

# **GYNECOLOGY & OBSTETRICS**

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**I think I'm stressed...**



# What assessment and history information would you like to know?

- ▶ Most common complaints
  - ▶ Abdominal pain
  - ▶ Vaginal bleeding
- ▶ Include last menstrual period (LMP)
- ▶ Obstetrical
  - ▶ Gravida (G)
  - ▶ Para (P)
  - ▶ Abortion (AB)
- ▶ *Dysmenorrhea* – painful menstruation
- ▶ *Dyspareunia* – painful intercourse

# Physical Examination

- ▶ Respect patient's modesty/privacy
- ▶ Keep patient informed throughout interaction
- ▶ Abdominal exam – in your experience, what have you typically found?
- ▶ Saturating more than 2 pads per hour (approximately 80-100 mL/pad)
- ▶ DO NOT perform an internal vaginal exam
- ▶ What is of greatest physiological concern to you?

**What gynecological  
patient encounters, if  
any, have you  
responded to?**

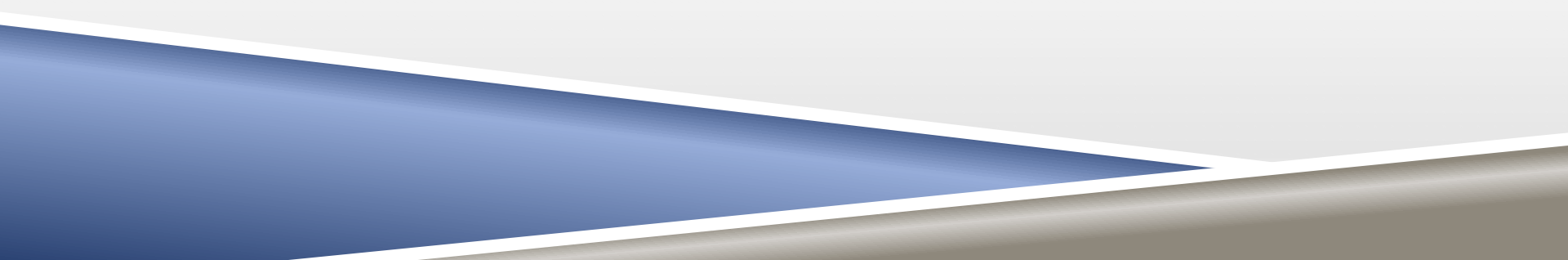
# Pelvic Inflammatory Disease (PID)

- ▶ Infection of the reproductive organs
- ▶ Most common cause of abdominal pain
- ▶ STIs commonly involved – gonorrhoea & chlamydia
- ▶ Predisposing factors
  - ▶ Multiple sex partners
  - ▶ Recent gynecological medical procedures
  - ▶ Use of intrauterine device (IUD)
- ▶ Complications
  - ▶ Infertility
  - ▶ Sepsis
  - ▶ Pelvic adhesions
  - ▶ Ectopic pregnancy

# PID – Signs & Symptoms

- ▶ Abdominal pain
  - ▶ Low and diffuse
  - ▶ Pain upon palpation with guarding and possible rebound tenderness
- ▶ Dyspareunia
- ▶ Shuffling gait – walking intensifies pain
- ▶ Increased pain leading up to and following menstrual period
- ▶ Vaginal discharge – yellow & foul odor
- ▶ Fever/chills
- ▶ Nausea/vomiting
- ▶ Tachycardia; usually normotensive

# **PID – Treatment Considerations**

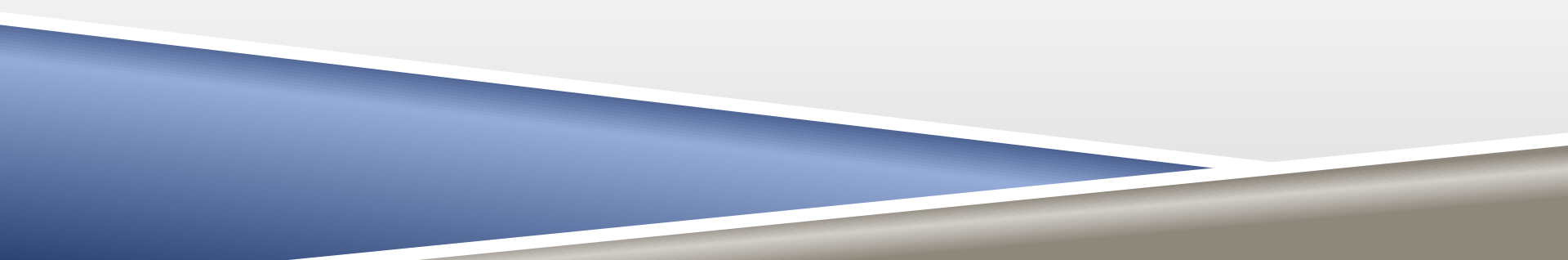
- ▶ **Position of comfort**
  - ▶ **Consider oxygen**
  - ▶ **IV access**
  - ▶ **Analgesics**
  - ▶ **Consider cardiac monitor**
  - ▶ **Antibiotics**
- 



