Labour Diagnosis & Management of Stages of Labour

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Overview

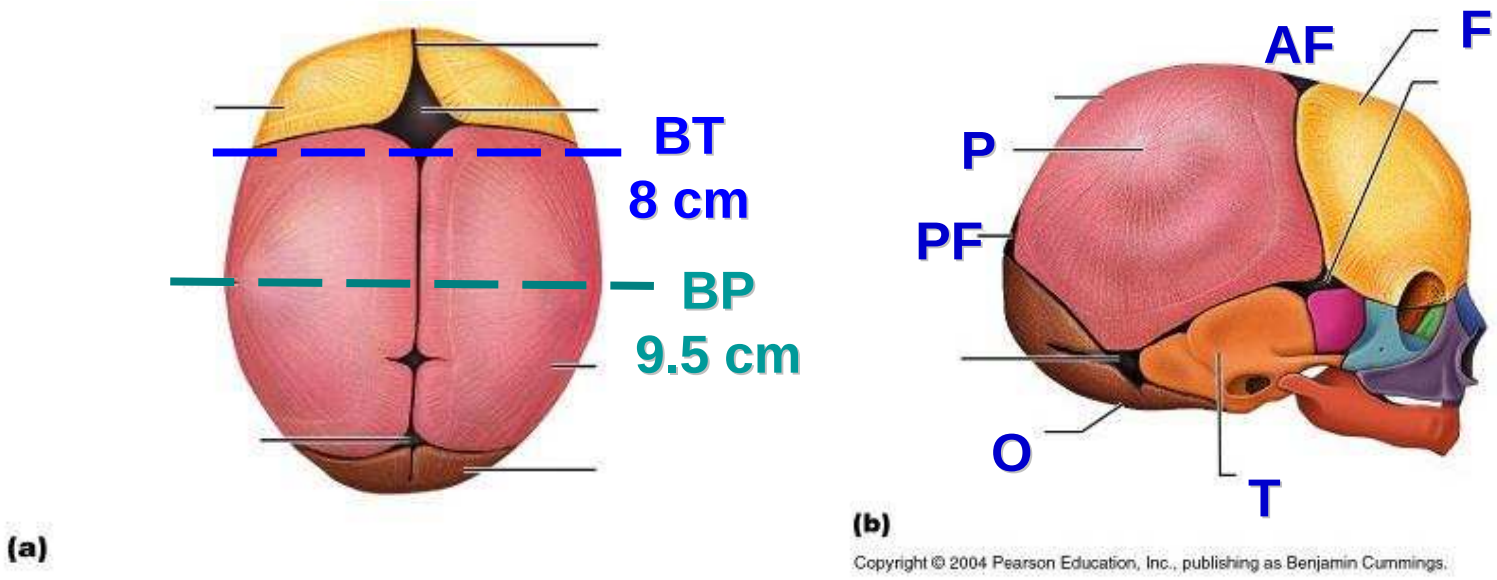
- What is LABOR??
- Anatomic landmarks of the fetal head & maternal pelvis
- Physiological preparations for labor
- Stages of labor
  - **Definition**
  - **Management**

Labour!!?

- **The process of passage of products of conception (fetus, placenta and membranes) through the birth canal due to effective uterine contractions leading to progressive dilatation of the cervix at gestational age above 24 weeks is the normal labour in which many factor have been involved to make it successful and these include, power (uterine contractions), passage (soft tissue in pelvis and bony pelvis) and passenger (fetus).**

