# High Risk Labor & Birth

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## Dysfunctional Labor

- Problem with the "Powers"
  - Hypertonic Uterine Dysfunction
  - Hypotonic Uterine Dysfunction
- Risk factors
- Ultrasound to R/O CPD

## Hypertonic Uterine Dysfunction

- Nonproductive, uncoordinated ctx
- Frequent and prolong duration
- Problem with uterine relaxation
- Latent phase
- Uteroplacental insufficiency
- Maternal exhaustion

- Treatment

## Hypotonic Uterine Dysfunction (FTP)

- Active phase
- Ineffective or absent ctx
- Associated factors
- Assessment
- Treatment
  - Position changes
  - Ambulate
  - Induction/augmentation of labor
    - AROM
    - Pitocin

## Malpositions/ Malpresentation

- Malposition- other than OA
- Malpresentation- other than vertex
- Occipit posterior most common
- C/S may be necessary
- Nursing Interventions
  - Change positions
  - Counterpressure
  - May need operative vaginal delivery

## Breech Presentations

- Complete breech
- Frank breech
- Footling breech

- External Version
- C/S delivery
- May pass meconium

## Risk Factors for Dystocia #1

- Epidural analgesia/excessive analgesia
- Multiple gestation
- Hydramnios
- Maternal exhaustion
- Ineffective maternal pushing technique
- Occiput posterior position



## Risk Factors for Dystocia #2

- Longer first stage of labor
- Nulliparity, short maternal stature
- Fetal birth weight over 8.8 lb
- Shoulder dystocia
- Abnormal fetal presentation or position
- Fetal anomalies



## Causes of Dystocia #1

- Problems with powers
  - Hypertonic uterine dysfunction
  - Hypotonic uterine dysfunction
  - Protracted disorders
  - Arrest disorders
  - Precipitate labor
- Problems with the passageway
  - Pelvic contraction
  - Obstructions in maternal birth canal

## Causes of Dystocia #2

- Problems with passenger
  - Occiput posterior position
  - Breech presentation
  - Multifetal pregnancy
  - Macrosomia and CPD
  - Structural abnormalities (see Table 21.1)
- Problems with psyche: psychological distress



## Shoulder Dystocia

- Fetal Risks
  - Asphyxia, nerve damage, clavicle fx, CNS injury, death
- Maternal Risks
  - Postpartum hemorrhage, extensive lacerations, uterine rupture, infection, fistulas, bladder injury
- McRoberts maneuver
- Suprapubic pressure



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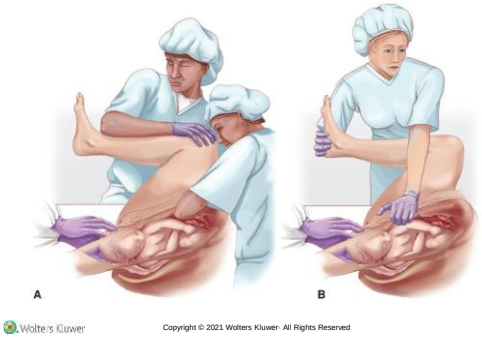
## Shoulder Dystocia






## Precipitate Labor

- Labor < 3 hors
- Maternal Risks
- Fetal Risks
- Management

- Precipitous delivery

## Preterm Labor

- Incidence
- Premature rupture of membranes (PROM)
- Preterm premature rupture of membranes (PPROM)

## Risks Factors for Preterm labor

- Dehydration
- Multiple gestiation
- Fetal abnormalities
- Hx of preterm birth
- Underweight
- BV, UTI
- DM,
- ↑ blood pressure
- Peridontal disease
- Poor weight gain
- Drug use
- Smoking
- Hx of cervical surgeries
- DES exposure

## Predicting Preterm Births

- Cervical length
- Previous hx etiology of PROM
- + fetal fibronectin (FFN) screening

## Management of Preterm Labor

- Identify cause
- Laboratory and diagnostic testing: CBC, UA, amniotic fluid analysis, fetal fibronectin, cervical length via transvaginal ultrasound, salivary estriol, home uterine activity monitoring
- Corticosteroid therapy for fetal lung maturity
  - Celestone
  - Betamethasone
  - Surfactant
- Limit activity/ Bedrest
- ↑ hydration
- Tocolytics
  - Terbulatine (Brethine)
  - Indomethacin
  - Magnesium Sulfate
    - < 25 weeks
    - < 34 weeks

