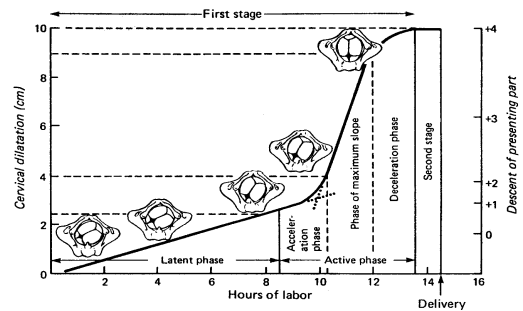


Labour Management

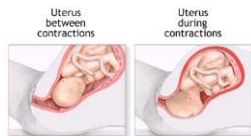
Clerkship Seminar Week 1
University of Western Ontario

Labour and Birth



First Stage of Labour

- **Definition:**
 - Onset of labour
→ full dilatation
 - Latent phase: 0-4 cm
 - Active phase: 4-10 cm



ADAM

- **True Labour:** regular uterine contractions causing progressive cervical dilation

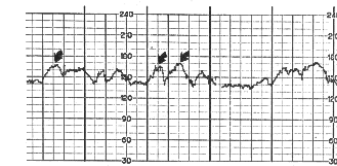
Describe FHR Patterns Heart rate

- **Baseline**
 - Normal 120-160 beats per minute (bpm)
 - Tachycardia >160 bpm
 - Bradycardia <120 bpm
- **Accelerations**
 - > 10 bpm from baseline
- **Decelerations**
 - > 10 bpm from baseline
- **Type of decelerations**
 - Early, late, variable or mixed-pattern decelerations
- **Baseline variability**
 - + or - 5 bpm

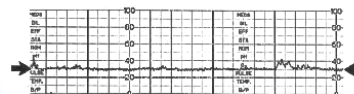
First Stage of Labour

- **Fetal Heart Rate (FHR) Monitoring**
 - **Intermittent:**
 - q 15 min 1st stage / q 5 min 2nd stage
 - **Continuous:**
 - Meconium staining of amniotic fluid
 - High risk – Preeclampsia, bleeding, abN FHR
 - Induction / Augmentation – Syntocinon
 - VBAC (Vaginal Birth After Caesarian)

Fetal Wellbeing in Labour

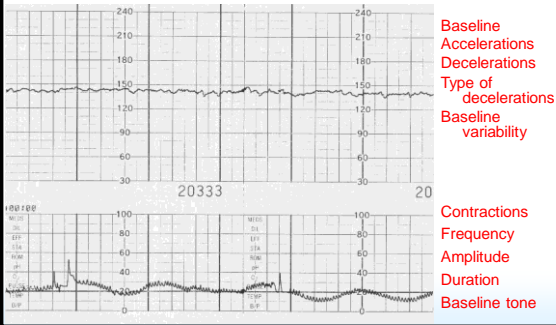


- Baseline
- Accelerations
- Decelerations
- Type of decelerations
- Baseline variability

