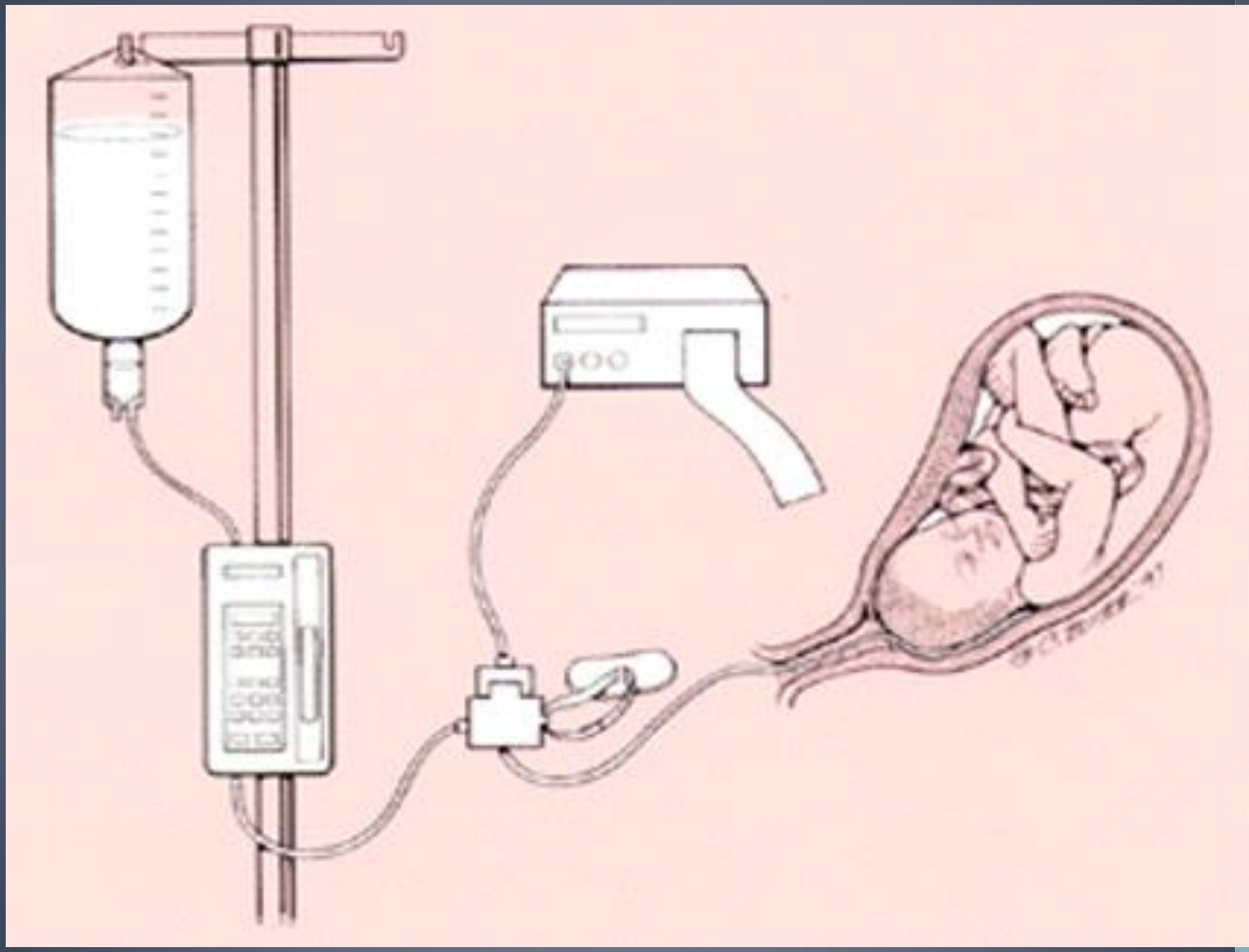
COMPLICATIONS DURING LABOR AND BIRTH

AMNIOINFUSION

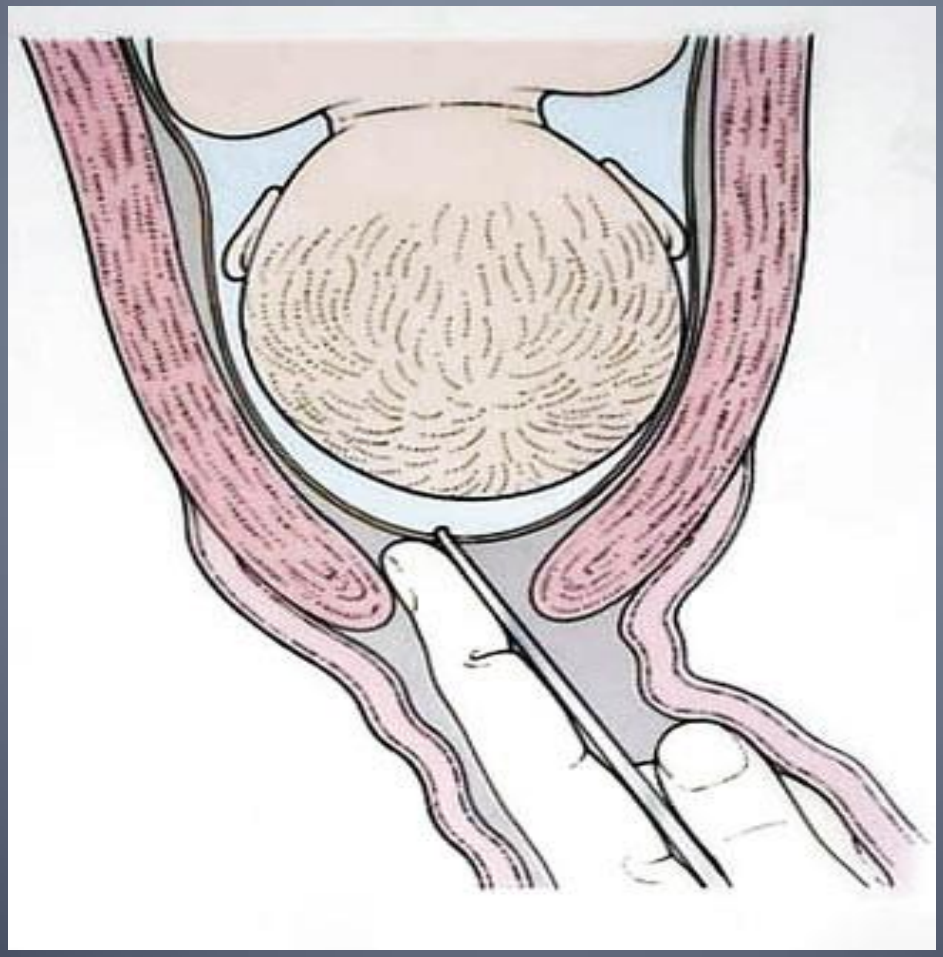
- Injection of warm saline into the uterus after the membranes have ruptured
- Replaces the cushion for the umbilical cord
- Indications
  - Oligohydramnios
  - Umbilical cord compression
  - Helps reduce variable decelerations
  - Dilution of meconium stained fluid



