

Mechanism basics

The baby engages in the widest diameter of the pelvic inlet = Transverse (13cm)

Enters the circular cavity (12cm) and rotates

Exits via the widest diameter the antero-posterior (AP) of the pelvic outlet (13cm)

Mechanisms of Labour

The birth canal is formed by the bony pelvis and soft tissues

To negotiate the birth canal, the fetus must take advantage of the widest diameter of each part of the pelvis

The baby needs to twist and turn as it makes its way through the birth canal and adapt to the shape of the mothers pelvis

The pelvic inlet is widest in the transverse diameter and the pelvic outlet is widest in the anteroposterior

The 'normal' mechanism requires that the fetal:

Lie is longitudinal

Attitude is fully flexed

Presentation is cephalic

Position is right or left occipitoposterior

Presenting part or Denominator is the occiput

According to Rankin

The fetus descends

The presenting part of the fetus meets resistance of the pelvic floor

The presenting part rotates forwards to lie anteriorly under the symphysis pubis

The emerging part of the fetus pivots around the pubic bone

Causes of descent

Descent occurs due to: uterine contractions, amniotic fluid pressure, abdominal muscle contractions

Descent is encouraged by: Increased abdominal muscle tone, Braxton hicks, fundal based uterine contractions, increased frequency and strength of contractions

Mechanisms of labour movements

- Descent
- Flexion
- Internal rotation of the head
- Crowning and extension of the head
- Restitution
- Internal rotation of the shoulders and external rotation of the head
- Lateral flexion

Descent - the fetus descends into the pelvis

As the head descends, it moves towards the pelvic brim in either the left or right occipitotransverse position

Descent - the fetus descends into the pelvis (cont)

The baby descends through the pelvic inlet towards the pelvic floor

As the fetus descends through the pelvis, it changes position to accommodate the widest part of the woman's pelvis

Flexion

Contractions push down on the spine causing the fetal head to come in contact with the pelvic floor which leads to flexion of the fetal head.

The increased flexion leads to the presentation of the smallest diameter of the fetal head (suboccipitobregmatic), which assists passage through the pelvis.

Internal rotation of the head

Internal rotation of the head aligns the head with the anteroposterior diameter of the pelvic outlet and moves the occiput forwards to lie under the symphysis pubis

This is caused by pressure from uterine contractions, the shape of the pelvic floor, the pressure of the ischial spines

It causes a slight twisting of the neck and now the head is no longer in line with the shoulders

Crowning and extension of the head

The occiput now moves from beneath the pubic arch and pushes against the vaginal entrance

The head is born by extension and pivots on the suboccipital region around the pubic bone

The sinciput, face and chin sweep the perineum

Restitution

Restitution occurs after the birth of the head

The head returns to its original position in correct alignment with the shoulders

Internal rotation of the shoulders

This occurs when the shoulders turn to fit the widest diameter of the pelvic outlet (anteroposterior)

The anterior shoulder reaches the pelvic floor and rotates forwards to lie under the symphysis pubis

This causes external rotation of the head so the occiput lies laterally towards the woman's thigh

The anterior shoulder is usually born first under the pubic arch

Lateral flexion

The spine undergoes lateral flexion to accommodate the curved birth canal and the rest of the body is born in that position

