# Obstetrics/Gynecology

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Captain Paramedic

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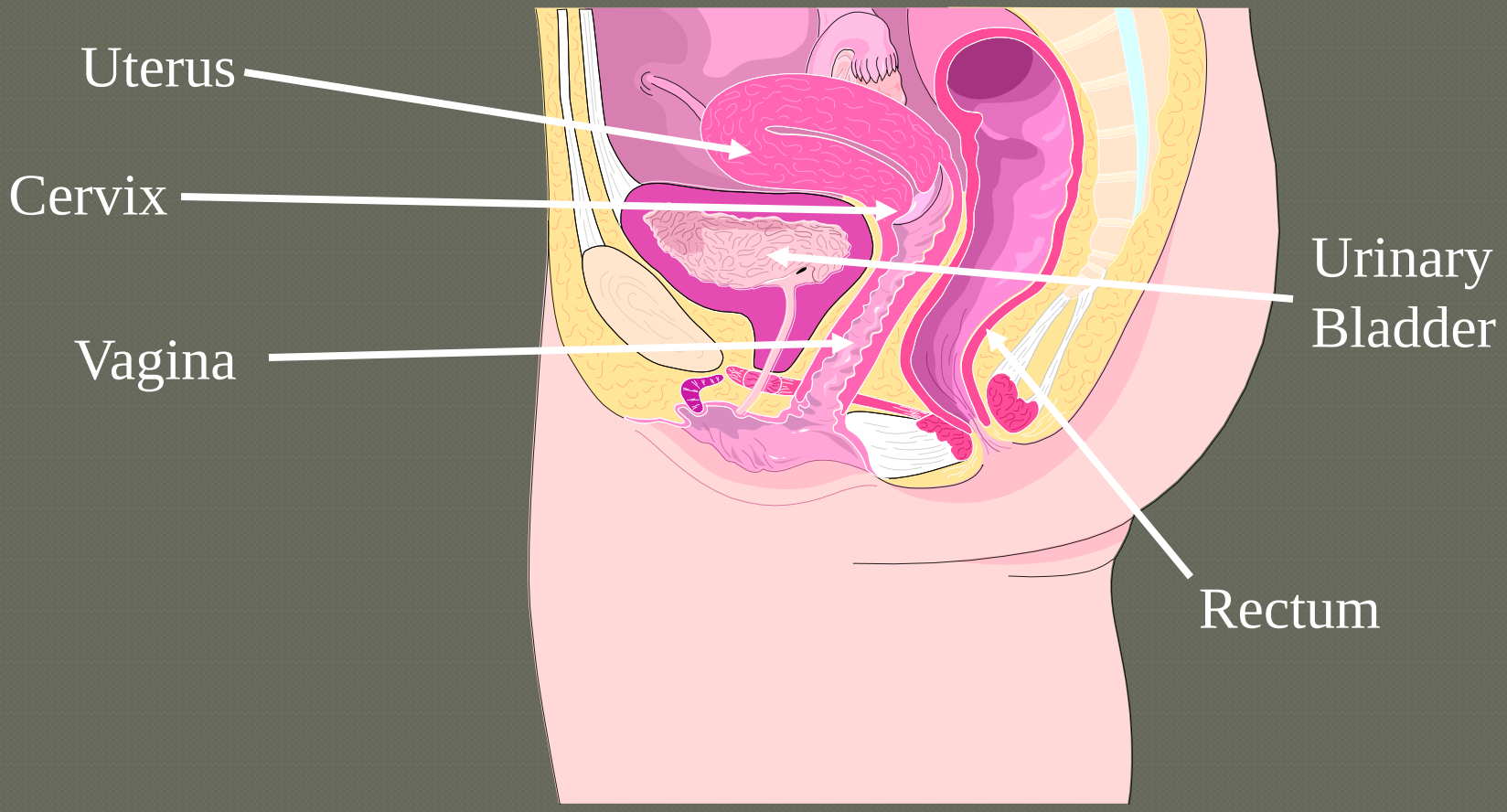
# Female Reproductive System



# OB GYN Assessment

- History
  - Is there a possibility you might be pregnant?
    - Missed period?
    - N/V
    - Increased urinary frequency
    - Vaginal discharge
    - History of previous infections

# OB Assessment

- History
  - When was your last **normal** menstrual period (LNMP)?
  - Abdominal pain? (location/quality)
  - Vaginal bleeding/discharge?