AMNIONOTOMY

- Artificial rupture of membranes
- Stimulates prostaglandin production which stimulates labor
- Committed to labor, no turning back
- Complications
  - Prolapse of umbilical cord
  - Infection
  - Abruptio Placenta

AMNIOTOMY



NURSING CARE FOR AROM

- Monitoring fetal heart before and after for changes indicative of cord compression
- Observe color, amount, odor of fluid
- Monitor progress of labor
- Monitor for infection
- Provide comfort

INDUCTION AND AUGMENTATION OF LABOR

- See indications page 174 bullets
- See contraindications page 175 bullets
- Cervix must be “ripe” or ready
- Cervical readiness determined by Bishops Score; page 175
  - Score of 6 or higher based on assessment per your book, some resources say 8 or higher
- Cervix can be “ripened” with prostaglandins before induction
  - This is often done when the Bishop’s score is not 8 or above.

CERVICAL RIPENING

- Fetal heart baseline
- Heparin Lock placed
- Prostaglandin insert placed
- Observation for 2 hours for hyperstimulation
- If procedure goes well, mother may go home and return the next day for induction or start induction 4-6 hours after ripening

PROSTAGLANDIN HYPERSTIMULATION

- Uterine contractions that last more than 90 seconds
- More than five contractions in 10 minutes
- Remove insert
- If gel, clean vagina out with wet gauze

ALTERNATIVES TO PROSTAGLANDIN

- Laminaria inserts
- Foley catheter bulb
- Sex; Semen has prostaglandin in it
- Orgasm causes an increase in oxytocin
- Nipple stimulation increases level of oxytocin
- Walking, light exercise

PITOCIN INDUCTION

- Pitocin is the synthetic form of oxytocin which stimulates contractions
- Does not cross the blood brain barrier
- Contractions can be stronger and more painful than Mom's own contractions
- Started at a very low rate and gradually increased until Mom is having active labor
- Must have continuous monitoring of fetus and contractions

COMPLICATIONS OF PITOCIN

- Fetal compromise
- Uterine rupture
- Water intoxication
- Increased pain
- Increased risk of c section

