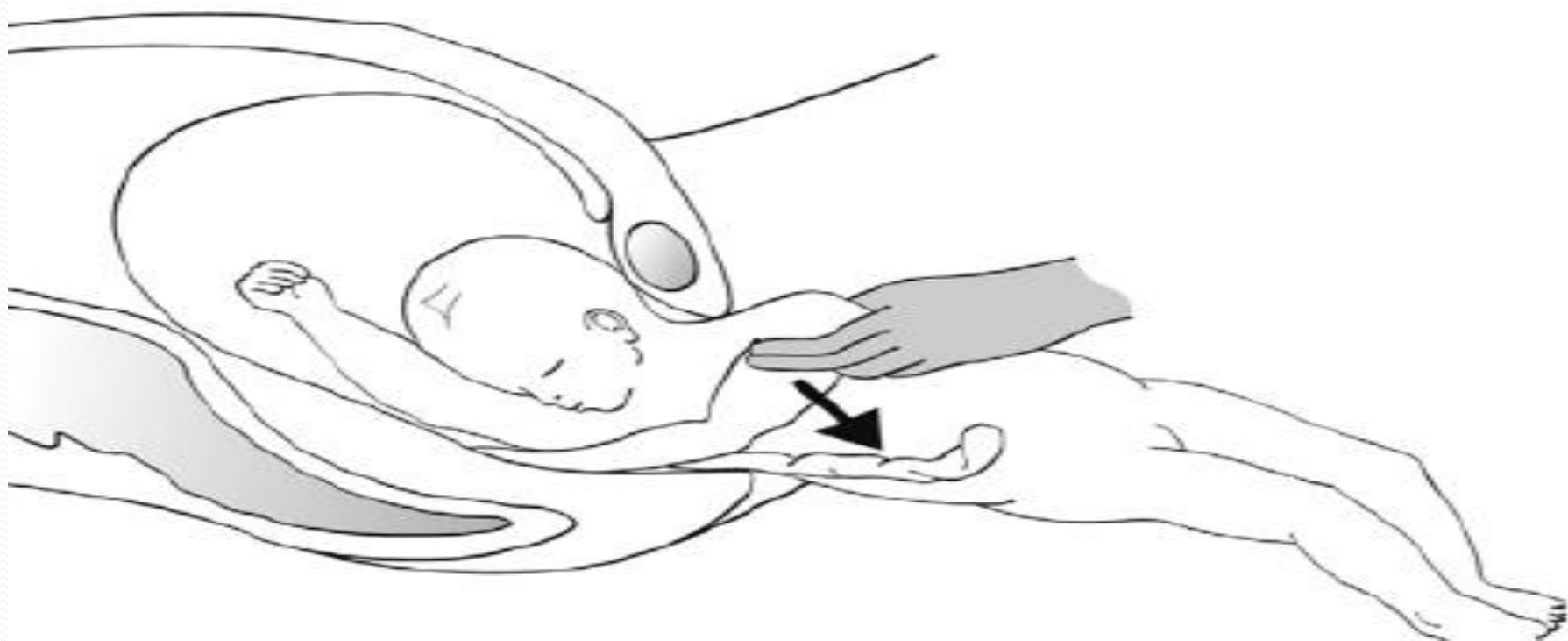
Epidural anaesthesia prevents bearing down before the cervix is fully dilated and is particularly important for labour with a preterm breech, when there is a real risk of head entrapment in the incompletely dilated


Cervix if pushing commences too early. For all breech labours, the mother should be encouraged to avoid bearing down for as long as possible

Vaginal breech delivery technique

- Maternal effort should be delayed until the buttocks are visible.
- after delivery of the buttocks the baby is encouraged to remain back upwards but should not otherwise be touched until the scapula is visible.
- The arms are then hooked down by the index finger at the fetal elbow, bringing them down the baby's chest.
- The body is then allowed to hang.

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- If the arms are stretched above the chest and cannot be reached, *Lovset's manoeuvre is required.*
 - This involves placing the hands around the body with the thumbs on the sacrum and rotating the baby 180° clockwise and then counterclockwise with gentle downward traction.
 - This allows the anterior shoulder and then the posterior shoulder to enter the pelvis and for the arm to be delivered from below the pubic arch.