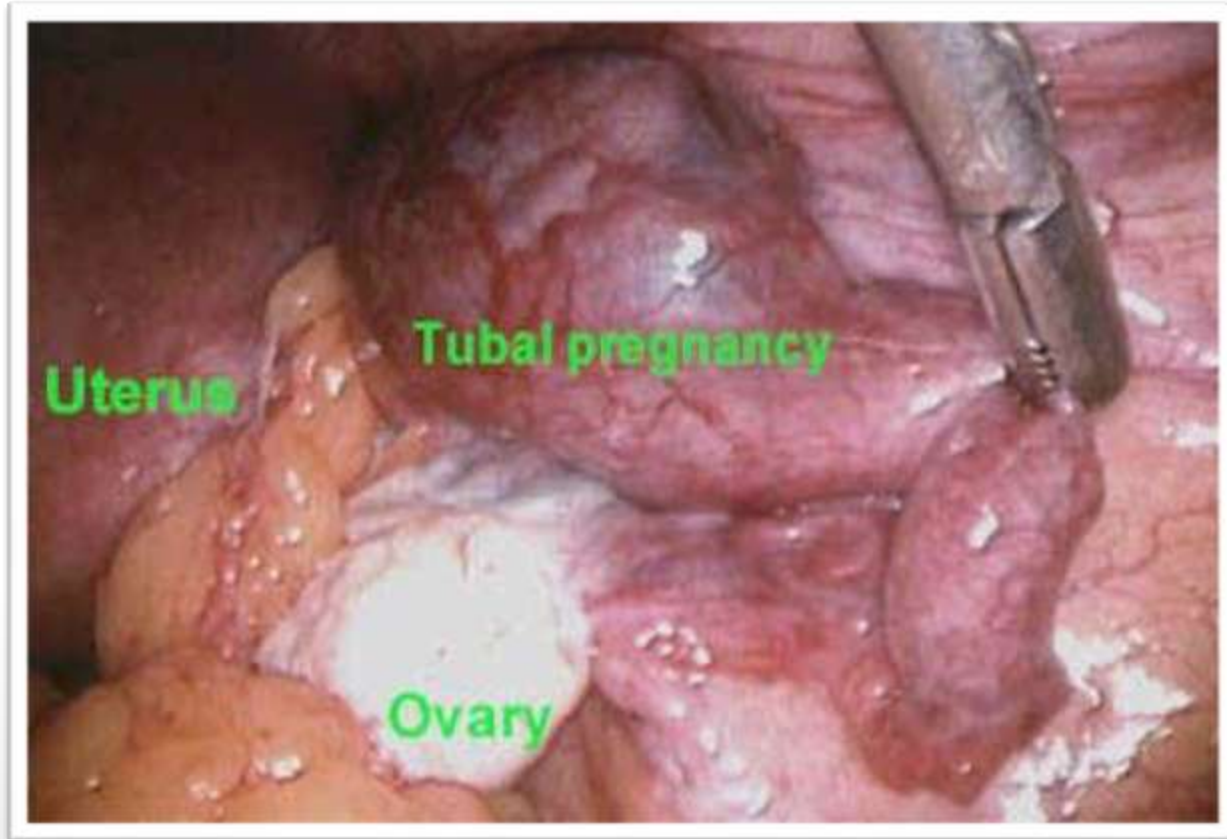
# Endometritis

- ▶ Infection of the endometrium
- ▶ Occurs as a complication of
  - ▶ Miscarriage
  - ▶ Childbirth
  - ▶ D&C or other gynecological procedures
- ▶ S/S
  - ▶ Diffuse low abdominal pain
  - ▶ Fever
  - ▶ Bloody, foul-smelling vaginal discharge
- ▶ Treatment considerations

# Endometriosis

- ▶ Endometrial tissue grows outside uterus
  - ▶ Tissue responds to hormonal changes that result in cyclic bleeding associated with menstrual period
  - ▶ Results in inflammation, scarring of tissue and development of adhesions
  - ▶ Treatment considerations
- 

# Ectopic Pregnancy (EP)



# Ectopic Pregnancy (EP)

- ▶ Implantation of fetus outside the uterus
  - ▶ Fallopian tubes (95%)
- ▶ Surgical emergency!
- ▶ Accounts for 1-5% of maternal mortality
- ▶ PID, IUD, endometriosis, & prior pelvic surgery increase risk for EP
- ▶ *When do ectopic pregnancies occur?*

# Ectopic Pregnancy – Signs & Symptoms

- ▶ Unilateral abdominal pain, radiates to shoulder
- ▶ Pain is initially diffuse, then sharp and localized
- ▶ Late or missed period, lighter than norm
- ▶ Possibly vaginal spotting/bleeding (rupture)
- ▶ Shock...

# Ectopic Pregnancy – Treatment Considerations

- ▶ 100% oxygen/SpO<sub>2</sub>
- ▶ IV access x-2, fluid resuscitate as needed
  - ▶ En route
  - ▶ Permissive hypotension
- ▶ Priority transport
  - ▶ Where do you want to transport a patient with suspected EP?

Assume any sexually active female of childbearing age with lower abdominal pain is experiencing an ectopic pregnancy...

POSITIVELY, THE  
WORST CASE OF  
'ECTOPIC' PREGNANCY  
I'VE SEEN



# **Sexual Assault**



# Sexual Assault Data

- ▶ Every 2-minutes someone in the US is sexually assaulted
- ▶ According to the FBI, sexual assault is “one of the most under-reported crimes...”
- ▶ 80% of victims know the assailant
- ▶ Estimated that 1 in 4 women and 1 in 6 men will be sexually assaulted at some point in their lifetime

# Sexual Assault and Adults

- ▶ 10.6% of women reported experiencing forced sex at some time in their lives
- ▶ 2.1% of men reported experiencing forced sex at some time in their lives
- ▶ 2.5% of women and 0.9% of men said they experienced unwanted sexual activity in the previous 12 months
- ▶ 20% to 25% of women in college reported experiencing an attempted or a completed rape in college

# Sexual Assault and Children

(17 years or younger)

- ▶ First raped before age 18
  - ▶ 60.4% of females
  - ▶ 69.2% of males
- ▶ Raped before the age of 12
  - ▶ 25.5% of females
  - ▶ 41% of males
- ▶ Raped between the ages of 12-17
  - ▶ 34.9% of females
  - ▶ 27.9% of males

# Sexual Assault Perpetrators

## Women

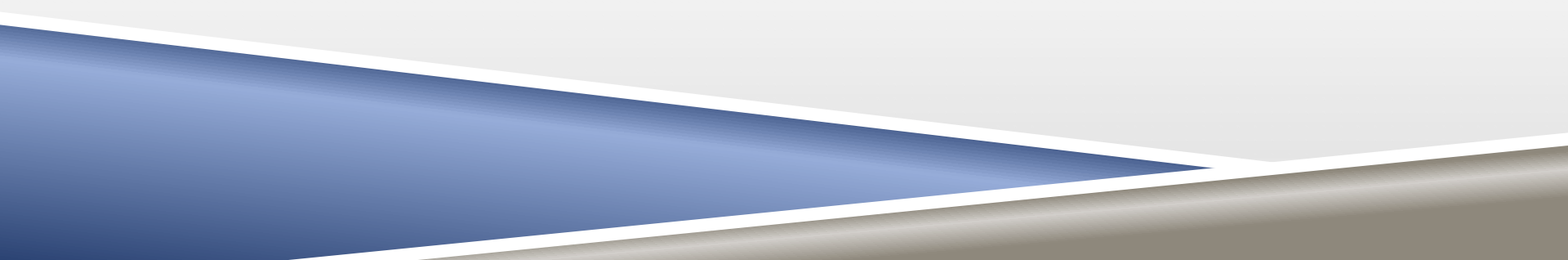
- ▶ Intimate partners (30.4%)
- ▶ Family members (23.7%)
- ▶ Acquaintances (20%)

## Men

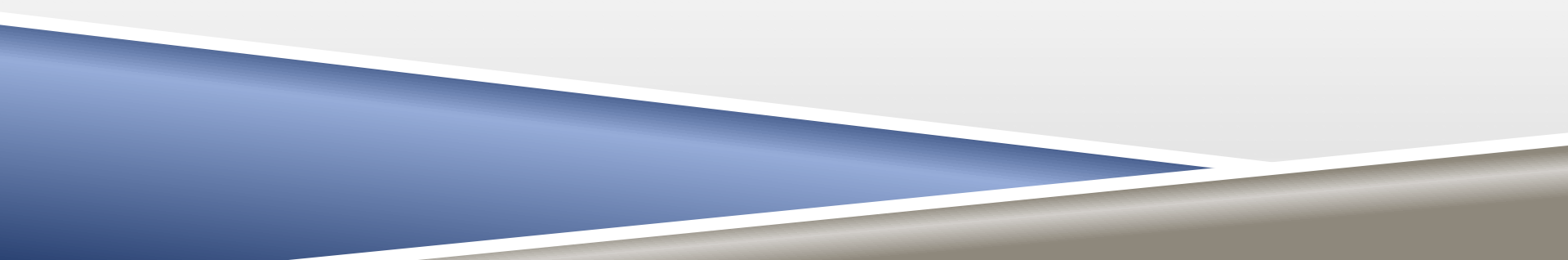
- ▶ Acquaintances (32.3%)
- ▶ Family members (17.7%)
- ▶ Friends (17.6%)
- ▶ Intimate partners (15.9%)