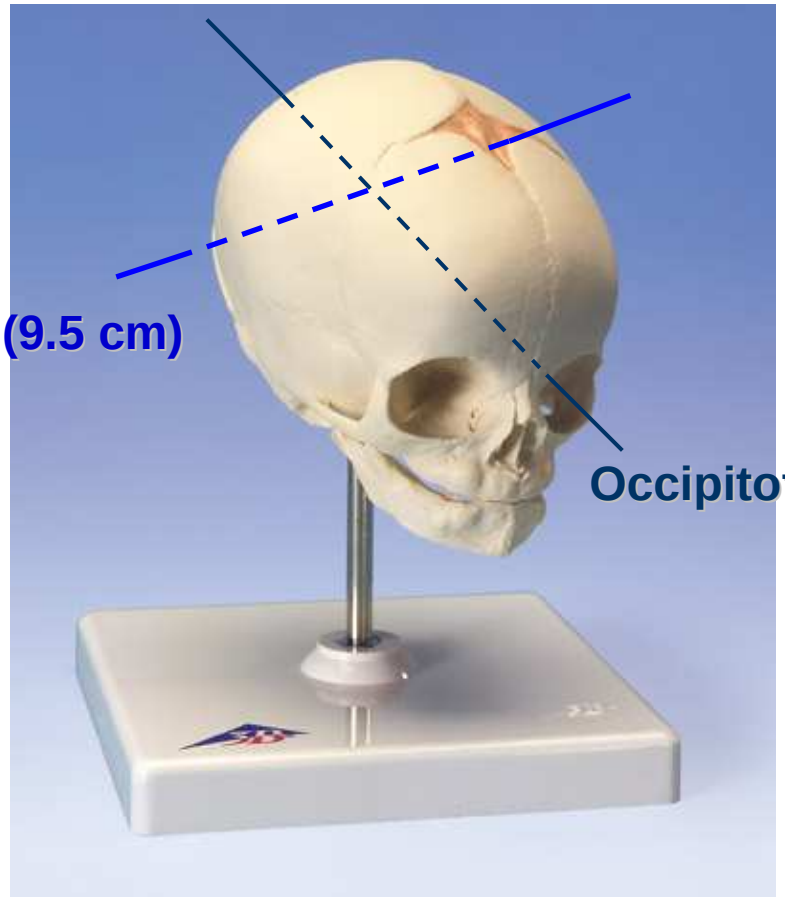
Anatomical landmarks

- Fetal head



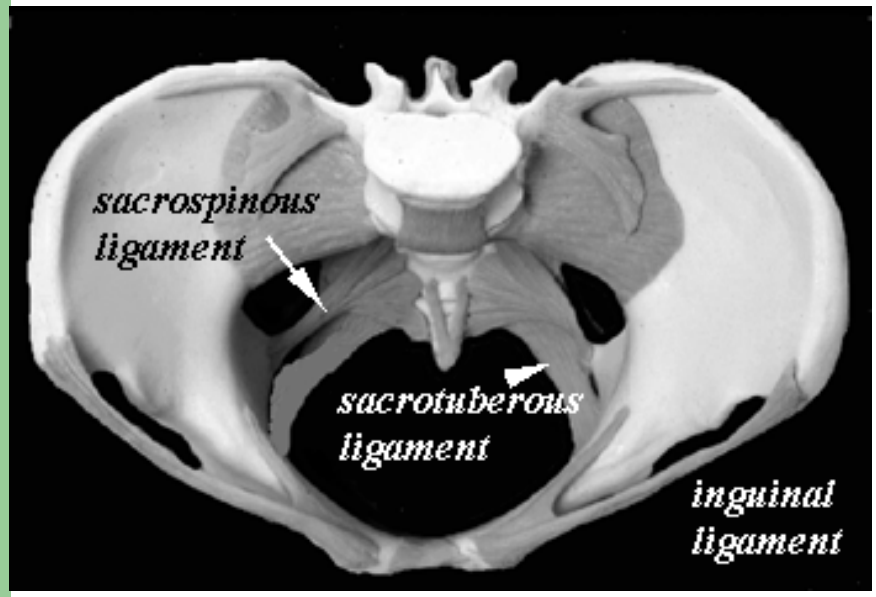
Anatomical landmarks

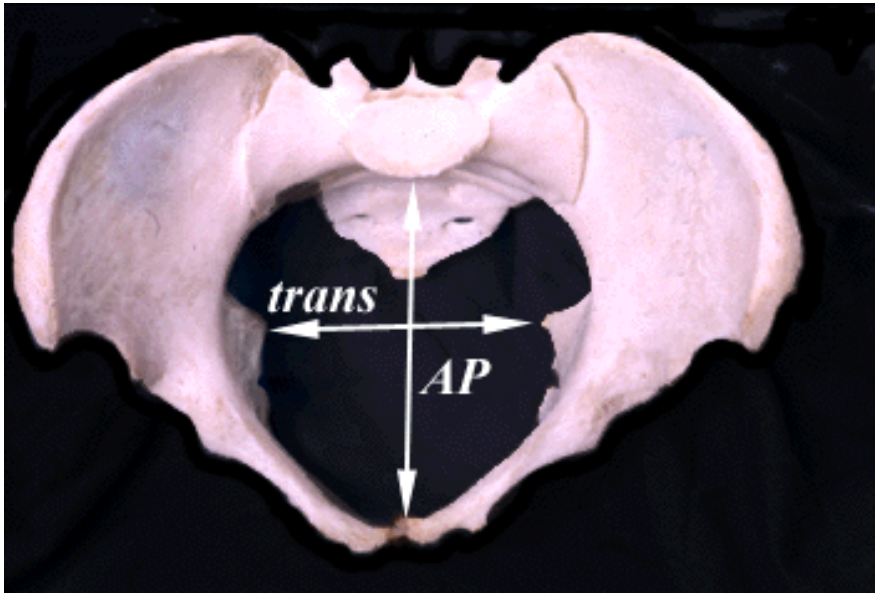
- Fetal head



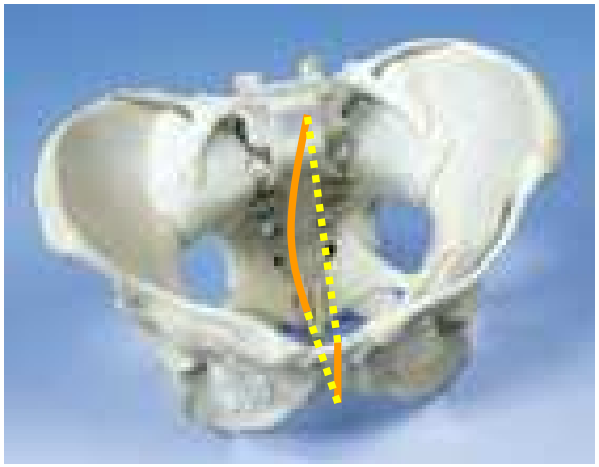
Anatomical landmarks