## Postterm Labor

- Pregnancy continuing past end of 42 weeks' gestation
- Unknown etiology
- Maternal risks: cesarean birth, dystocia, birth trauma, postpartum hemorrhage, and infection
- Fetal risks: macrosomia, shoulder dystocia, brachial plexus injuries, low Apgar scores, postmaturity syndrome, and cephalopelvic disproportion



## Postterm Pregnancy: Assessment and Management

- Nursing assessment: estimated date of birth; daily fetal movement counts, nonstress tests twice weekly, amniotic fluid analysis, weekly cervical examinations, client understanding, anxiety, and coping ability
- Nursing management: fetal surveillance; decision for labor induction; support; education, intrapartal care



## Labor Induction and Augmentation

- Induction: stimulating contractions via medical or surgical means
- Augmentation: enhancing ineffective contractions after labor has begun
- Indications: prolonged gestation, prolonged premature rupture of the membranes, gestational hypertension, cardiac disease, renal disease, chorioamnionitis, dystocia, intrauterine fetal demise, isoimmunization, and diabetes

## Labor Induction: Therapeutic Management

- Cervical ripening (Bishop score, see Table 21.2)
- Herbal agents
- Castor oil, hot baths, enemas
- Sexual intercourse with breast stimulation
- Mechanical methods and surgical methods
- Pharmacologic agents (see Drug Guide 21.2)
- Oxytocin



## Induction/ Augmentation of Labor

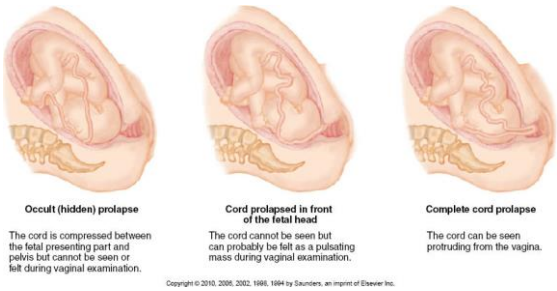
- Bishop's Scale
  - Dilation
  - Effacement
  - Consistency
  - Station
  - Position
- Prostaglandin therapy
- Amniotomy/ AROM
- Oxytocin Infusion

## Intrauterine Fetal Demise

- Numerous causes
- Devastating effects on family and staff
- Nursing assessment
  - Inability to obtain fetal heart sounds
  - Ultrasound to confirm absence of fetal activity
  - Labor induction
- Nursing management
  - Assistance with grieving process
  - Referrals

## Umbilical Cord Prolapse

- Cord is the presenting part
- Occult prolapse
- Complete prolapse
- Preventive Measures
- Management
  - Manually elevate presenting part off cord
  - Trendelenburg or knee chest position
  - O2
  - Warm saline on cord
  - Bladder filling



**Occult (hidden) prolapse**

The cord is compressed between the fetal presenting part and pelvis but cannot be seen or felt during vaginal examination.

**Cord prolapsed in front of the fetal head**

The cord cannot be seen but can probably be felt as a pulsating mass during vaginal examination.

**Complete cord prolapse**

The cord can be seen protruding from the vagina.



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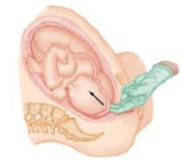
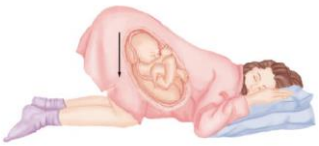


A gloved hand in the vagina pushes the fetus upward and off the cord.



Knee-chest position uses gravity to shift the fetus out of the pelvis. The woman's thighs should be at right angles to the bed and her chest flat on the bed.

The woman's hips are elevated with two pillows; this is often combined with the Trendelenburg (head down) position.

## Uterine Rupture

- Obstetric emergency; onset marked by sudden fetal bradycardia
- Nursing assessment
  - Risk factors
  - Onset of sudden fetal distress; other signs
- Nursing management
  - Preparation for urgent cesarean birth
  - Continuous maternal and fetal monitoring



## Amniotic Fluid Embolism

- Obstetric emergency
- Sudden onset of hypotension, hypoxia, and coagulopathy due to breakage in barrier between maternal circulation and amniotic fluid
- Nursing assessment: difficulty breathing, hypotension, cyanosis, seizures, tachycardia, coagulation failure, DIC, pulmonary edema, uterine atony with subsequent hemorrhage, ARDS, cardiac arrest
- Nursing management: supportive measures to maintain oxygenation and hemodynamic function and to correct coagulopathy; critical care monitoring



## Amniotic Fluid Embolism

- Treatment
  - CPR
  - Intubation
  - Hemodynamics
  - Central venous line
  - Immediate delivery