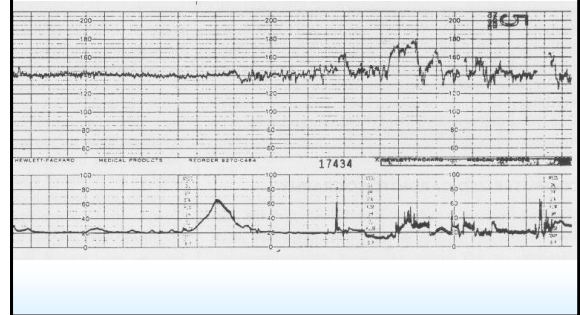


- Contractions
- Frequency
- Amplitude
- Duration
- Baseline tone

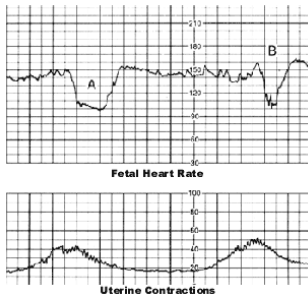
Intrapartum Fetal Monitoring 1



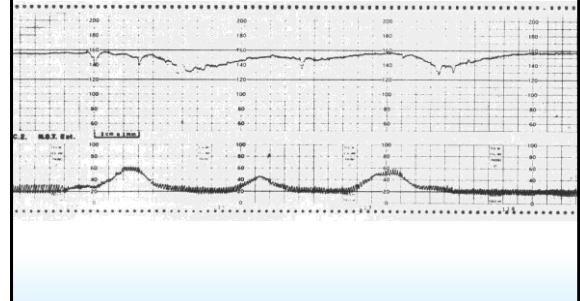
Intrapartum Fetal Monitoring 2



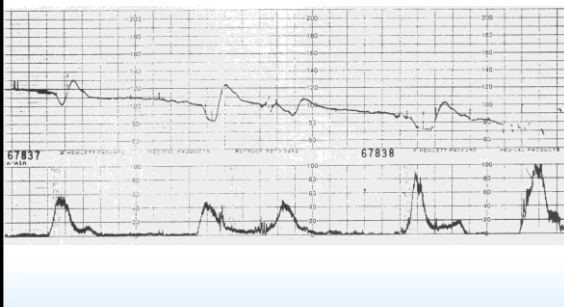
Intrapartum Fetal Monitoring 3



Intrapartum Fetal Monitoring 4



Intrapartum Fetal Monitoring 5



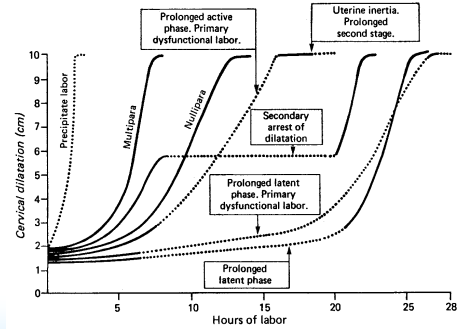
Assessment of Uterine activity

- Contractions
 - yes/no
- Frequency of contractions
 - Optimally every 2-3 min
- Amplitude
 - 40-60 mmHg
- Duration
 - 60-90 seconds
- Baseline tone
 - <15 mmHg

Progress in First Stage of Labour: Monitoring

- **Contractions:**
 - by palpation – q 30 min early
 - Tocometer – in high risk or slow progress
- **Cervical change:**
 - Q 2 hours in early labour
 - Sooner based on patient symptoms, FHR
 - Assess dilation, effacement, station

Friedman Curve



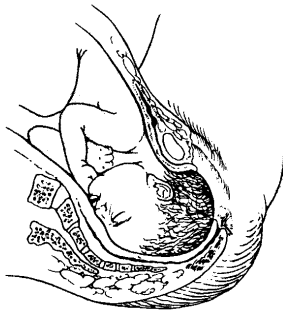
Friedman Curve (1967)

- Normal curves of progress of labour
- Not strict rules, but guideline
- **First stage**
 - 6 - 18 hrs primip / active phase 1.2 cm/hr
 - 2 – 10 hrs multip / active phase 1.5 cm/hr

Labour Dystocia (Failure to progress)

- Most common cited reason for C/S
 1. Passage – Abnormal pelvis
 2. Passenger – LGA fetus
 3. Powers
 - poor contraction pattern
 - poor pushing

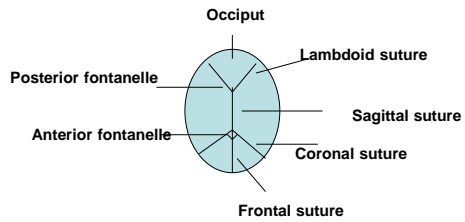
Labour and Birth Second stage



Second Stage of Labour

- **Definition:**
 - Full dilatation → delivery of fetus
- **Friedman:** 30 min – 3 hrs primip
5 min – 30 min multips
- **Progress monitored by station**
 - 0 = ischial spines
 - 1-5 cm (or thirds) of total distance

Fetal Position

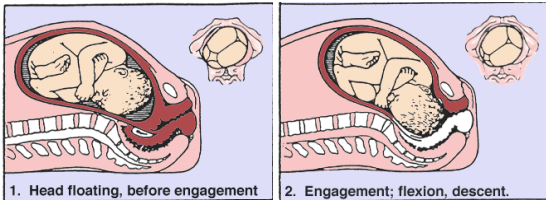


Labour and Birth

Mechanism of Normal Labour (Cardinal movements)

- Engagement
- Descent
- Flexion
- Internal rotation
- Extension
- External rotation
- Expulsion