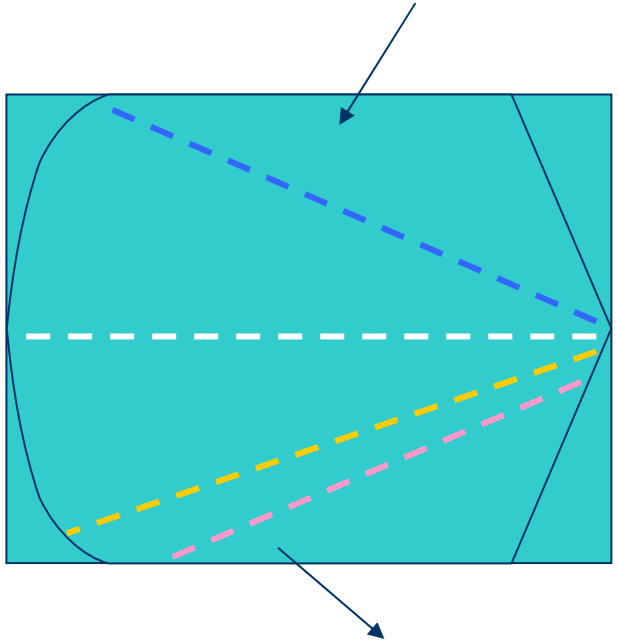
- Female Pelvis





Anatomical landmarks

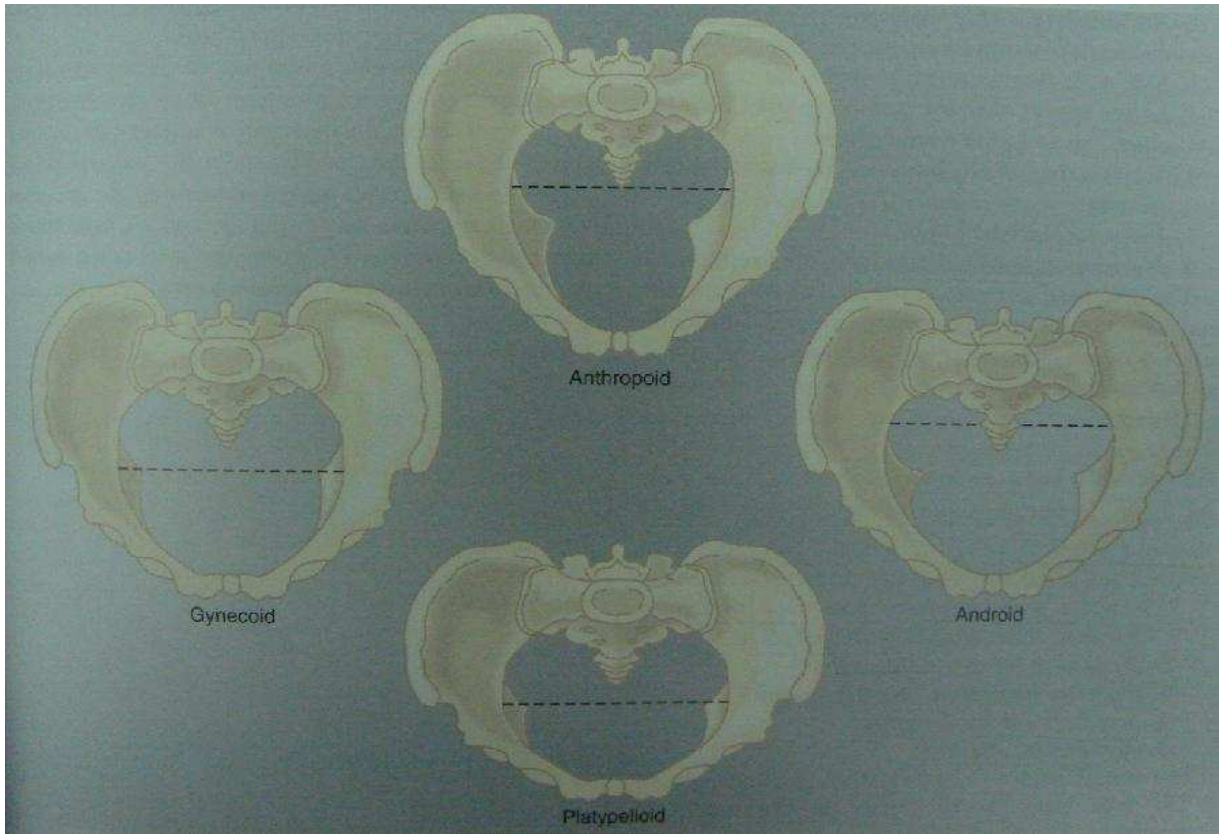




Anatomical landmarks

- Female Pelvis

- Gynecoid **G = Good**
- Android **DD = Bad**
- Anthropoid **PD = Fair**
- Platypelloid **PP = Bad**