# OB/Gyn Assessment

- History
  - If pregnant:
    - estimate due date (estimated date of confinement)
    - Para = # of live births
    - Gravida = # of pregnancies
    - Previous pregnancy issues, prenatal care
    - TEAL score

# OB/Gyn Assessment

- Vital signs
  - Hypertension
  - Hypotension
  - Tilt test if blood loss is suspected
- Focused exam
  - Edema (particularly of face, hands)

# Pelvic Inflammatory Disease

- Acute syndrome caused by spread of microorganisms from the vagina and cervix to reproductive organs
- Most common cause are STD's
- Can involve endometrium,fallopian tubes and pelvic peritoneum

# Pelvic Inflammatory Disease

- Most at risk?
- Sexually active women aged 15-19 with no countraceptive device
- Multiple partners increases risk factor
- Chlamydia and Neisseria gonorrhea are most common pathogens

# Pelvic Inflammatory Disease

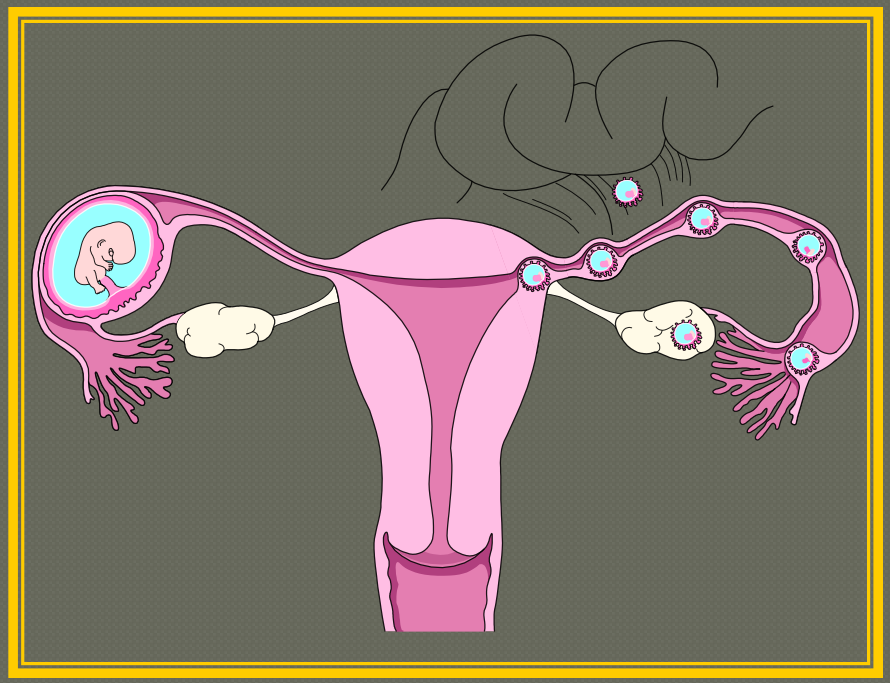
- Presentation and assessment
  - c/o abdominal or lower abdominal pain
  - lower back pain
  - vaginal d/c
  - fever may or may not be present

# Pelvic Inflammatory Disease

- FYI about PID

- 25% of these patients in ED Dx with other conditions
  - ectopic pregnancy
    - ( 7 times more likely in women w/ PID)
  - appendicitis
  - ruptured ovarian cyst

# Ectopic Pregnancy



- Zygote implants in location other than uterine cavity
- 95% are in Fallopian tube (tubal ectopic)
- Life threatening!

# Ectopic Pregnancy

- Signs and Symptoms
  - Missed period, other signs/symptoms of early pregnancy
  - Light vaginal bleed (spotting) 6-8 weeks after LNMP
  - Abdominal pain, may radiate to shoulder
  - Positive “tilt” test
  - Other signs/symptoms of hypovolemic shock

# Ectopic Pregnancy

- Signs and Symptoms
  - Abdominal pain may be absent
  - Some patients may NOT miss period
  - Some patients may have NEGATIVE pregnancy tests

# Ectopic Pregnancy

Lower abdominal pain or unexplained hypovolemic shock in a woman of child-bearing age equals Ectopic Pregnancy Until Proven Otherwise

# Ectopic Pregnancy

- Management
  - 100% $O_2$
  - Supportive care for hypovolemic shock
  - Transport immediately

# Pre-eclampsia

- Acute hypertension after 24th week of gestation
- 5-7% of pregnancies
- Most often in first pregnancies
- Other risk factors include young mothers, no prenatal care, multiple gestation, lower socioeconomic status

# Pre-eclampsia

- Triad
  - Hypertension
  - Proteinuria
  - Edema

# Pre-eclampsia

- Sign and Symptoms
  - Hypertension
    - Systolic > 140 mm Hg
    - Diastolic > 90mm Hg
    - Or either reading > 30 mmHg above patient's normal BP
  - Edema (particularly of hands, face) present early in day

# Pre-eclampsia

- Signs and Symptoms
  - Rapid weight gain
    - >3lbs/wk in 2nd trimester
    - >1lb/wk in 3rd trimester
  - Decreased urine output
  - Headache, blurred vision
  - Nausea, vomiting
  - Epigastric pain
  - Pulmonary edema

# Pre-eclampsia

- Complications
  - Eclampsia
  - Premature separation of placenta
  - Cerebral hemorrhage
  - Retinal damage
  - Pulmonary edema
  - Lower birth weight infants

# Pre-eclampsia

- Management
  - 100% $O_2$
  - Left lateral recumbent position
  - Avoid excessive stimulation
  - Reduce light in patient compartment
  - Avoid use of emergency lights, sirens