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- When the nape of the neck is visible, delivery is achieved by placing two fingers of the right hand over the maxilla and two fingers of the left at the back of the head to flex it (*Mauriceau–Smellie–Veit manoeuvre*) and maternal pushing is encouraged.
 - **If this fails** to deliver the head, forceps should be applied before the next contraction.
 - Delivery of the head should be gentle and controlled to avoid rapid decompression which could cause intracranial bleeding.
 - The upright position for delivery is advocated by some experienced attendants but there is no proof that this makes delivery safer.




Complications of a breech labour and delivery

Increased risk of cord prolapse: particularly with footling breech.

Increased risk of CTG abnormalities as cord compression is common.

Mechanical difficulties with the delivery of the shoulders and/or after-coming head, leading to damage of the visceral organs or the brachial plexus.

Delay in the delivery of the head may occur with a larger fetus, leading to prolonged compression of the umbilical cord and asphyxia.




Uncontrolled rapid delivery of the head may occur with a smaller fetus and predisposes to tentorial tears and intracranial bleeding.

A small or preterm fetus may deliver through an incompletely dilated cervix, resulting in head entrapment.

Irrespective of the mode of delivery, neonatal and longer-term risks are increased. The reasons for this are incompletely understood but may be due in part to:

- association with congenital abnormalities
- many preterm babies are breech at the time of delivery.

Maternal Most breeches are delivered by CS.



In preterm delivery, the body can slip through an incompletely dilated cervix, with resulting head entrapment. If the cervix cannot be 'stretched up' digitally, surgical incisions are made in the cervical ring at 2, 6 and 10 o'clock (Dührssen incisions). Head entrapment in the contractile upper segment can occur at CS. Acute tocolysis and/or extension of the uterine incision may be required to release the head.

Face presentation

Incidence 1 in 500 labours

due to complete extension of the fetal head.

causes

unknown, although it is frequently attributed to excessive tone of the extensor muscles of the fetal neck.

Rarely, extension may be due to a fetal anomaly such as a thyroid tumour. The presenting diameter is the submento-bregmatic, which measures 9.5 cm and is approximately the same in dimension as the suboccipitobregmatic (vertex) presentation. Despite this, engagement of the fetal head is late and progress in labour is frequently slow, possibly because the facial bones do not mould.



Diagnosis


- Face presentation is diagnosed in labour on vaginal examination.
- The orbital ridges, nose, malar eminences, mentum, gums, and mouth can be distinguished.
- It may be mistaken for a breech, but presence of gum margins will help to differentiate between a mouth and an anus.