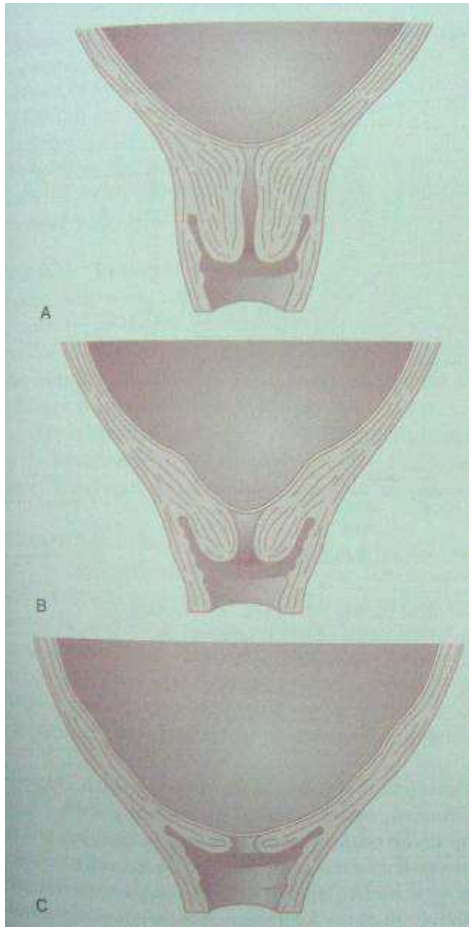
Preparation for Labor

- **Lightening:- Fetal head settles into the prim of the pelvis (flat up.Abd Vs. prominent L.Abd)**
  - **2 or more weeks before labor**
  - **In Multigravida occurs early in labor**