*Sexual Assault taken from 2008 CDC reports at: [www.cdc.gov](http://www.cdc.gov)*

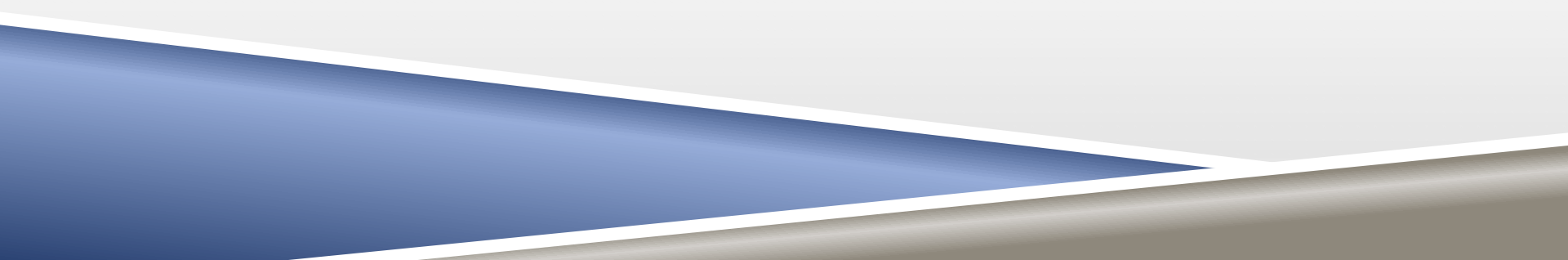
# Sexual Assault Assessment Considerations

- ▶ Delicately balance medical care needed and emotional support...
  - ▶ Maintain objectivity
  - ▶ Remember you are dealing with legal evidence
  - ▶ Do not ask specific details about the assault or sexual practices
  - ▶ Respect patient's modesty
  - ▶ Limit physical exam unless necessitated by injury
- 

# Sexual Assault – Treatment Considerations

- ▶ Same sex care provider desired when possible
  - ▶ Provide a safe environment
  - ▶ Utilize a calm and reassuring approach
  - ▶ Communicate everything that you are doing and why - ask for permission...
  - ▶ Preserve evidence
  - ▶ Provide medically necessary treatment
- 

# Evidence Preservation Guidelines

- ▶ Handle clothing as little as possible
  - ▶ Bag items separately in paper bags with evidence seals
  - ▶ Throw nothing away
  - ▶ Try not to cut clothing
  - ▶ Place a pad under the patient to collect bleeding, fluids, or other evidence
  - ▶ Do not allow patient to change clothes, bathe, or douche
  - ▶ Do not comb hair, brush teeth, or clean nails
  - ▶ Document...
- 

# Obstetrical Emergencies and the In-field Delivery





Video Interlude...

[I'm Gonna Be a Daddy - YouTube](#)

# Historical Considerations

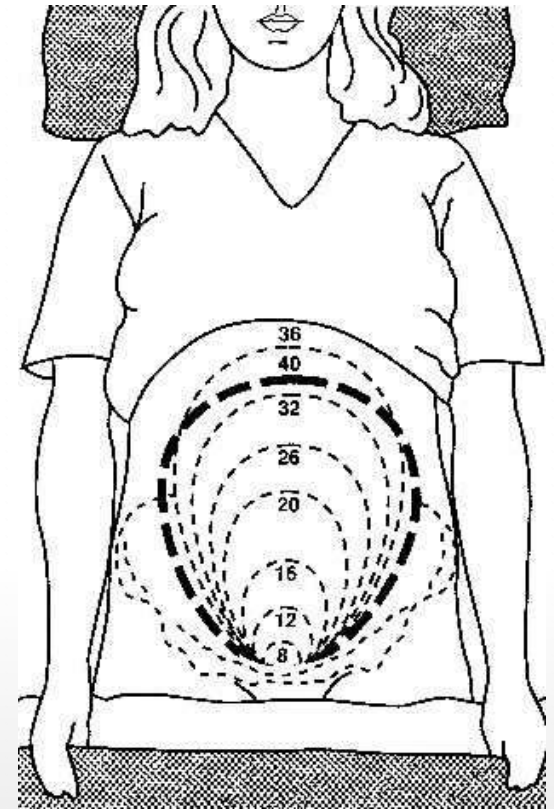
- ▶ Gravida, para, abortions
- ▶ Length of gestation - weeks
- ▶ EDC - due date
- ▶ Prior c-sections
- ▶ Prior OB/GYN complications...
- ▶ Vaginal bleeding, spotting, discharge
- ▶ General health status
- ▶ Prenatal care
- ▶ Sonogram
- ▶ Need to move bowels
- ▶ Ruptured membranes (ROM), color

# Pre-existing History Considerations

- ▶ Diabetes
  - ▶ Preeclampsia
  - ▶ Hypertension
  - ▶ Large baby
  - ▶ Hypoglycemic newborns
  - ▶ Birth defects
- ▶ Heart Disease - CHF
- ▶ Hypertension
  - ▶ Preeclampsia/PIH
  - ▶ Increased risk of stroke
- ▶ Seizures - if poorly controlled

# Physical Examination

- ▶ Fundal Height - 1 cm = 1 week
  - ▶ 10-12 weeks - symphysis pubis
  - ▶ 20 weeks - umbilicus
  - ▶ term - xiphoid process
- ▶ Fetal Heart Tone - FHTs
  - ▶ May be heard at 18-20 weeks
  - ▶ 140-160 bpm normal
- ▶ Palpate ABD - contractions
- ▶ Visually inspect for?



# **Complications of Pregnancy**



# Maternal Trauma During Pregnancy

- ▶ Pregnancy makes you clumsy
- ▶ Trauma is most frequent cause of non-obstetric death
- ▶ Later in pregnancy, greater the risk
- ▶ 20 weeks or greater - physician evaluation
- ▶ Primary fetal mortality is maternal mortality
- ▶ Maternal shock associated with fetal mortality (70-80%)
- ▶ Management considerations...
- ▶ **What physiological factors impact assessment and treatment considerations?**

# Postmortem Cesarean Section

- ▶ Delivery after the death of the mother
- ▶ Survival of mother and baby dependent upon a number of factors
- ▶ Earlier the fetus is delivered following maternal arrest, the better fetal survival; best chance within 5-minutes
- ▶ Two cases in literature of fetal survival with C-section performed at 45-minutes and 15-minutes after arrest, both trauma
  - ▶ 29-year-old, 37 weeks gestation, shot in head, baby had neurological sequelae
  - ▶ 28-year-old, 31 weeks gestation, MVC with head and chest injuries, normal baby

*Journal of Maternal-Fetal and Neonatal Medicine (Sept. 2011)*

# Spontaneous Abortion (SAB)

- ▶ “Miscarriage”
- ▶ Termination of pregnancy prior to 20th week
- ▶ Most common cause of 1st and 2nd trimester bleeding
- ▶ Odds of having a miscarriage rise with maternal age
- ▶ Causes
  - ▶ Fetal chromosomal anomalies
  - ▶ Maternal hormonal abnormalities
  - ▶ Lifestyle - use of drugs, alcohol, smoking, malnutrition
  - ▶ Placental defects
  - ▶ Maternal infections
  - ▶ Trauma