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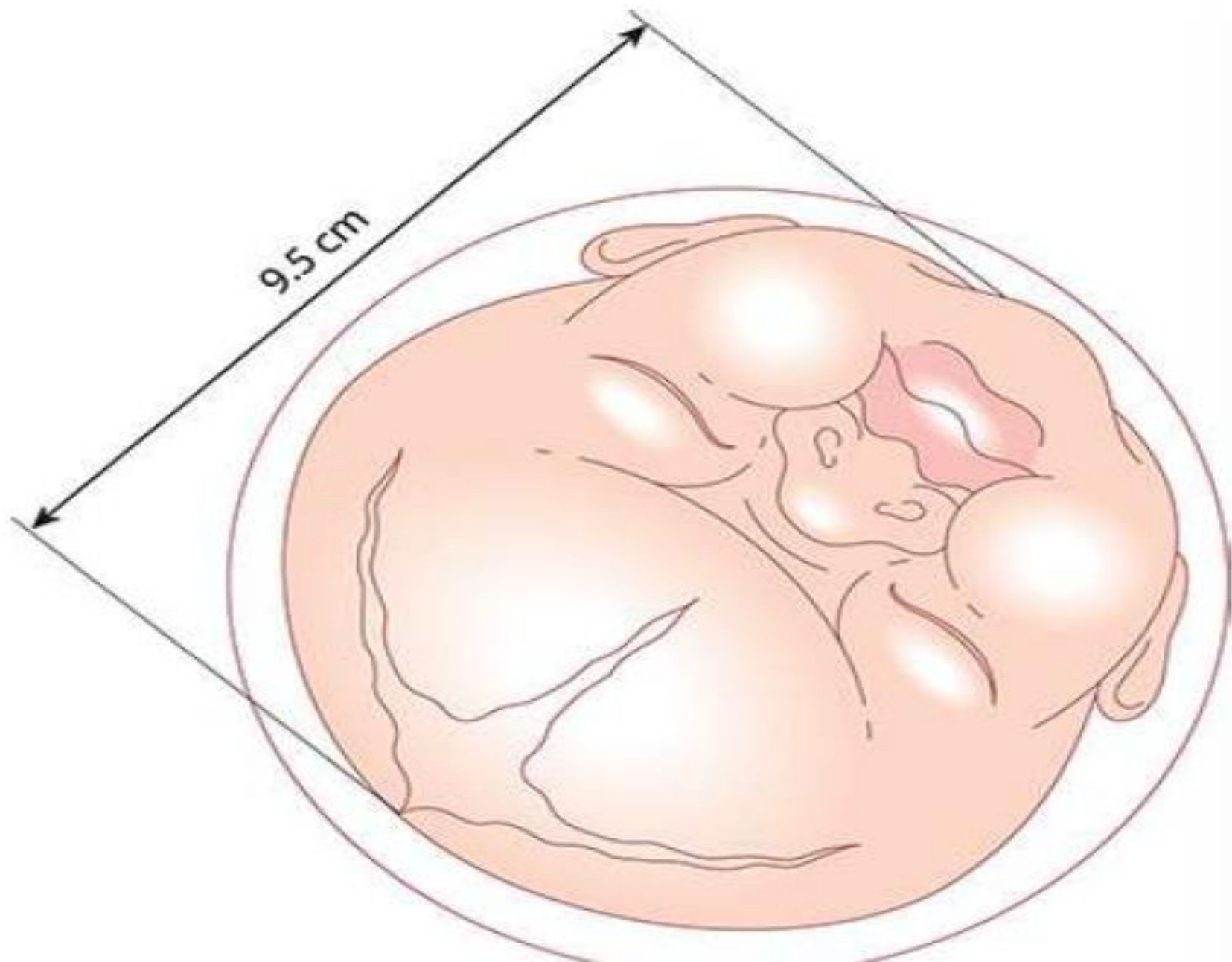