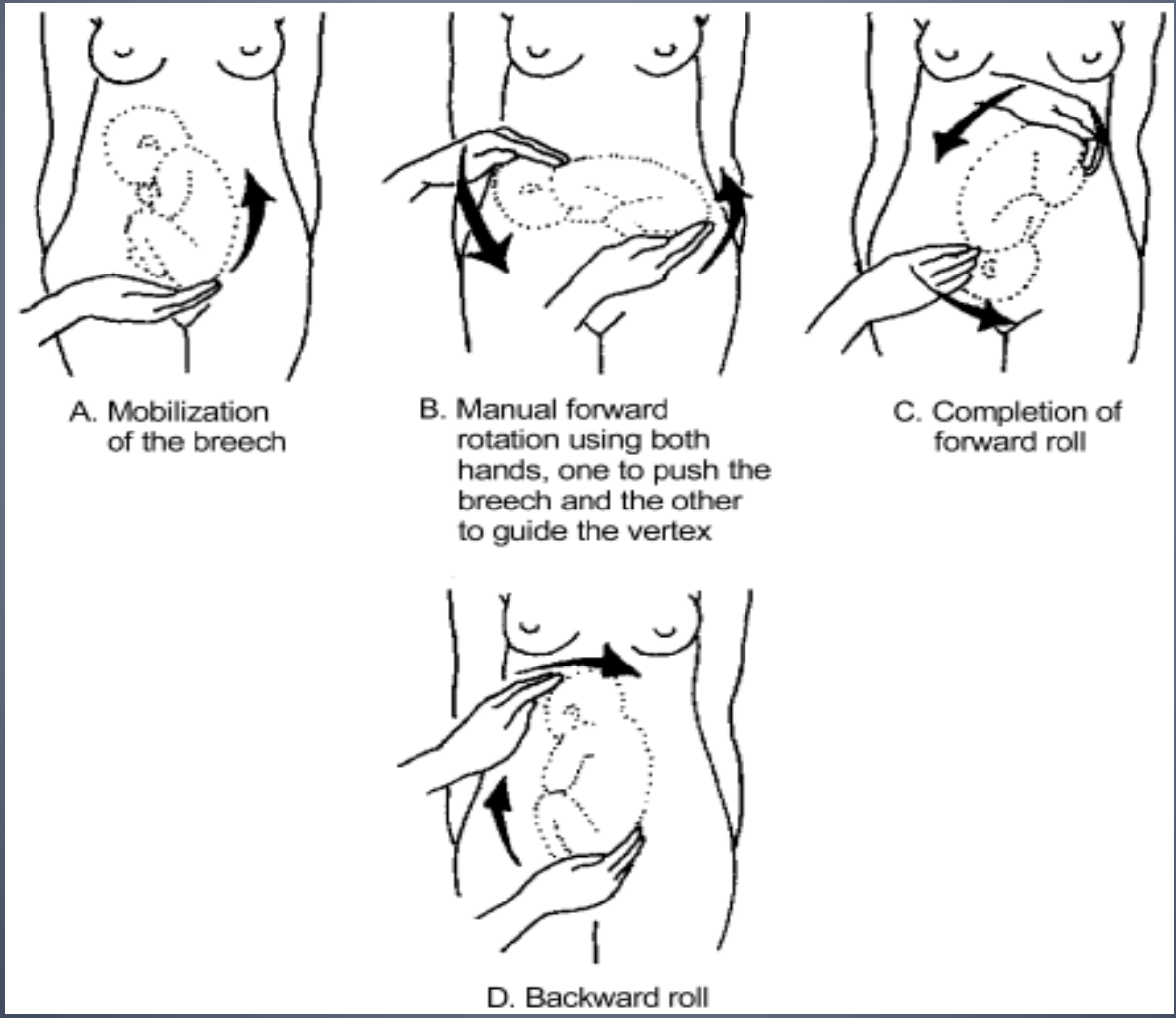
COMPLICATIONS

- If either fetal compromise or if contractions are outside of normal parameters:
  - Shut off oxytocin
  - Run IV to dilute oxytocin
  - Change woman's position
  - O2 10L/minute tight face mask

VERSION

- Method of changing fetal presentation
- See contraindications on page 176-77
- Done after 37 weeks
- Start with non stress test and biophysical profile
- Terbutaline to relax the uterus
- Done under ultrasound
- Observed for two hours before being sent home
- Rhogam to Rh negative mothers.

FETAL VERSION



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

EPISIOTOMY AND LACERATIONS

- Episiotomy: surgical cutting to allow more room and to prevent lacerations
  - It is thought that episiotomies heal easier than lacerations by some health care providers
- Lacerations: a tear during birthing of vaginal or perineal tissues
- See degrees of laceration on page 177
- See nursing tip on page 177

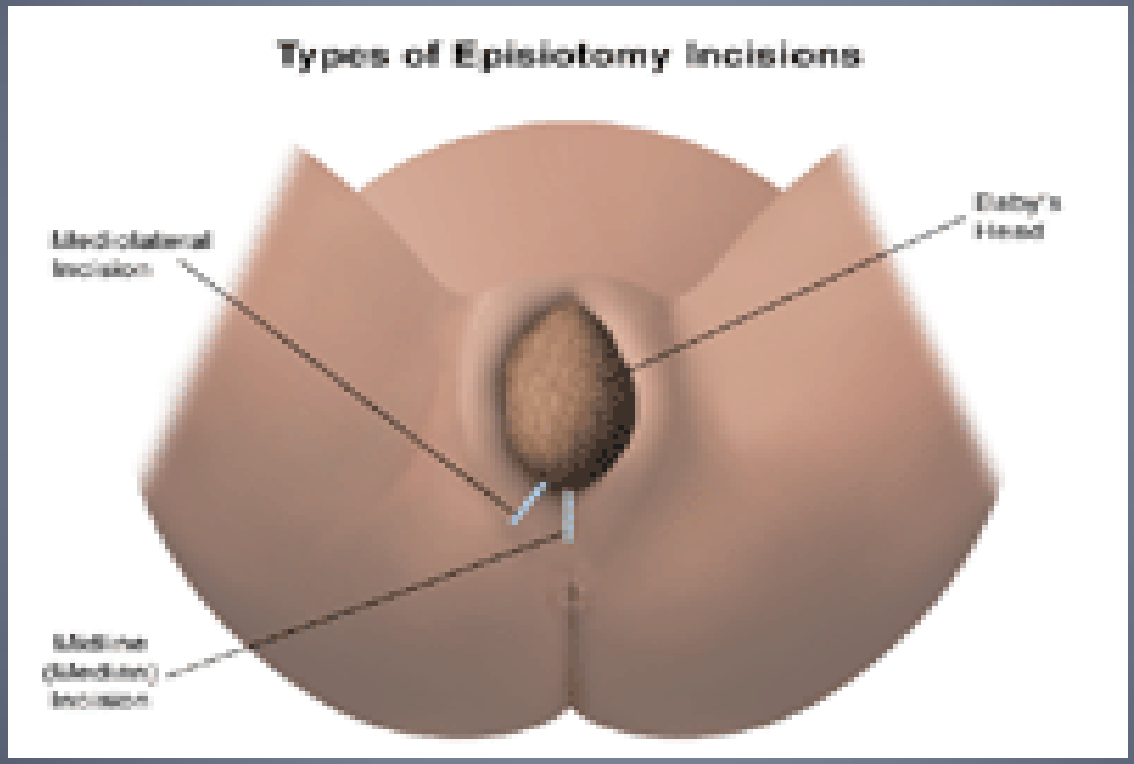
PREVENTION

- Often not considered by providers
- Includes:
  - Physiologic pushing according to mom's urges
  - Slower controlled birth
  - Pushing upright or side lying are noted to be helpful

Risks of Episiotomy
Technique of Episiotomy

Risk	Technique
Infection Extension of the episiotomy into the rectal tissues	Median or midline - Easier to repair - Heals neatly Mediolateral or to the left - Provides more room - Less likely to extend into rectal sphincter