# Spontaneous AB – Signs & Symptoms

- ▶ Crampy abdominal pain
- ▶ Backache
- ▶ Vaginal bleeding
  - ▶ Slight spotting to severe bleeding
  - ▶ Presence of clots/tissue
- ▶ Signs of infection – fever/chills
- ▶ Nausea and vomiting
- ▶ Shock signs & symptoms

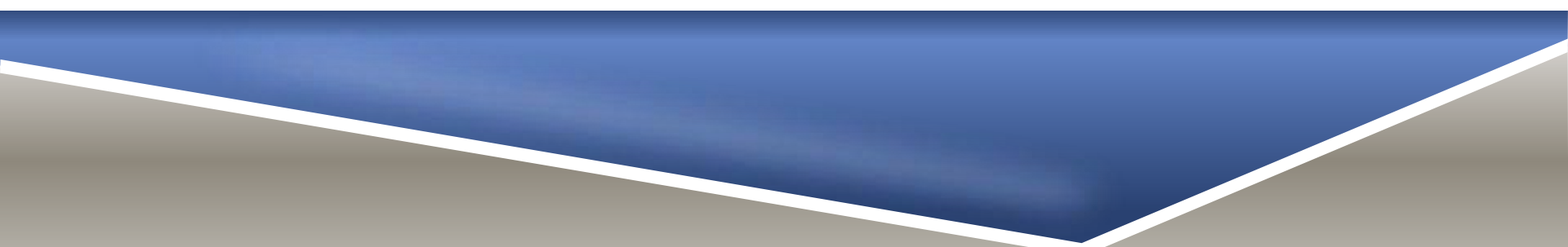
# SAB – Treatment Considerations

- ▶ Provide emotional support
- ▶ Supplemental oxygen/SpO<sub>2</sub> Monitoring
- ▶ IV access
- ▶ Cardiac Monitor
- ▶ Transport all placental contents
- ▶ Religious requests...

# **Third Trimester Bleeding**

Placenta Previa

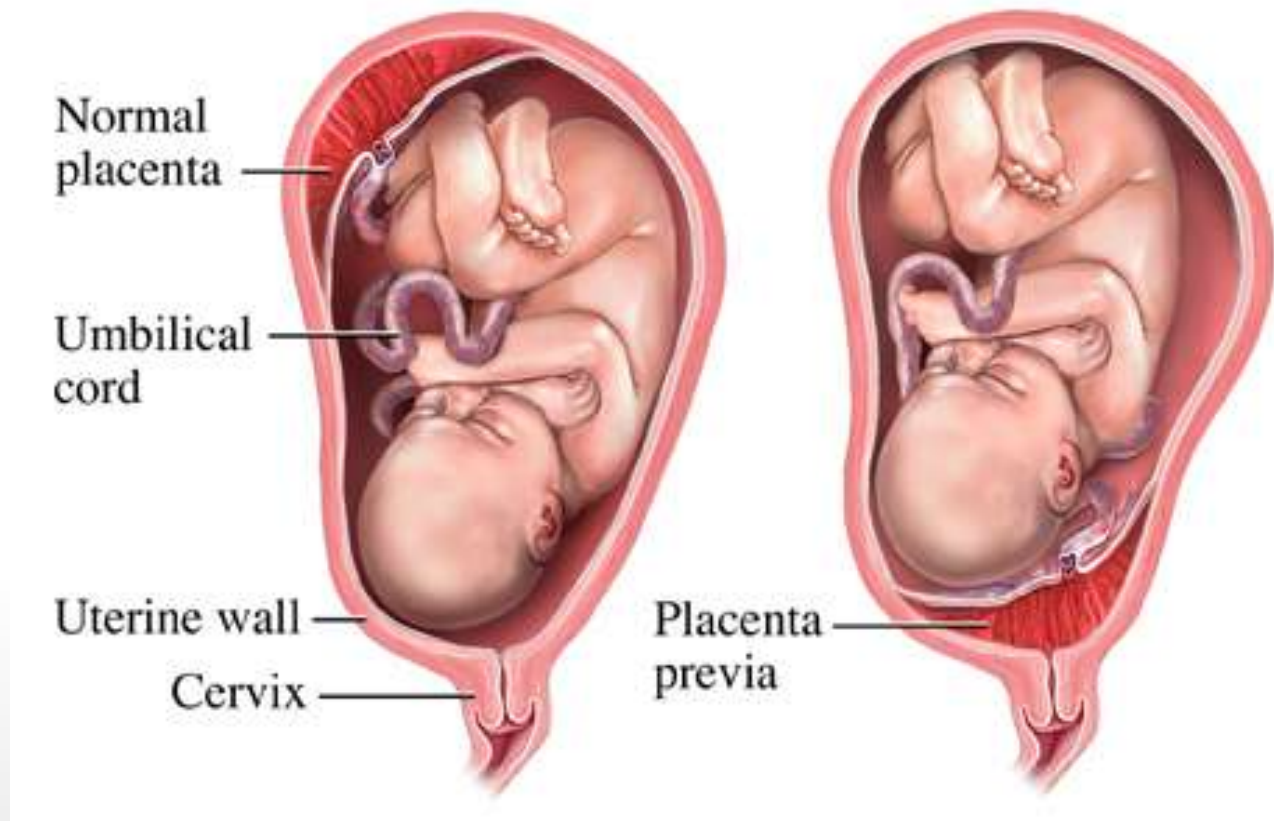
Abruptio Placentae



# Placenta Previa

- ▶ Abnormal implantation of the placenta
- ▶ Placenta partially or completely covers the cervix
- ▶ Incidence – 1 in every 200 live births
- ▶ Classified as complete, partial, marginal
- ▶ Predisposition
  - ▶ Multiparity
  - ▶ Increased maternal age
  - ▶ History of prior placenta previa

# Placenta Previa



# Placenta Previa – Assessment Considerations

- ▶ Bleeding may present secondary to
  - ▶ Onset of labor
  - ▶ Vaginal Examination
  - ▶ Intercourse
- ▶ **\*Painless onset of bright red blood**
- ▶ Bleeding may stop on its own and recur hours or days later
- ▶ Possible cramping
- ▶ Never attempt vaginal exam!!!
- ▶ Ask about prenatal history – ultrasound may have detected

# Placenta Previa – Treatment Considerations

- ▶ Insert nothing vaginally
- ▶ Prevent progression of labor - terbutaline
- ▶ Treat for shock...
- ▶ C-section is definitive treatment