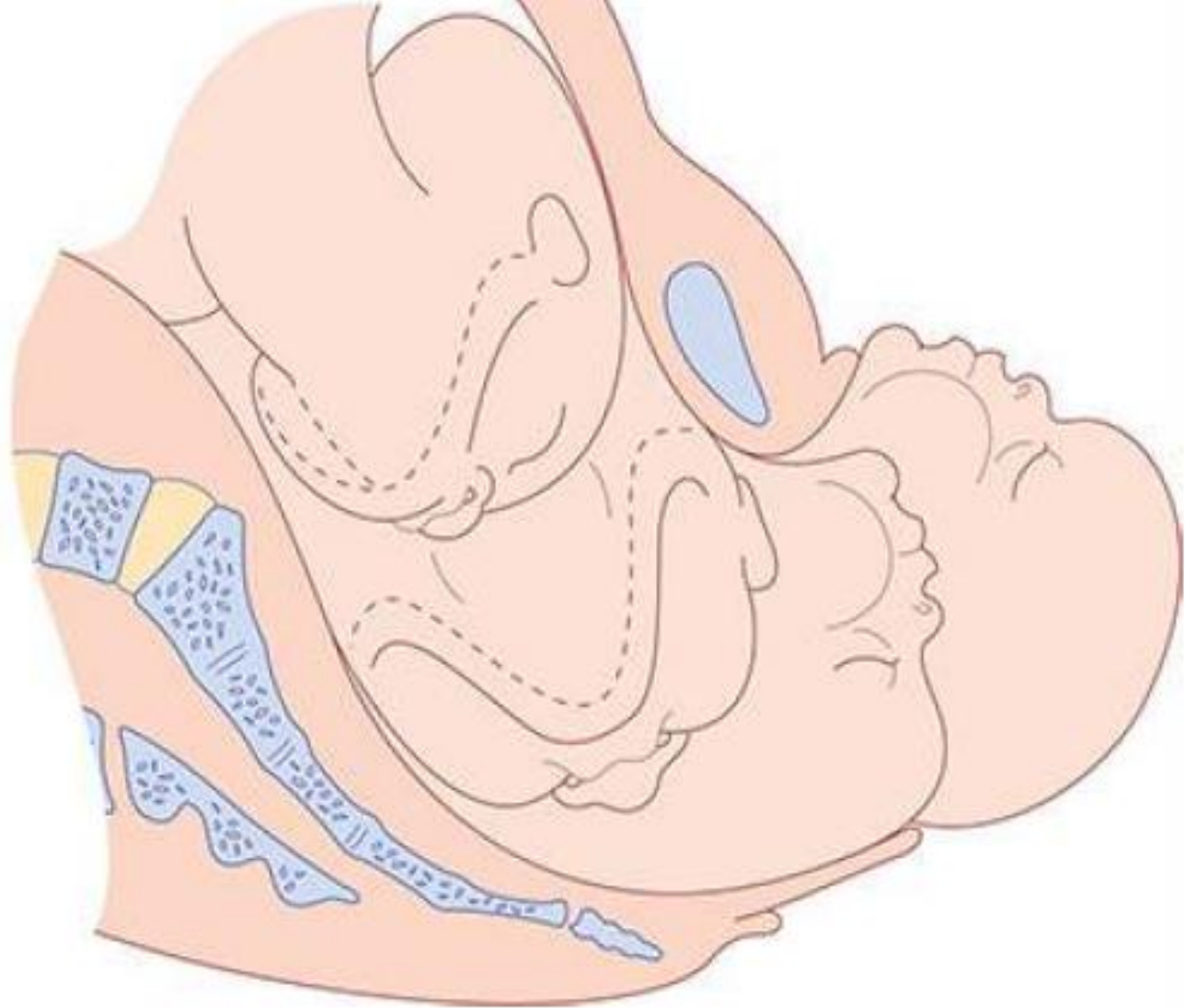
Management

- 90% are mentoanterior (MA) and head can flex to allow vaginal delivery.
- Expectant management should be considered with mentoposterior (MP) as about 20–30% will rotate on reaching the pelvic floor.
- Persistent MP face presentations cannot deliver vaginally as it would require the head to overextend.
- If there is poor progress or failure to rotate, CS is indicated.
- Fetal monitoring should be external and fetal blood sampling is contraindicated

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- The use of ventouse is absolutely contraindicated but forceps delivery is possible with an MA position well below spines.

Attempts to convert face presentations manually into vertex or use of forceps to rotate persistent MP positions can lead to complications of cord prolapse and fetal cervical cord injury.





Brow presentation

It can be considered a midway position between vertex and face.

It is the least common malpresentation, occurring **in 1 in 2,000**

The causes are similar to those of face presentation, although some brow presentations arise as a result of exaggerated extension associated with an OP position.

The presenting diameter is the **mento-vertical** (measuring 13.5 cm)