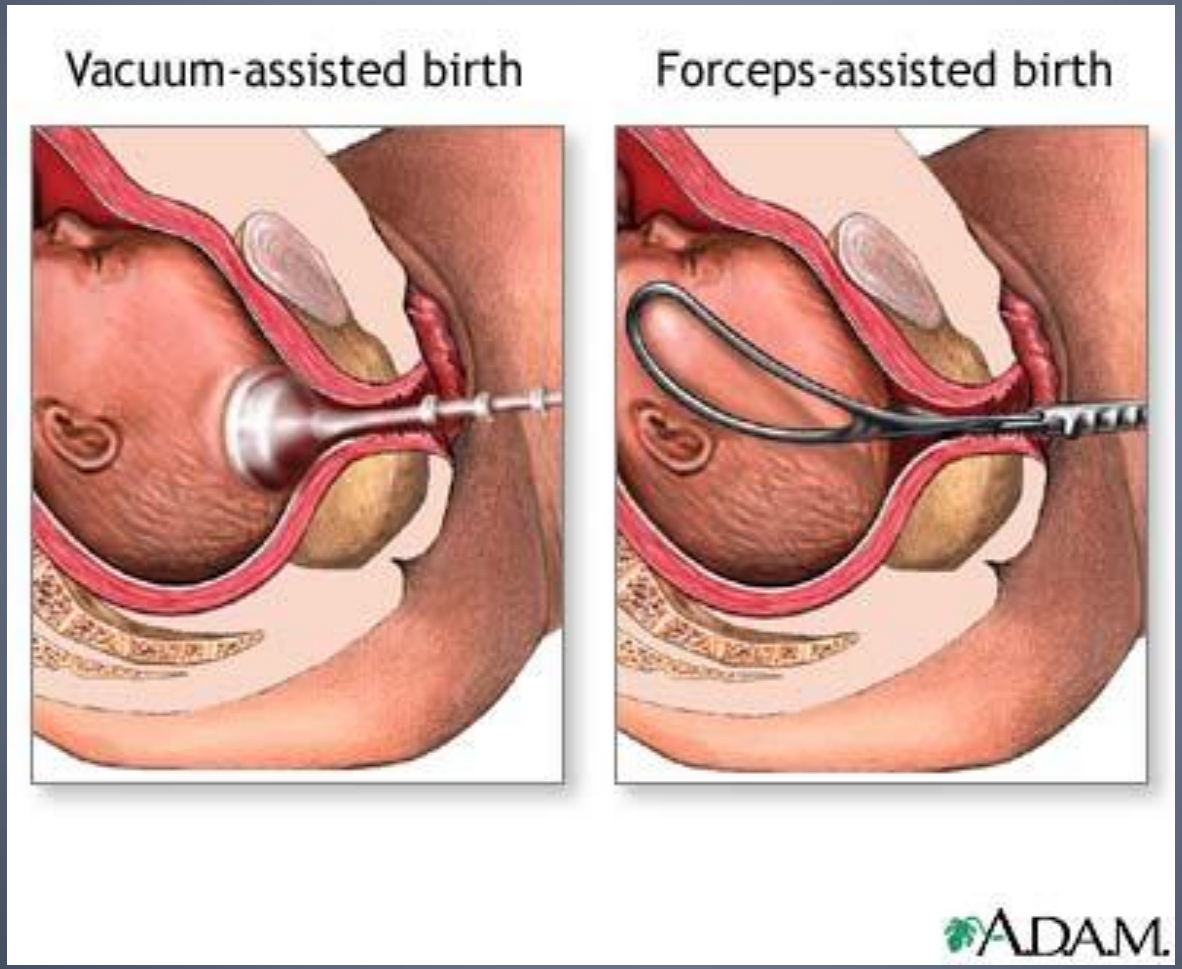
TYPES OF INCISIONS



NURSING CARE OF EPISIOTOMY OR LACERATION

- Cold compresses first 12 to 24 hours
- Warm compresses there after
- Sitz baths
- Oral analgesics
- Lidocaine sprays
- Assessment for infection, hematoma and hemorrhage from episiotomy or laceration

FORCEPS AND VACUUM ASISSTED DELIVERY



FORCEPS AND VACUUM EXTRACTION INDICATIONS

- Mom is exhausted
- Mom has medical needs to ease the delivery
- Infant is showing signs of distress
  - Cervix fully dilated
  - Membranes are ruptures
  - Bladder empty
  - Fetal position at +2 station

RISKS

- Trauma to maternal tissue
  - Vaginal lacerations
  - Vaginal hematoma
  - Perineal lacerations
- Trauma to fetus
  - Bruising, lacerations abrasions
  - Cephalohematoma
  - Intracranial hemorrhage

NURSING CARE

- Ice
- Careful assessment for vaginal or perineal lacerations and hematoma
- Assessment of infant for trauma/nerve damage

CESAREAN SECTIONS

- Indications page 180
- Contraindications page 180
- Risks page 180
- Although your book says that c sections are not usually done if the fetus is dead they are done if the mother's health is at risk to deliver vaginally.

PRE-OP

- Lab studies
- Drug to reduce gastric acidity
- Antibiotics
- Indwelling foley catheter
- Shaving
- Cleansing of the abdomen

RECOVERY

- VS q 15 minutes for 1-2 hours
- IV maintenance
- Fundus for firmness, height and midline position
- Dressing for drainage
- Lochia
- Urinary out put
- Cough, deep breath and moving
- Compression stockings
- Pain management
- Support of incision when moving and breast feeding

HYPERTONIC LABOR DYSFUNCTION

- Occurs during latency
- Frequent, cramp like
- Painful, non productive
- Tense uterus even between contractions
- RX:
  - Mild sedation
  - Occasionally terbutaline to relax

HYPOTONIC LABOR

- Contractions too weak to be effective
- Usually occurs with over distended uterus
- RX:
  - Amniotomy
  - Labor augmentation
  - Position changes
  - Upright positions and moving
  - Nipple stimulation