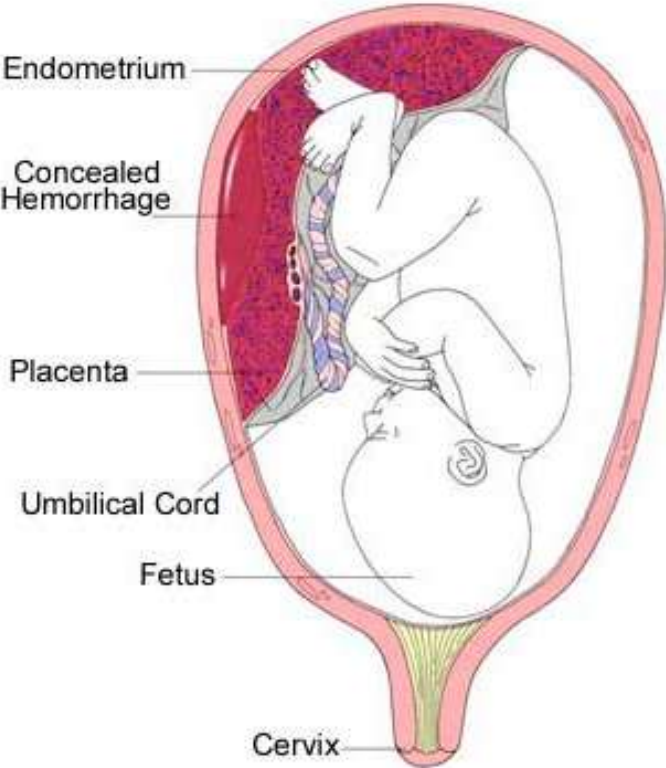
# Abruptio Placentae

- ▶ Premature separation of placenta
- ▶ 1 in 150 deliveries; severe form less common – 1 in 800 – 1,600 deliveries
- ▶ Classified as partial, central, complete
- ▶ Predisposition
  - ▶ Trauma – fall, blunt abdominal force, MVC
  - ▶ Multiparity
  - ▶ Maternal hypertension
  - ▶ Life style - drug abuse (cocaine), smoking, excess alcohol
  - ▶ Increased maternal age

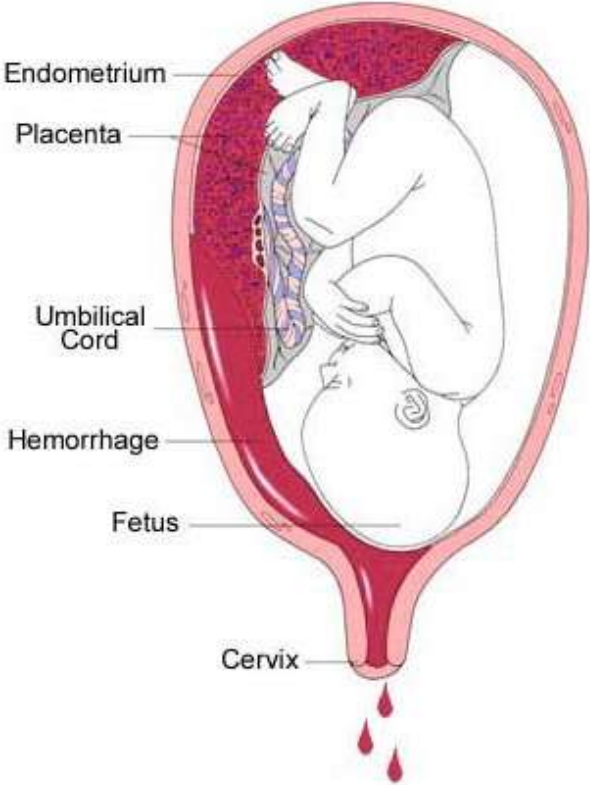


# Abruptio Placentae

Concealed Bleeding



Visible Bleeding



# Abruptio Placentae – Assessment Considerations

- ▶ There MAY or MAY NOT be vaginal bleeding
- ▶ Sudden, sharp, tearing pain
  - ▶ Can vary depending on class of separation
  - ▶ Back pain
  - ▶ Uterine contractions
- ▶ Hypotension – Shock
- ▶ Fetal distress occurs early in about half of all cases

# Abruptio Placentae – Treatment Considerations

- ▶ Control risk factors (life style, hypertension, diabetes, etc.)
- ▶ Life-threatening emergency for mom and fetus; may requires immediate surgical intervention (cesarean section)
- ▶ If a small separation without bleeding, hospital observation
- ▶ If uterine hemorrhage is uncontrollable – hysterectomy
- ▶ Treat your patient for profound shock...
  - ▶ 100% supplemental oxygen; and SpO<sub>2</sub>
  - ▶ Intravenous access – fluid resuscitate; permissive hypotension
  - ▶ Cardiac monitor

# **Pregnancy Induced Hypertension (PIH) Preeclampsia/Eclampsia**

- ▶ Typical onset after 20<sup>th</sup> week gestation
- ▶ 2<sup>nd</sup> leading cause of maternal death in US; and leading cause of fetal complications
- ▶ Incidence of preeclampsia on rise in part due to rise in maternal age
- ▶ Affects 6-8% of all pregnancies
- ▶ Exact etiology unknown

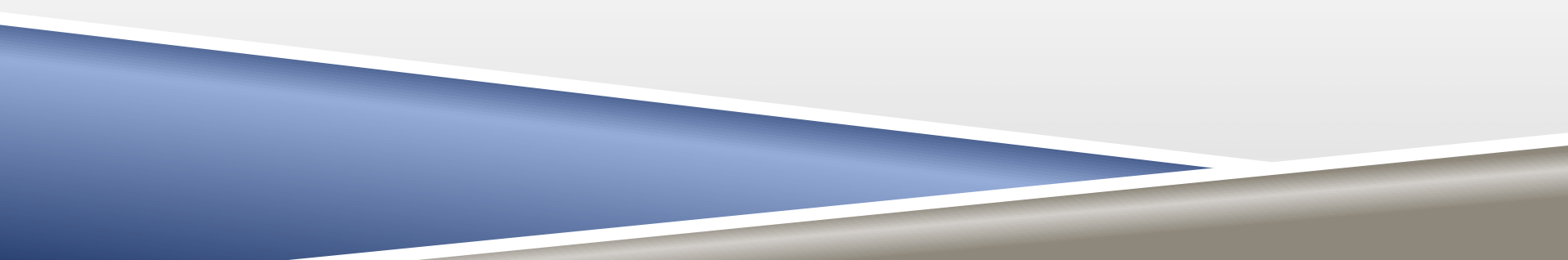
# PIH – Predisposing Factors

- ▶ Hypertension
  - ▶ Chronic hypertension
  - ▶ Gestational hypertension
- ▶ Extremes of maternal age – under 20; over 35
- ▶ Multiparity
- ▶ Diabetes
- ▶ Kidney disease

# PIH – Assessment Considerations

- ▶ Hypertension – increase from baseline
  - ▶ 30 mmHg systolic
  - ▶ 15 mmHg diastolic
  - ▶ Absolute – 140/90 or above
- ▶ Proteinuria
- ▶ Persistent headaches
- ▶ Visual disturbances – photosensitivity, blurred vision
- ▶ Edema – hands, feet/ankles/legs, and face
- ▶ Hyperreflexia
- ▶ Abdominal pain
- ▶ Dyspnea – pulmonary edema
- ▶ Seizures

# **Serious Complications of PIH**

- ▶ **Myocardial Infarction**
  - ▶ **Stroke**
  - ▶ **Abruptio Placentae**
  - ▶ **Disseminated Intravascular Coagulopathy**
  - ▶ **Renal Failure**
- 