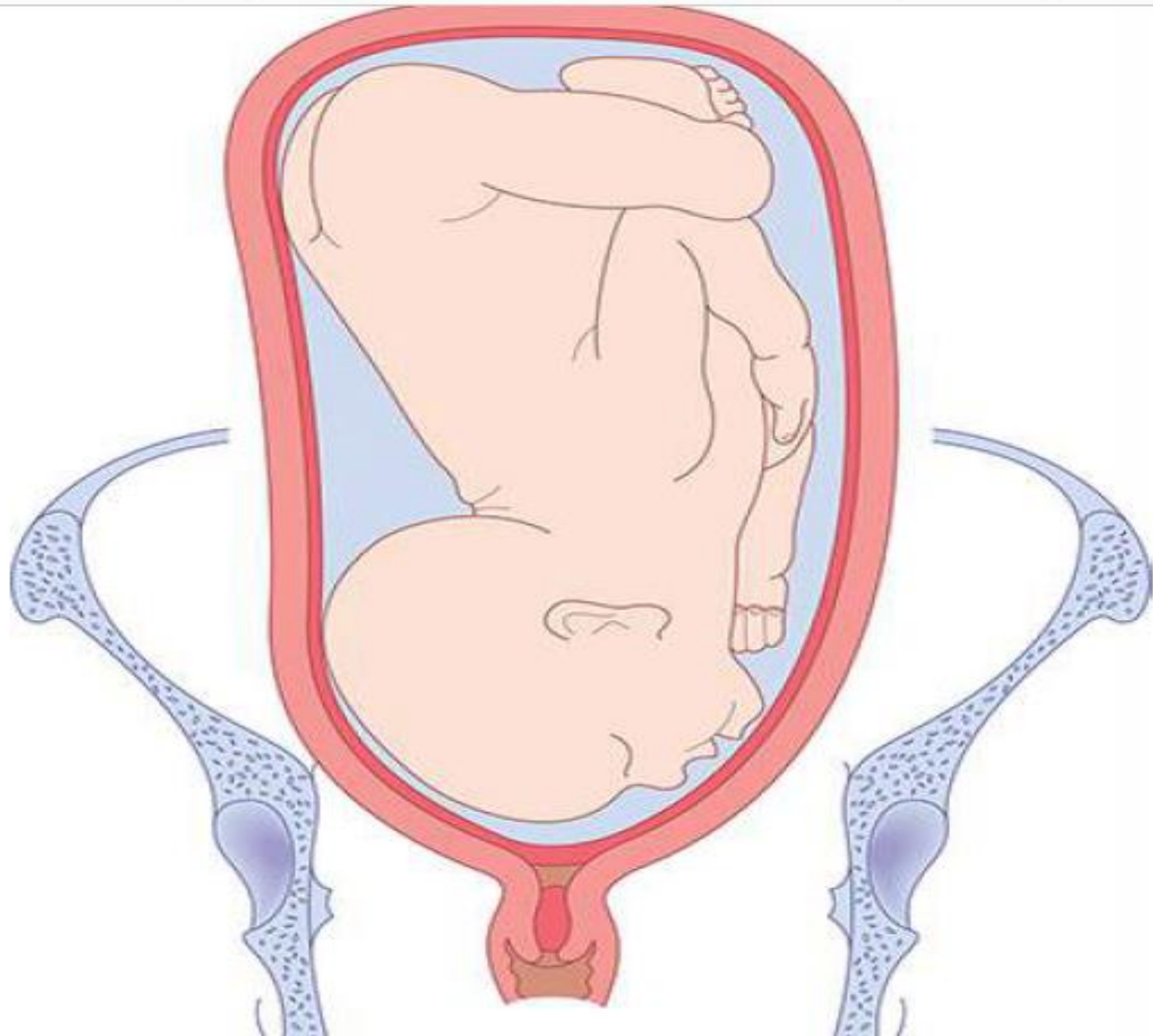
This is incompatible with a vaginal delivery.