## Amnioinfusion

- Indications
  - Severe variable decelerations due to cord compression
  - Oligohydramnios due to placental insufficiency
  - Postmaturity or rupture of membranes
  - Preterm labor with premature rupture of membranes
  - Thick meconium fluid
- Nursing management: teaching, maternal and fetal assessment, preparation for possible cesarean birth

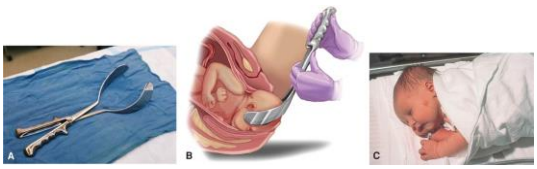


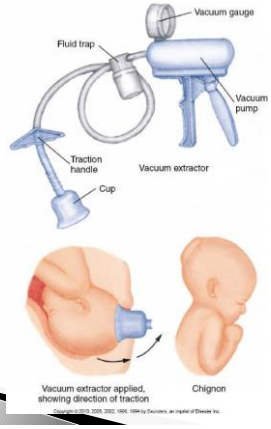
## Forceps- or Vacuum-Assisted Birth #1

- Application of traction to fetal head
- Indications: prolonged second stage of labor, nonreassuring FHR pattern, failure of presenting part to fully rotate and descend, limited sensation or inability to push effectively, presumed fetal jeopardy or fetal distress, maternal heart disease, acute pulmonary edema, intrapartum infection, maternal fatigue, infection
- Risk of tissue trauma to mother and newborn
- Prevention as key



## Forceps- or Vacuum-Assisted Birth #2






## Cesarean Birth

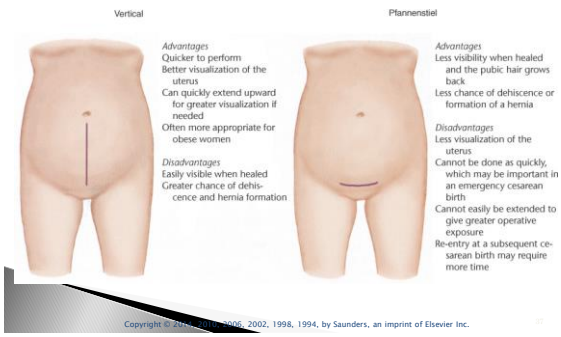
- Classic or low transverse incision (see Figure 21.8)
- Major surgical procedure with accompanying risks
- Nursing assessment: history and physical examination for maternal and fetal indications
- Nursing management
  - Preoperative care
  - Postoperative care



## Cesarean Birth: Technique

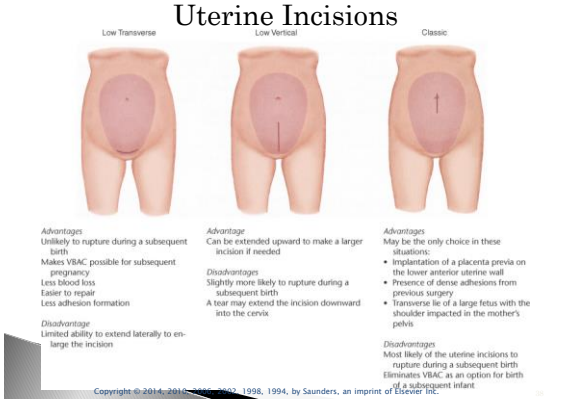
- Preparation
  - Anesthesia
  - Medication
  - Laboratory studies
  - Prophylactic antibiotics
  - Skin prep
  - Foley catheter

## Skin Incisions






## Uterine Incisions






## Vaginal Birth after Cesarean (VBAC)

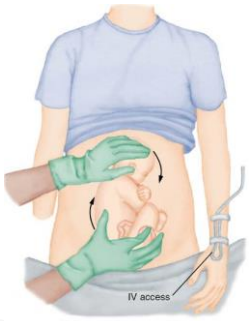
- Controversy related to risk of uterine rupture and hemorrhage
- Contraindications
- Special areas of focus: consent, documentation, surveillance, and readiness for emergency
- Nurses as advocates for clients; expertise in reading fetal monitoring tracings to identify nonreassuring pattern and instituting measures for emergency delivery

## Version: Indications

- External version
  - Change the fetal position from a breech, shoulder (transverse lie), or oblique presentation to cephalic
- Internal version
  - Change the position of a second twin in a vaginal birth



## External Version






## Internal Version