# PIH – Treatment Considerations

- ▶ Delivery of fetus
- ▶ Bed rest, stress reduction, minimal sensory stimulation
  - ▶ Utilize a calm demeanor
  - ▶ Dim ambulance compartment lights
  - ▶ DO NOT utilize lights/sirens unless patient actively seizing
- ▶ Left lateral recumbent position
- ▶ Supplemental oxygen & SpO<sub>2</sub> monitoring
- ▶ IV access
- ▶ Magnesium Sulfate – 2-5 grams – treating vasospasm & muscle relaxant
- ▶ Antihypertensives (BP > 160 mmHg systolic) – labetalol, nifedipine, and hydralazine

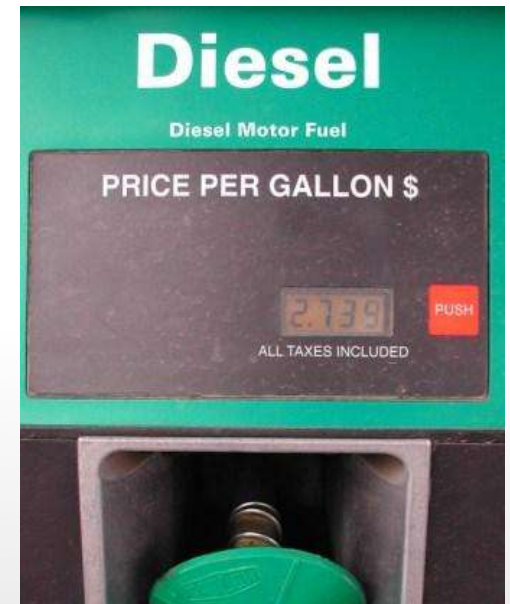


# **A Surprise Birthday Party!**

**The Infield Delivery...**



# Unnecessary Equipment...



# Stages of Labor

## ▶ Stage I: Dilatation

- ▶ onset of contractions until complete dilation
- ▶ nullparis 8-10 hours, multip 5-7 hours

## ▶ Stage II: Expulsion

- ▶ complete dilation until delivery of baby
- ▶ nullparis 1-hour, multip 30 minutes

## ▶ Stage III: Placental

- ▶ birth of infant to delivery of placenta

# General Preparation

- ▶ Transport versus field delivery???
- ▶ Oxygen
- ▶ IV access
- ▶ Assemble all necessary equipment

# OB Kit



# Let the Party Begin...

- ▶ Position mother
- ▶ If delivery not accomplished in 20 minutes - transport
- ▶ Support the head/perineum, ROM - meconium?
- ▶ Check for nuchal cord
- ▶ Pause and suction, let mom rest
- ▶ Gently guide baby's head downward
- ▶ Gently guide baby upward - “slippery when wet”
- ▶ Clamp and cut the cord
- ▶ Record the time of birth

# Following Delivery

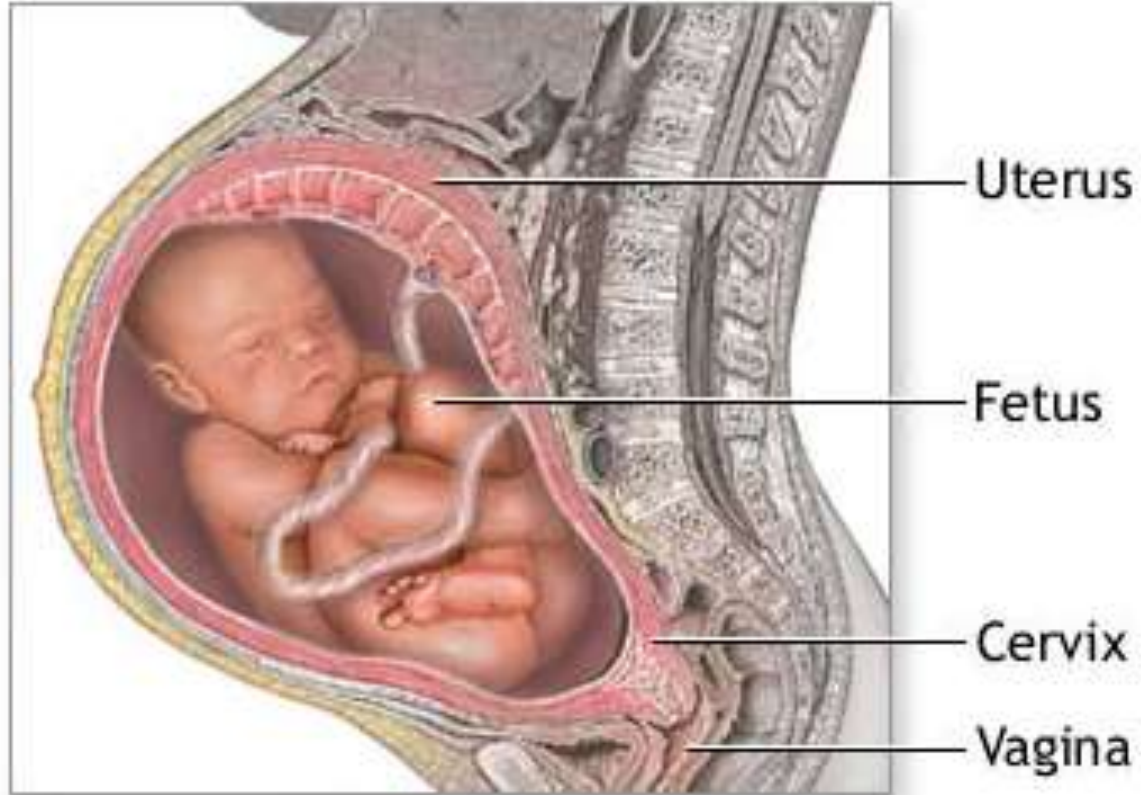
- ▶ Blood loss is usually about 500 mL
- ▶ Do not pull on umbilical cord
- ▶ Placenta delivery is next
- ▶ Fundal massage
- ▶ Baby to breast
- ▶ Apply direct pressure to visible external bleeding
- ▶ Pitocin – 10 IU given IM; or 20 IU in 1 L of saline infused at 250 mL/hour