- **False Labor:- Unpredictable and sporadic mild painless uterine contractions (can be rhythmic), not associated with cervical dilatation or effacement "Braxton Hicks"**
  - **4 to 8 weeks before real labor**
  - **Reach up to once every 10 to 20 min**

Preparation for Labor

- **Cervical effacement:- Thinning of the cervix as it is taken up into the lower uterine segment. This happens simultaneously with softening of the cervix as a result of Increased water content & collagen lysis**
  - **Release of mucous plug → bloody show**



Stages of labor

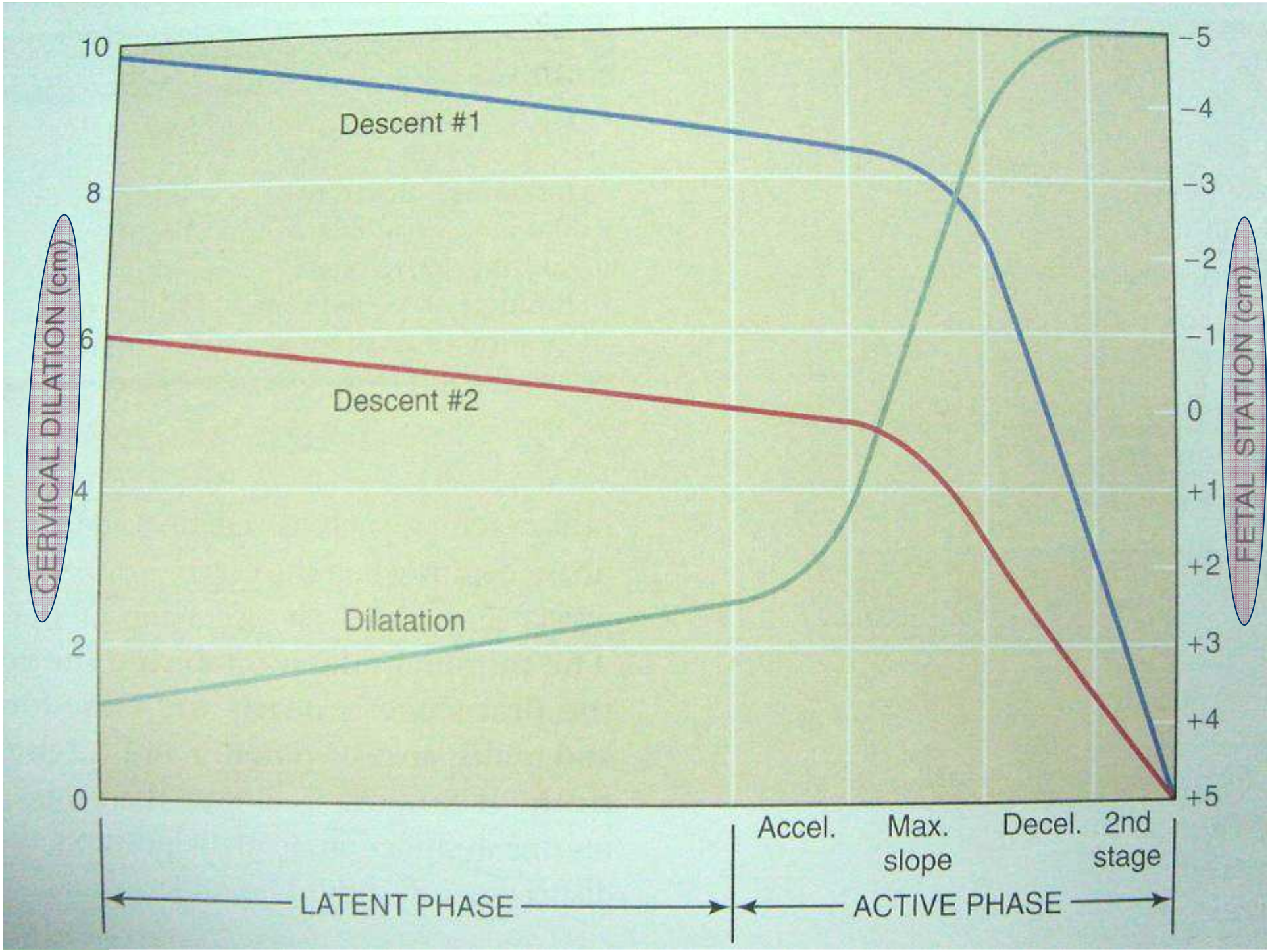
The onset of labor is defined as regular, painful uterine contractions resulting in progressive cervical effacement and dilatation.