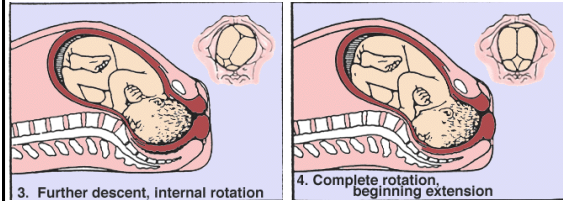
Cardinal Movements



1. Head floating, before engagement

2. Engagement; flexion, descent.

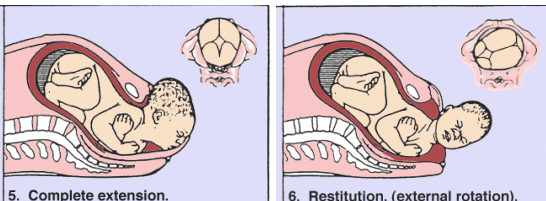
Cardinal Movements



3. Further descent, internal rotation

4. Complete rotation, beginning extension

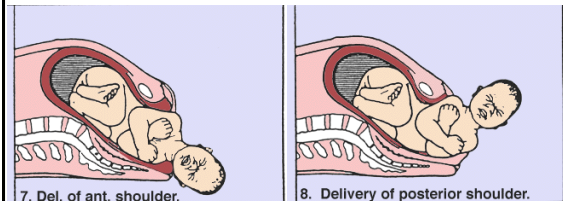
Cardinal Movements



5. Complete extension.

6. Restitution, (external rotation).

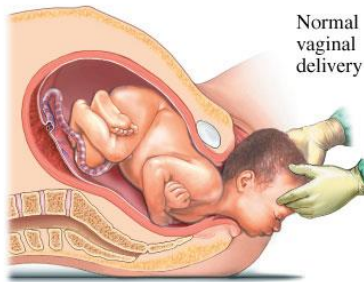
Cardinal Movements



7. Del. of ant. shoulder.

8. Delivery of posterior shoulder.

Vaginal Delivery

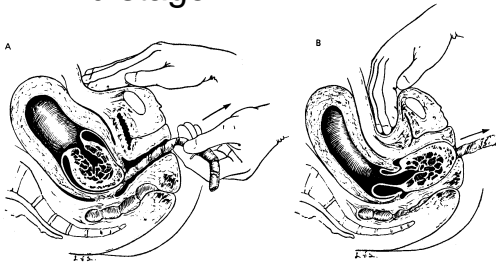


Second Stage of Labour

- Pelvic architecture issues:
- Best outcomes with gynecoid & android
- Cardinal movements may be inhibited by narrow or flat pelvis
- Trial of labour is only true test of pelvic adequacy

Labour and Birth

Third stage



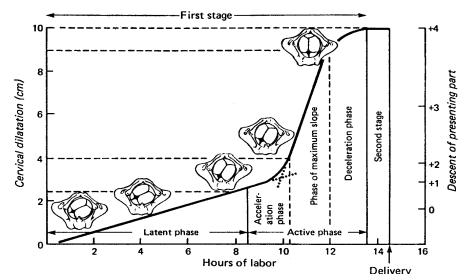
Third Stage of Labour

- Definition:
 - delivery of fetus → expulsion of placenta
- Timeline – 2 – 30 min
- Active management – WHO / SOGC
 - Uterotonic agents (Syntocinon / Misoprostil)
 - Gentle traction on cord
 - Fundal massage

Third Stage of Labour

- Signs of separation
 1. New onset bright bleed
 2. Lengthening of cord
 3. “balling up” of fundus
- Uterine involution – oxytocin mediated
- Inspection and repair of lacerations

Labour and Birth Summary



Analgesia

- Natural supported labour
- Narcotics
- Nitrous/Oxygen inhalation
- Regional analgesia (Epidural)

Induction

- **Indications:**
 - Post dates
 - Preeclampsia
 - Diabetes Mellitus
 - Maternal disease (cardiac)
 - PROM / IUGR

Induction

- **Methods**
 - Syntocinon – synthetic oxytocin
 - Prostaglandins – Cervidil, Prostin gel, Misoprostol
 - ARM – artificial rupture of membranes, may be enough to initiate labour

Augmentation

- Failure to progress
- Oxytocin infusion
- Titrate to good contraction pattern and cervical change
- Intrauterine pressure catheter (IUPC)

Caesarian Section

- **Indications**
 1. Failure to progress
 2. Non-reassuring FHR status
 3. Previous caesarian section
 4. Fetal malpresentation – breech, transverse
- **Responsible for 70% of sections**



Labour Dystocia (Failure to Progress)

- **Most common cited reason for C/S**
 1. Passage – Abnormal pelvis
 2. Passenger – LGA fetus
 3. Powers – poor contraction pattern
 - poor pushing

C/S Technique



- **Standard Uterine Incision**
 - Lower uterine segment
 - Transverse
 - Low risk of rupture in subsequent labour (0.5%)
- **Vertical (Classical), or “T” Incision**
 - High risk of rupture in subsequent labour (5%)