# **Delivery Complications**





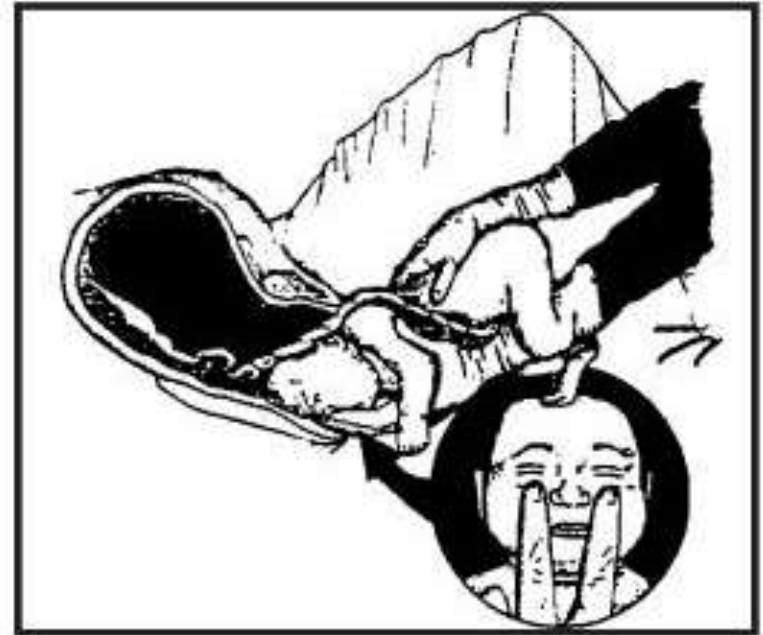
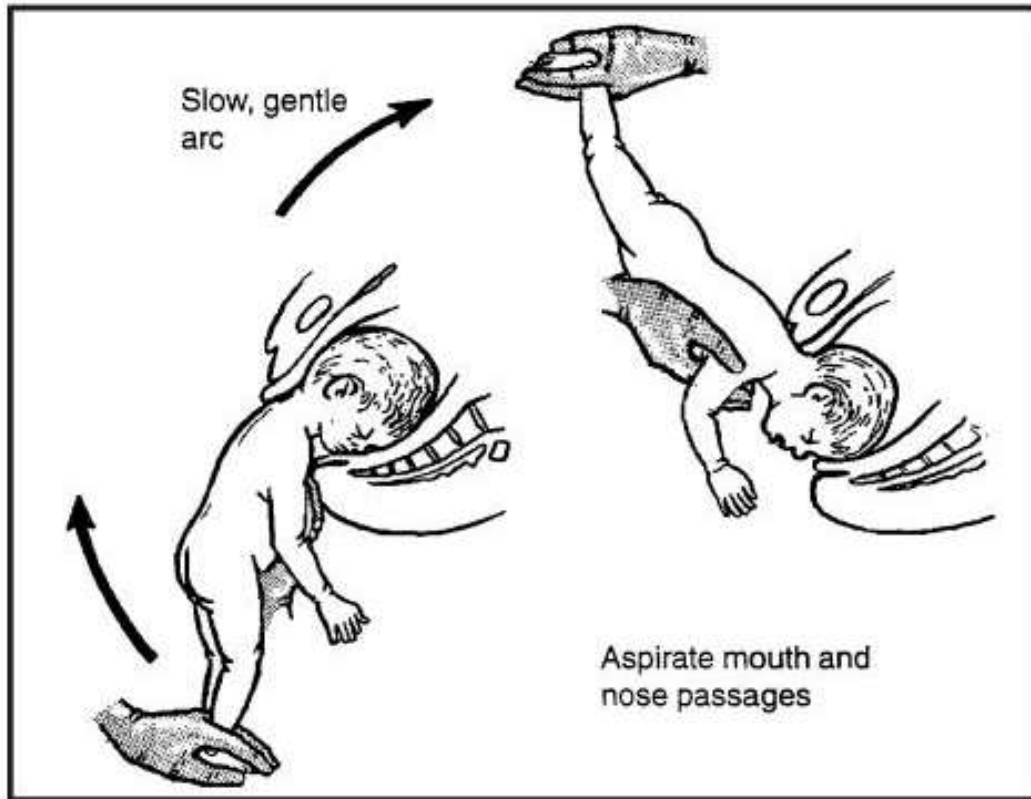
# Breech Presentation



# Now What?!!



# Breech Procedure



# Prolapsed Umbilical Cord



# Prolapsed Umbilical Cord

- ▶ Incidence - 0.6% of deliveries
- ▶ Occurs when presenting part is not fully engaged as cervical dilation progresses
- ▶ Increased risk in fetal malpresentation – incomplete breech (5-10%)
- ▶ Fetal bradycardia may indicate cord compression
- ▶ If membranes intact, may resolve spontaneously
- ▶ Ruptured membranes requires emergent delivery

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



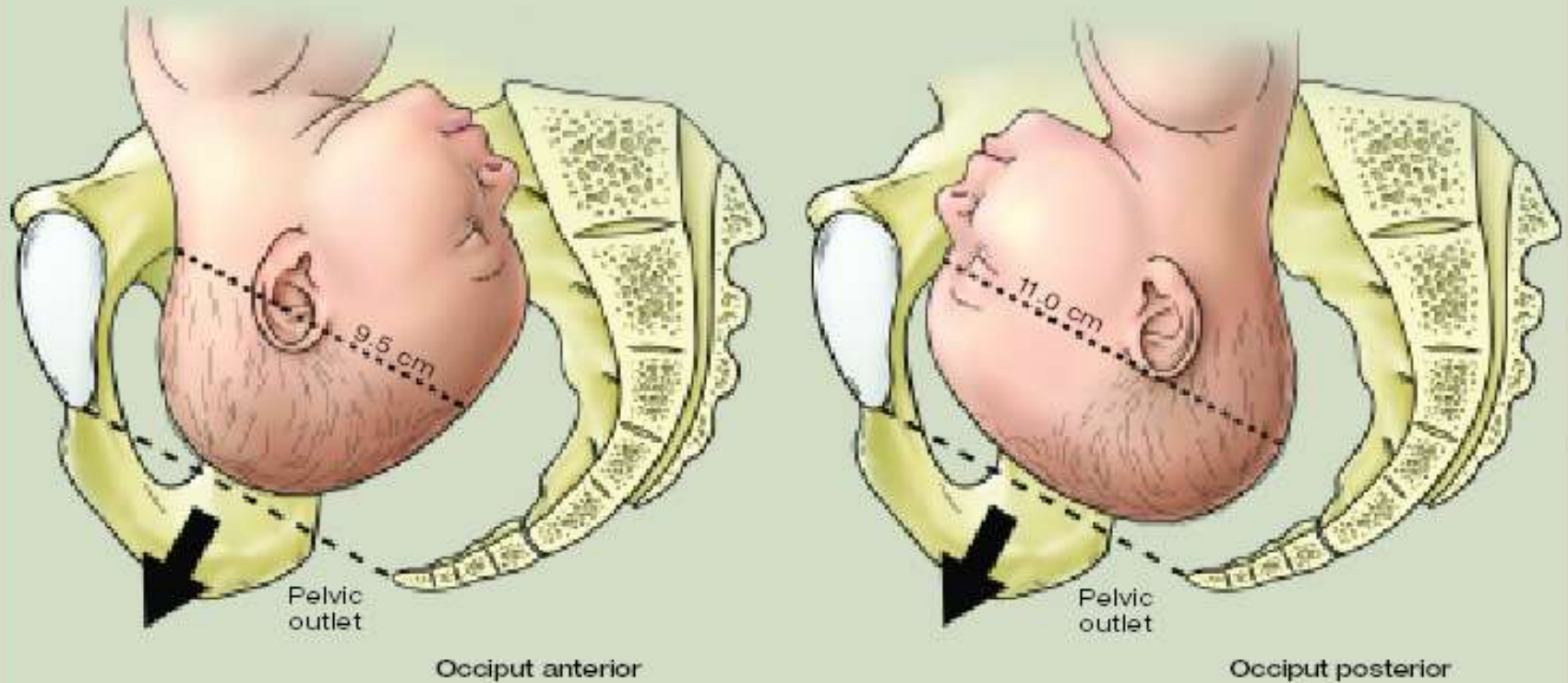
Knee-chest position uses gravity to shift the fetus out of the pelvis. The woman's thighs should be at right angles to the bed and her chest flat on the bed.