- **4 stages**
- 1st stage:- from the onset of labor to complete dilation of the cervix
- 2nd stage:- to the birth of the baby
- 3rd stage:- to the delivery of the placenta
- 4th stage:- to stabilization of the patient's condition "till 6 hours postpartum"

1st Stage

- **Latent phase:-** cervical effacement + early dilation
- **Active phase:-** More rapid cervical dilation occurs (after 3-4 cm of dilation)

- Primipara Vs. Multipara
  - **Length:- 6-18 hrs / 2-10 hrs**
  - **Rate of C.dilation:- 1 cm/hr / 1.2 cm/hr**


10
8
6
4
2
0
CERVICAL DILATION (cm)
Descent #1
Descent #2
Dilatation
−5
−4
−3
−2
−1
0
+1
+2
+3
+4
+5
FETAL STATION (cm)
Accel.
Max. slope
Decel.
2nd stage
LATENT PHASE
ACTIVE PHASE

Progress is slower??

*Uterine dysfunction??

*Fetal malposition??

*Cephalopelvic disproportion??

1st Stage

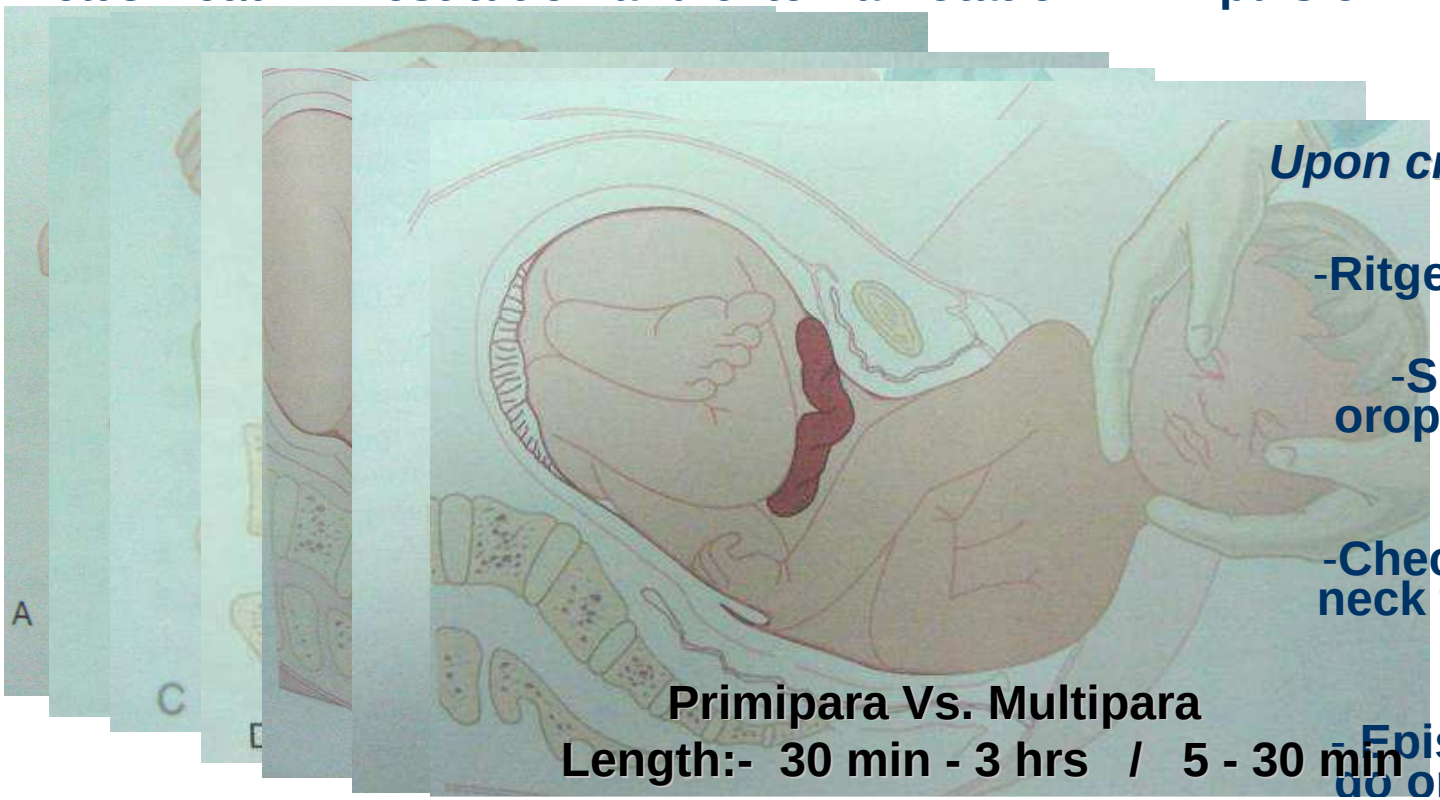
- Management
  - Position:
    - lateral recumbent should be encouraged
  - IVF:
    - Avoid oral fluids
    - Crystalloid during labor
    - Oxytocin after placental delivery
    - Treatment of any unanticipated emergency
  - Investigations:
    - Blood
    - Urin
  - Maternal monitoring every 1 – 2 hours (vitals and I/O)
  - Analgesia