COMPARE AND CONTRAST

- See textbook page 186 to compare and contrast hypertonic and hypotonic labor

INEFFECTIVE MATERNAL PUSHING

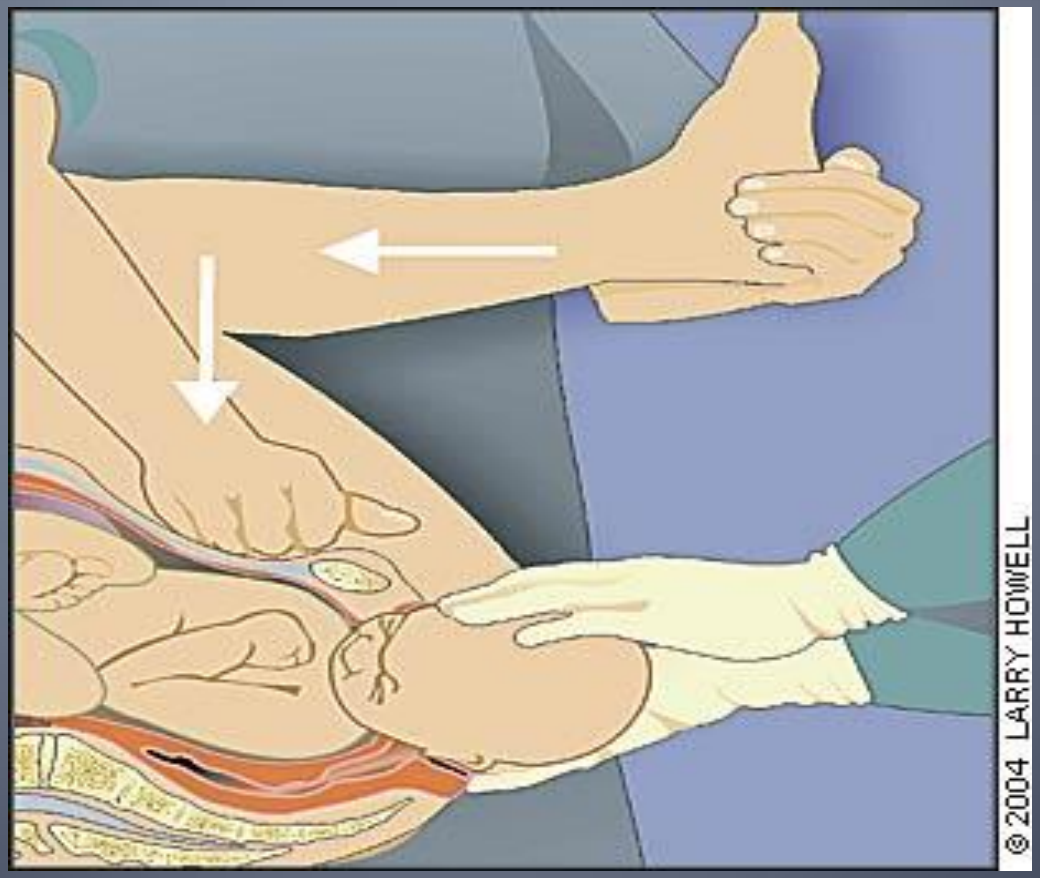
- Exhaustion
- Fear
- Not being able to sense contractions and pushing efforts
- Not knowing how to push

MACROSOMIC FETUS

- Book defines at 4000 grams, some resources set at 4200 or 4500 grams.
- Complications include
  - Shoulder dystocia
  - Episiotomy and lacerations
  - Maternal hematomas
  - Uterine atony and hemorrhage post partum
  - Birth injury to baby
    - Nerve injury
    - Clavicle injury

SHOULDER DYSTOCIA HELP

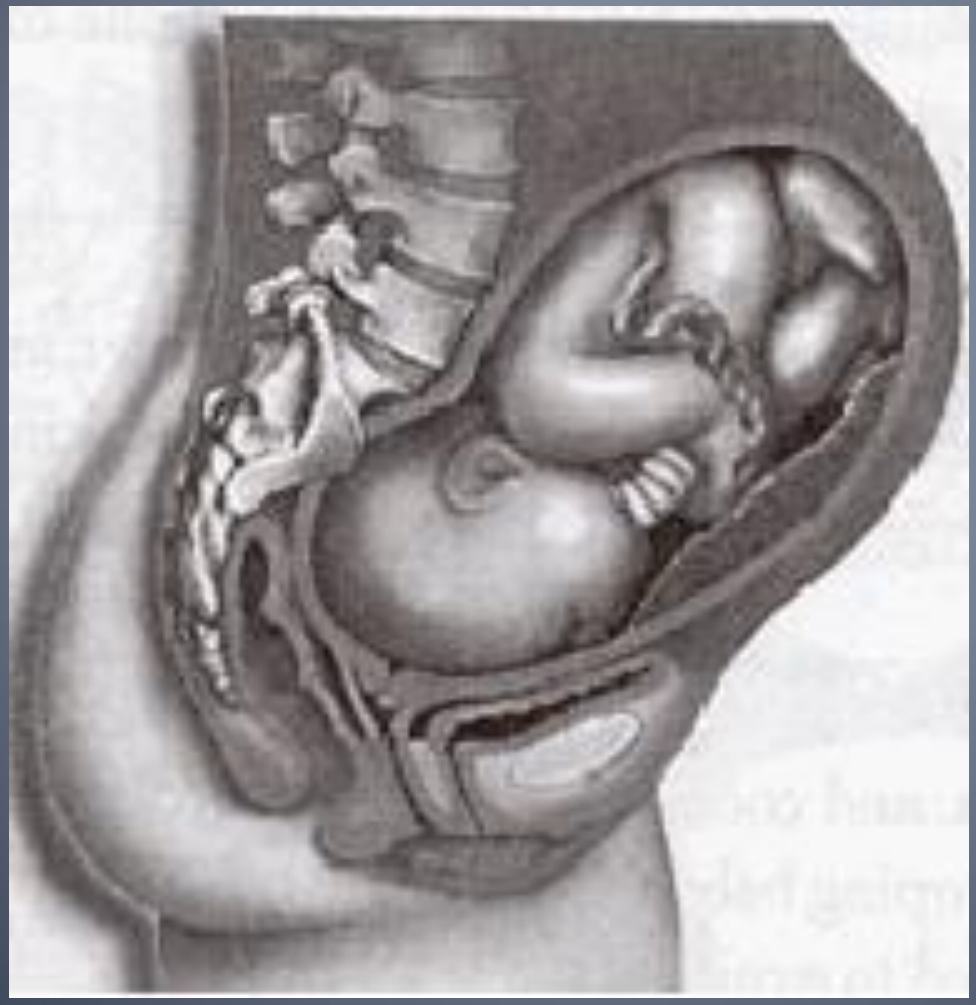
- Mc Roberts Maneuver and supra pubic pressure



ABNORMAL FETAL PRESENTATIONS

- Breech
  - Usually a C-Section in the US
- Asynclitic
  - Head tilted to one side of the other
- Posterior
  - Most common issue