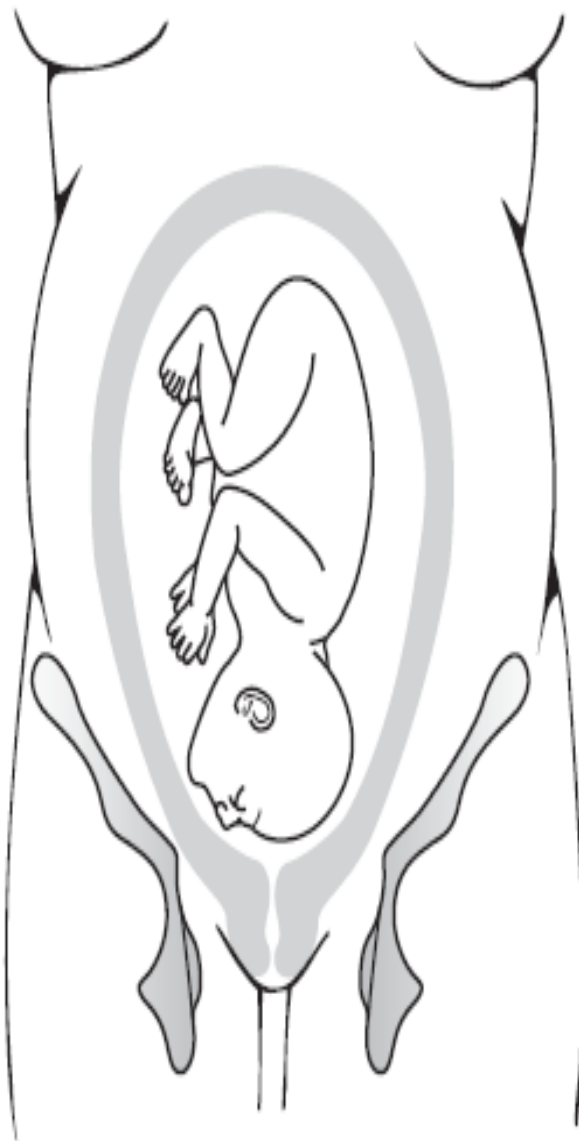
Diagnosis

- Often diagnosed in advanced labour (may be suspected on abdominal palpation when both occiput and chin are palpable).
- The head does not descend below the ischial spines.
- Vaginal examination is diagnostic as the frontal sutures, anterior fontanelle, orbital ridges, eyes, and the root of nose are palpable.

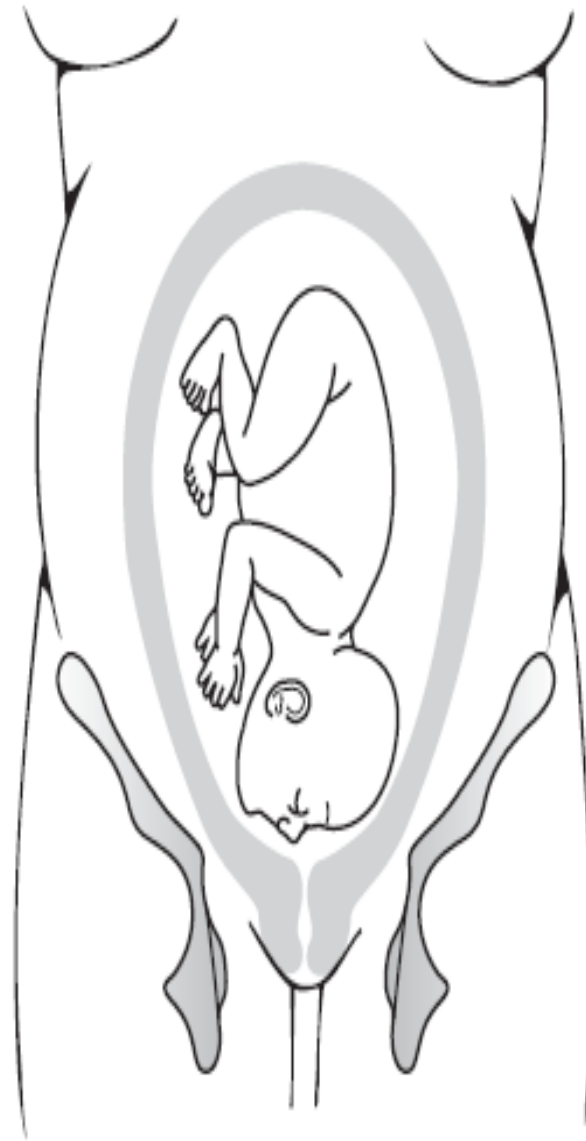
Management

- Watch and wait: may become a vertex or face presentation.
- If progress is slow or if the brow persists then CS is indicated.





(a) Brow presentation



(b) Face presentation

Shoulder presentation

The incidence is 1 in 300 pregnancies at term, but few of these women will go into labour.

Shoulder presentation occurs as the result of a transverse or oblique lie of the fetus.

the causes include

1. placenta praevia,
2. high parity,
3. pelvic tumour
4. uterine anomaly

Delivery should be by caesarean Section.

Risks include

1. cord prolapse
2. uterine rupture.

Cord presentation

This occurs when one or more loops of cord lie below the presenting part and the membranes are still intact.

association

- ❑ malpresentation,
- ❑ abnormal lie
- ❑ high head.

The **risk** is of cord prolapse when the membranes rupture. This is an obstetric emergency.



Diagnosis

- The diagnosis of cord presentation is often made on USS, but may be found on VE in labour.
- It can be suspected clinically when persistent variable fetal heart decelerations occur early in labour.
- ARM is contraindicated as it will cause cord prolapse.