1st Stage

- **Management (cont..)**
  - **Fetal monitoring (internal or external):**
    - **If no obstetric risk → every 30 minutes in stage 1**
      → every 15 minutes in stage 2
    With obstetric risk → every 15 minutes in stage 1
      → every 5 minutes in stage 2
  - **Uterine activity:**
    - **By palpation for frequency, duration and intensity every 30 minutes**
    - **For high risk pregnancies → monitored continuously with fetal heart rate**
  - **Vaginal examination:**
    - **In the active phase, cervix assessed every 2 hours (more = more risk of infection)**
  - **Amniotomy:**
    - **Increase uterine contractility**
    - **Increase risk of chorioamnionitis, umbilical cord compression or prolapse**

2nd Stage

●**Descent** (greater) → **Flexion** (change diameters) → **Internal rotation** → **Extension** (crowning +/- episiotomy) → Delivery of the fetus' head → **Restitution and external rotation** → **Expulsion**



Upon crowning…

-**Ritgen maneuver**

-**Suction of oropharynx and nares**

-**Check the fetus' neck for wrapped cord**

-**Episiotomy "to do or not to do"**

Primipara Vs. Multipara
Length:- 30 min - 3 hrs / 5 - 30 min

To episiotomy or not to episiotomy??

- An episiotomy is an incision through the vaginal wall and the perineum to enlarge the vaginal opening and facilitate childbirth.

- 2 types
  - **Median episiotomy "may extend to a 3rd or 4th degree tear**
  - **Mediolateral episiotomy "associated with large bleed and poor healing"**

To episiotomy or not to episiotomy??