BACK LABOR

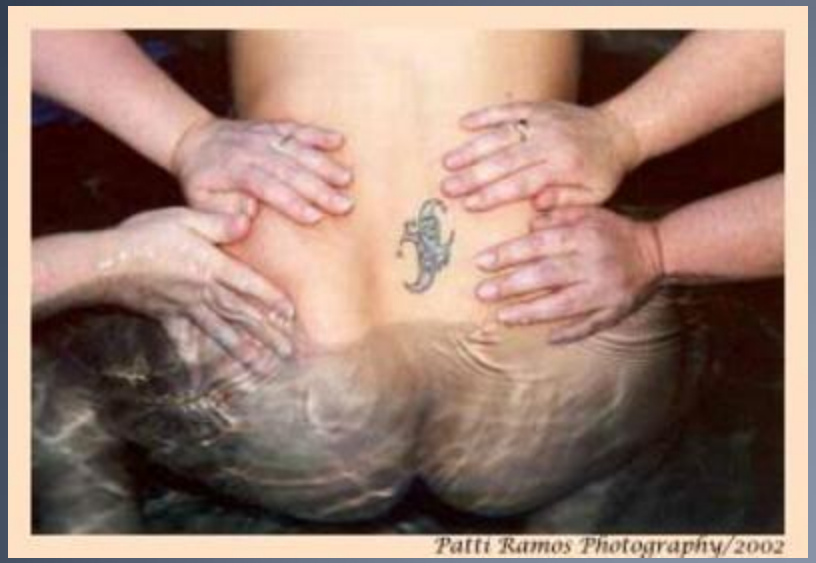


POSTERIOR BABIES, WHAT WE CAN DO TO HELP

- Know the position pre labor and teach Mom suitable positions at home to encourage baby to turn before labor
- Know positions in labor to help baby turn
  - See bullets page 189
  - (make correction on bullet on page 189)
  - In side lying if the baby is in a ROP position lay on the right side and on the left side if in a LOP positions
- Offer Mom comfort measures for back labor pain

COMFORT MEASURES FOR BACK LABOR

- Warm or cold compresses depending on mom's preference.
- Counter pressure to the back with
  - Heal of hand
  - Fist
  - Tennis ball or other ball
  - Do this continuously throughout the contraction
- Double hip squeeze
  - Do this continuously throughout the contraction
- Jacuzzi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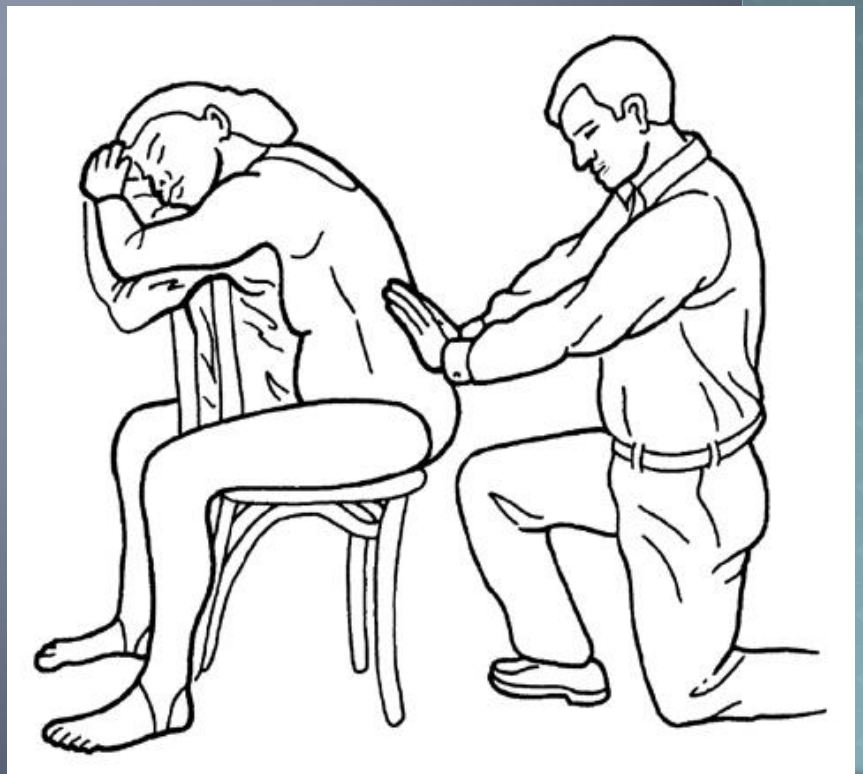


PELVIS AND SOFT TISSUE PROBLEMS

- Not big enough pelvic outlet
  - Cephalo pelvic disproportion
- Soft Tissue obstructions
  - Full bladder, void every two hours
  - Fibroid tumors
  - Scarred cervix
- Another thought; poorly relaxed muscles.

THE PSYCHE

- Anxiety releases hormones that reduce contractility of the uterus
- Negative aspects of “flight/fight”
  - Uses glucose
  - Diverts blood from uterus
  - Increase tensions in pelvic floor
  - Increase perception of pain