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

# Occiput Posterior

FIGURE 1



# Multiple Births





# Multiple Births

- ▶ Twins occurs in about 1 in 80-90 pregnancies in the US
- ▶ Rise in multiple births attributed to infertility treatments
- ▶ Premature birth (compared to 9% of singleton pregnancies)
  - ▶ 50% of twins
  - ▶ 90% of triplets



# Cephalopelvic Disproportion (CPD)

- ▶ Pelvis too small or abnormal shape
- ▶ Fetal head too large/large baby
- ▶ Often identified during prenatal care with ultrasonogram
- ▶ Labor fails to progress/stalls
- ▶ Cesarean section delivery

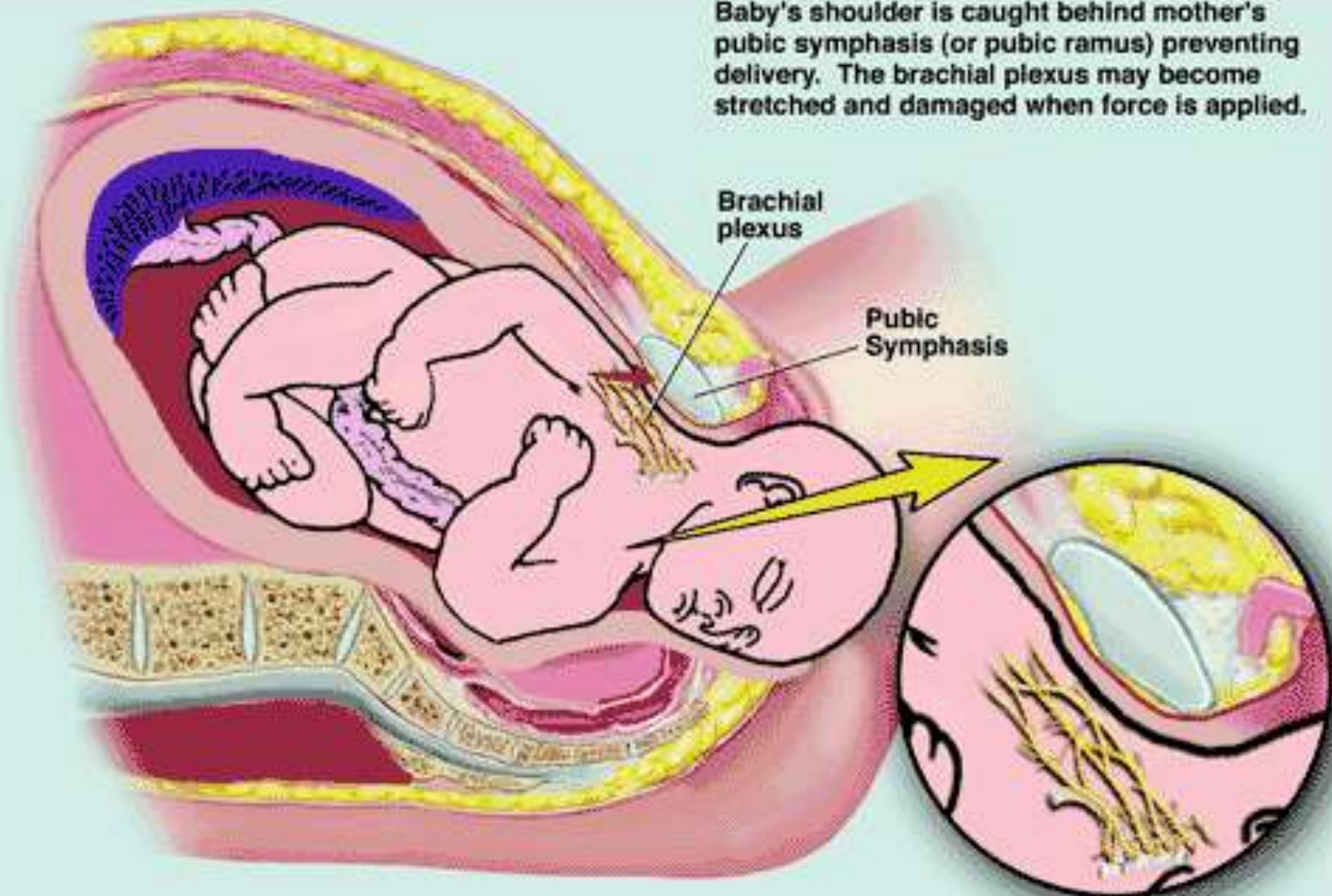


# Shoulder Dystocia

- ▶ Incidence varies by fetal weight
  - ▶ 0.6 to 1.4 percent – less than 8-pounds, 13-ounces
  - ▶ 5-9 percent weighing 9-pounds, 14-ounces or more
- ▶ Maternal complications include hemorrhage, laceration, and rarely uterine rupture
- ▶ Fetal brachial plexus injury
  - ▶ 4 to 15 percent of infants
  - ▶ Most palsies resolve within 6-12 months, fewer than 10% result in permanent injury
- ▶ Presents with stalled delivery following delivery of head and classic “turtle sign”

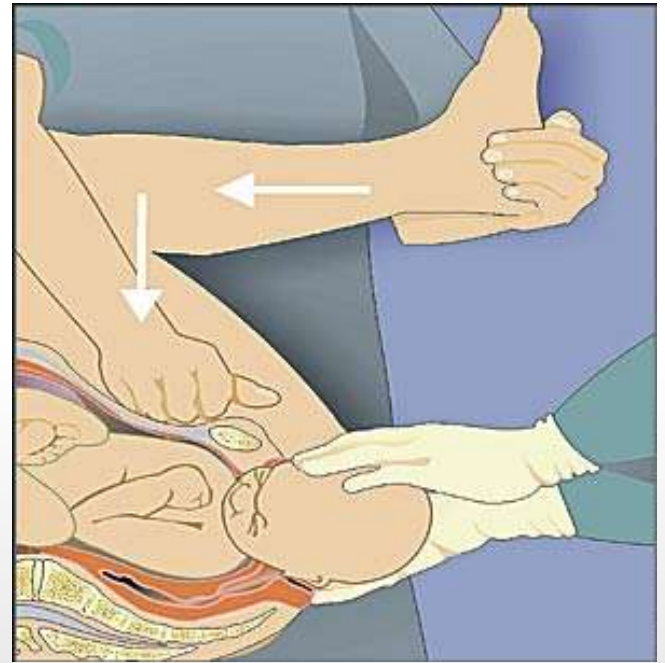
# Shoulder Dystocia

Baby's shoulder is caught behind mother's pubic symphysis (or pubic ramus) preventing delivery. The brachial plexus may become stretched and damaged when force is applied.



# Shoulder Dystocia – Treatment Considerations

- ▶ Recognize your limitations
- ▶ McRoberts Maneuver – flex and abduct maternal hips
- ▶ Downward suprapubic pressure
- ▶ Roll the patient – place in all-fours position



# The Miracle of Life...