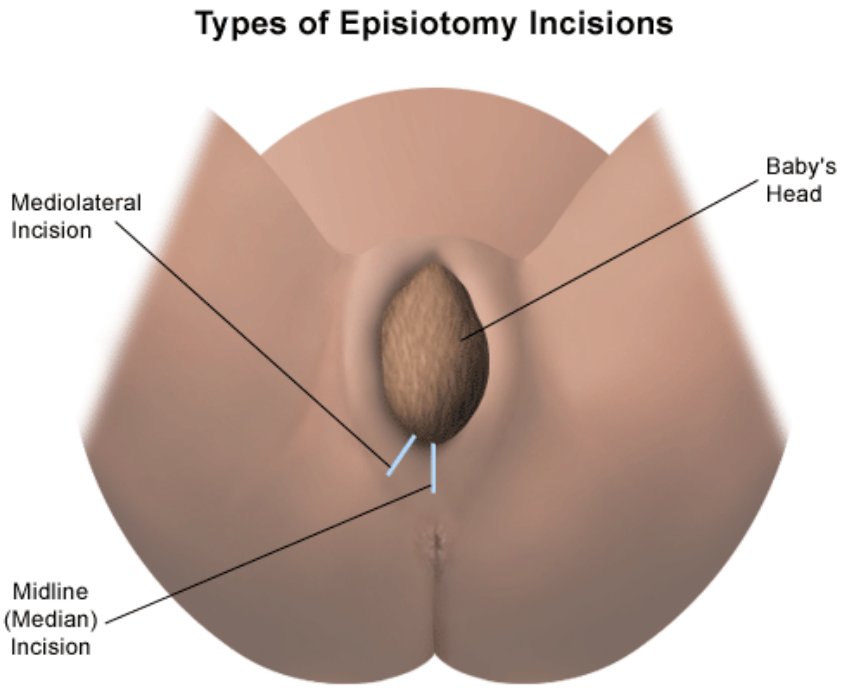
- concluded that episiotomies prevent anterior perineal lacerations (which carry minimal morbidity), but fail to accomplish any of the other maternal or fetal benefits traditionally ascribed, including prevention of perineal damage and its sequelae, prevention of pelvic floor relaxation and its sequelae, and protection of the newborn from either intracranial hemorrhage or intrapartum asphyxia. In the process of affording this one small advantage, the incision substantially increases maternal blood loss, the average depth of posterior perineal injury, the risk of anal sphincter damage and its attendant long-term morbidity (at least for midline episiotomy), the risk of improper perineal wound healing, and the amount of pain in the first several postpartum days.

Woolley RJ.

Benefits and risks of episiotomy: A review of the English-language literature since 1980. Part I & II. Obstet Gynecol Survey 1995; 50:806-820

To episiotomy or not to episiotomy??

- **When to episiotomy??**
  - **fetal distress**
  - **complicated birth such as a breech presentation or shoulder dystocia**
  - **prolonged second stage (>2 hrs)**
  - **forceps or vacuum delivery**
  - **large baby**
  - **preterm baby**



2nd Stage

- Management
  - Maternal position
    - Not supine
  - Bearing down
  - Fetal monitoring
    - No Ob risk →every 15 minutes
    - With Ob risk → every 5 minutes
  - Vaginal examination
    - Every 30 minutes
    - Attention should be maid to descent, flexion, internal rotation and molding

2nd Stage

- **Management**
  - **Delivery of the fetus**
    - **Posterior lithotomy position**
    - **Skin cleansed with antiseptic solution**
    - **Episiotomy during crowning if needed**
    - **Airway cleared after using the Ritgen maneuver (no nasal suction in fetal distress or meconium stained liquor)**
    - **Check the neck for wrapped cord by the index finger**
      - **Can be slipped**
      - **Or cut between 2 clamps if too tight**
    - **Shoulders are delivered be applying downward traction on the fetal head for anterior shoulder, and upward traction for posterior shoulder (brachial plexus!!)**
    - **Cord is clamped within 15 – 20 sec**

3rd stage

- **Immediately after baby's delivery**
  - Cervix and Vagina should be inspected for lacerations → repair
  - Delivery of the placenta Usually occurs within 2 – 10 minutes… (30 min. max.)
  - Squeezing of the fundus is NOT recommended
  - Signs of placental separation
    - A fresh show of blood from the vagina
    - Lengthening of umbilical cord
    - Fundus of the uterus rises up
    - Uterus becomes firm and globular

3rd stage

- Placental delivery
  - Start traction gently with counter pressure between the symphysis and fundus
  - Pay attention for uterine bleeding (placental implantation site)
  - Uterine massage and the use of oxytocin may be considered
  - Placenta should be examined to insure it is complete
  - If the patient is at risk of hemorrhage (anemia, prolonged oxytocic augmentation, multiple gestation or hydramnios)
    - Manual removal of the placenta
    - Manual exploration of the uterus
  - Episiotomy repair + laceration repair

4th stage

- The hour immediately following the delivery requires close observation
  - Vitals
  - Uterine blood loss
- Think of!!
  - Uterine relaxation
  - Retained placental fragments
  - Un-repaired laceration
  - Occult bleeding


Ok then…. Enough with all of you
Where is the pediatrician???


Thanks for
your attention