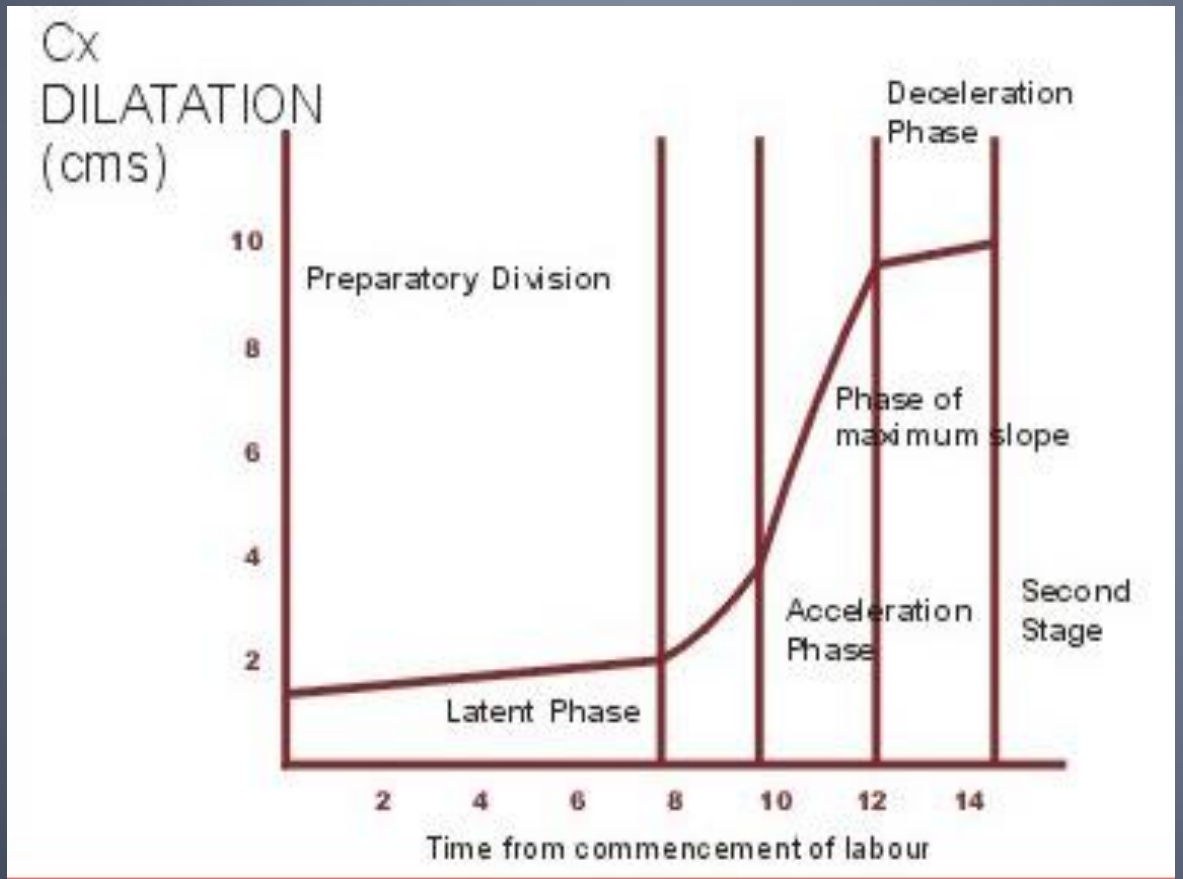
WHAT NURSES CAN DO

- Honor cultural traditions
- Assist with coaching if coach not available or if coach needs assistance
- Offer non pharmacologic comfort measures
- Give anticipated reassurance on condition

PROLONGED LABOR

- Based on the “Friedman curve”
- “normal” progress is considered to be (during active labor)
  - 1.2 cm/hr for woman having her first child
  - 1.5 cm/hr for woman having her second child

FRIEDMAN'S CURVE



Friedman's curve showing phase of maximum slope

WORK BOOK ON PAGE 74

PRECIPITATE BIRTH

- Labor and birth completed in less than three hours
- Sometimes Mom's don't know they are having or had labor until they are ready to push
- The don't need to push, the contractions are doing enough on their own!!
- Complications:
  - Maternal birth trauma: lacerations and hematomas
  - Infant birth trauma: nerve damage and intracranial damage due to very rapid birth.

WHAT TO DO IF BABY IS COMING

- Don’t try to transport on own, call 911
- Lie Mom in side lying position and support upper leg, slows baby down
- Gentle pressure to baby’s head, don’t push back in just slow the delivery a little bit
- Check for cord around neck after delivery of head
- Clean out mouth and nose
- Hold tight for delivery of the body, it comes fast

THE BABY IS HERE!!!

- Place baby on Mom's lower abdomen until cord has stopped pulsating.
- Once cord has stopped pulsating put baby on Mom's chest, skin to skin and encourage breast feeding.
- Observe baby for ABCs
- Observe Mom for firm fundus once placenta is delivered.
- Do not cut cord just keep placenta near Mom and remember it is attached when moving baby

PREMATURE RUPTURE OF MEMBRANES

- PROM and PPROM
- PPROM is before 37 weeks gestation
- Diagnosed by nitrazine paper turning blue
- If at 36 weeks gestation (some resources would say 34 weeks) labor is induced within 24 hours

NURSING CARE FOR PROM OR PPROM

- Observe for maternal infection
  - Fever
  - Uterine tenderness
  - Fetal tachycardia
- Observe for fetal compromise
  - May be related to cord compression
  - May be related to infection
- Teach patient bullets on page 192 if going home
- Fetal kick count error in book; 10 kicks in a 2 hour period

PRETERM LABOR

- Labor between 20 and 37 weeks gestation
- At 37 weeks considered term
- Fetal fibronectin may be predictive of labor
- Maternal symptoms page 193 bullets
- Risk factors box 8-2 page 193

PRETERM LABOR MEDICAL CARE

- Magnesium Sulfate
- Terbutaline
- Ritrodine
- Prostaglandin synthesis inhibitors: Indomethacin
- Calcium channel blockers Nifedipine or Procardia

MAGNESIUM SULFATE

- Carefully observe for toxicity
  - Unable to arouse
  - Diminished or absent reflexes
  - Respiratory depression
  - Therapeutic level 4-7
- If unsuccessful fetus may experience
  - Drowsiness, respiratory depression
  - Interacts with aminoglycosides when utilized as antibiotics for the fetus

TERBUTALINE

- Increased pulse
- Increased blood pressure
- Increased blood glucose
- If labor continues infant may have compounded trouble with hypoglycemia

RITRODINE

- Hypotension
- Cardiac arrhythmias
- Pulmonary edema
- Increased blood glucose

CALCIUM CHANNEL BLOCKERS

- Procardia or nifedipine
- Vasodilation and flushing
- Hypotension can be a problem

INDOMETHACIN

- Used rarely
- May close ductus arteriosis
- Is not used after 34 weeks gestation because of the increased risk of closing the ductus arteriosis
- May reduce the amount of amnionic fluid

CONTRAINDICATIONS TO STOPPING PRETERM LABOR

- Pre eclampsia
- Placenta previa
- Abruptio placentae
- Chorioamnionitis
- Fetal demise

SPEEDING FETAL LUNG MATURATION

- Betamethasone
- Two IM injections 24 hours apart
- Given between 24-34 weeks gestation
- May be given later in Mom's with diabetes as diabetes slows fetal lung maturation

NURSING CARE

- Related to monitoring side effects and toxicity of medications utilized
- Activity restriction
- Fetal monitoring

PROLONGED PREGNANCY

- Pregnancy lasting longer than 42 weeks.
- Risks
  - Aging placenta may not be meeting needs of fetus
  - Infant may loose weight in utero
  - Utero placental insufficiency during labor
  - Hypoglycemia of infant at birth
  - If placenta if doing well, could lead to macrosomic infant

POST 40 WEEKS

- Twice weekly visits
- NSTs and biophysical profiles (81)
- Daily kick counts
- When reaches 42 weeks: induction

PROLAPSED UMBILICAL CORD

- Complete
- Palpated
- Occult
- See figures and bullets on page 194-195
- Risk factors
  - High in pelvis
  - Small fetus
  - Abnormal presentation
  - hydamnios

UTERINE RUPTURE

- A tear in the wall of the uterus
- Risk factors
  - Previous c sections
  - Grand multiparity
  - Oxytocin stimulation
  - Sustained blunt abdominal trauma

SYMPTOMS OF UTERINE RUPTURE

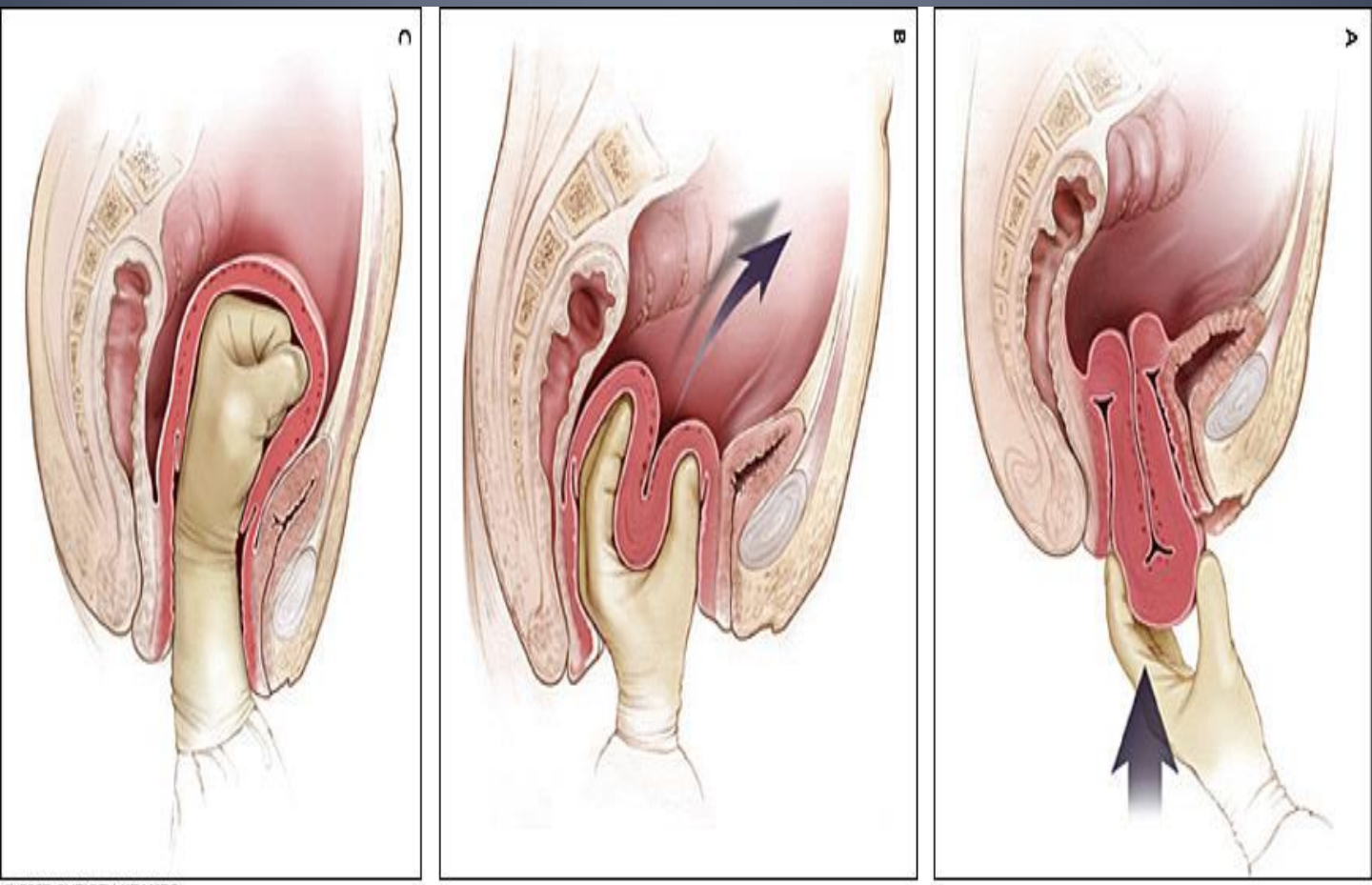
- Usually sudden onset of severe s/s
- Shock
- Abdominal pain
- Pain in the chest or between the scapula
- Cessations of contractions
- Abnormal or absent fetal heart tones
- Palpation of the fetus out side of the uterus

UTERINE INVERSION

- Partial or complete turning inside out of the uterus
- Rapid onset of shock because blood is not controlled at the site of the placenta
- Replacement of the inverted uterus under general anesthesia, emergency surgery
- Care centers around shock treatment and emergency surgery

RISK FACTORS TO UTERINE INVERSIONS

- Prior deliveries.
- Long labour (more than 24 hours).
- Use of the muscle relaxant magnesium sulphate during labour.
- Short umbilical cord.
- Pulling too hard on the umbilical cord to hasten delivery of the placenta, particularly if the placenta is attached to the fundus.
- Placenta accreta (the placenta has invaded too deeply into the uterine wall).
- Congenital abnormalities or weaknesses of the uterus.



AMNIOTIC FLUID EMBOLISM

- Amniotic Fluid and its particles enter Mom's circulation
- Abrupt onset of hypotension and respiratory distress
- Coagulation abnormalities occur
- Management
  - Emergency respiratory support
  - Replacement of coag factors
  - Packed red blood cells