# Eclampsia

- Gravest form of pregnancy-induced hypertension
- Signs and Symptoms
  - Signs, symptoms of pre-eclampsia plus:
    - Grand mal seizures
    - Coma

# Eclampsia

- Complications
  - Same as pre-eclampsia
  - Maternal mortality rate: 10%
  - Fetal mortality rate: 25%

# Eclampsia

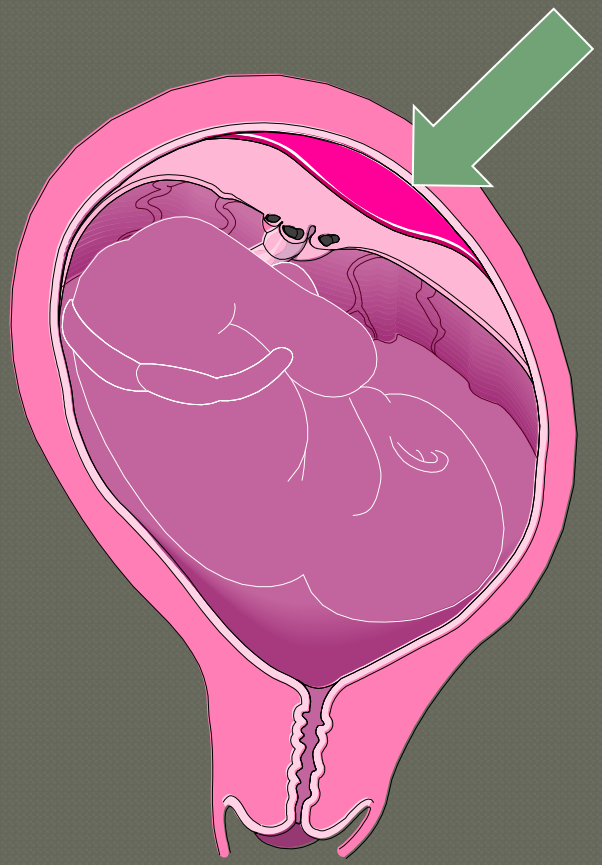
- Management
  - 100% $O_2$; assist ventilations, as needed
  - Left lateral recumbent position
  - Reduce light
  - Manage like any major motor seizure
  - Emergency transport
  - Consider ALS intercept for medication administration

# Eclampsia

- Assess every pregnant patient for
  - Increased BP
  - Edema
- Take all reports of seizures in pregnant females seriously

# Abruptio Placentae

- Premature separation of placenta from uterus
- High risk groups
  - Older pregnant patients
  - Hypertensives
  - Multigravidas



# Abruptio Placentae

- Signs and Symptoms
  - Mild to moderate vaginal bleeding
  - Continuous, knife-like abdominal pain
  - Rigid, tender uterus
  - Signs, symptoms of hypovolemia

# Abruptio Placentae

Third Trimester Abdominal Pain
equals Abruptio Placentae
until proven otherwise

# Abruptio Placentae

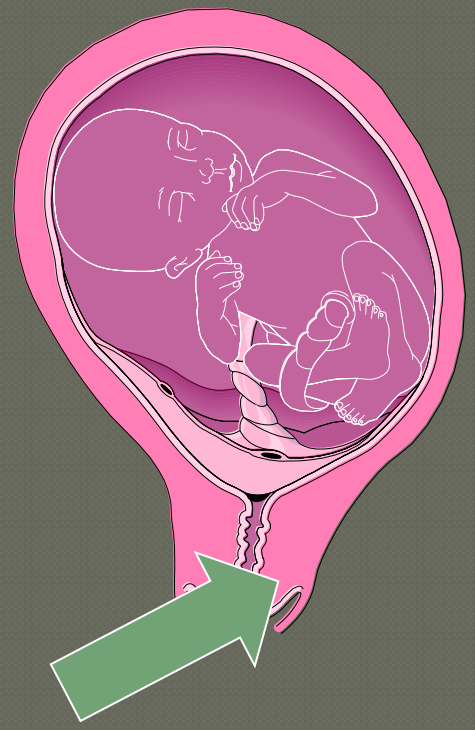
Hypovolemic shock out of proportion to visible bleeding equals Abruptio Placentae until proven otherwise

# Abruptio Placentae

- Management
  - 100% $O_2$
  - Left lateral recumbent position
  - Supportive care for hypovolemic shock
  - Rapid transport

# Placenta Previa

- Implantation of placenta over cervical opening



# Placenta Previa

- Signs and Symptoms
  - Painless, bright-red vaginal bleeding
  - Soft, non-tender uterus
  - Signs and symptoms of hypovolemia

# Placenta Previa

- Management
  - 100% $O_2$
  - Left lateral recumbent position
  - Supportive care for hypovolemic shock

# Uterine Rupture

- Causes
  - Blunt trauma to pregnant uterus
  - Prolonged labor against an obstruction
  - Labor against weakened uterine wall
    - Old Cesarian section scar
    - Grand multiparous patients

# Uterine Rupture

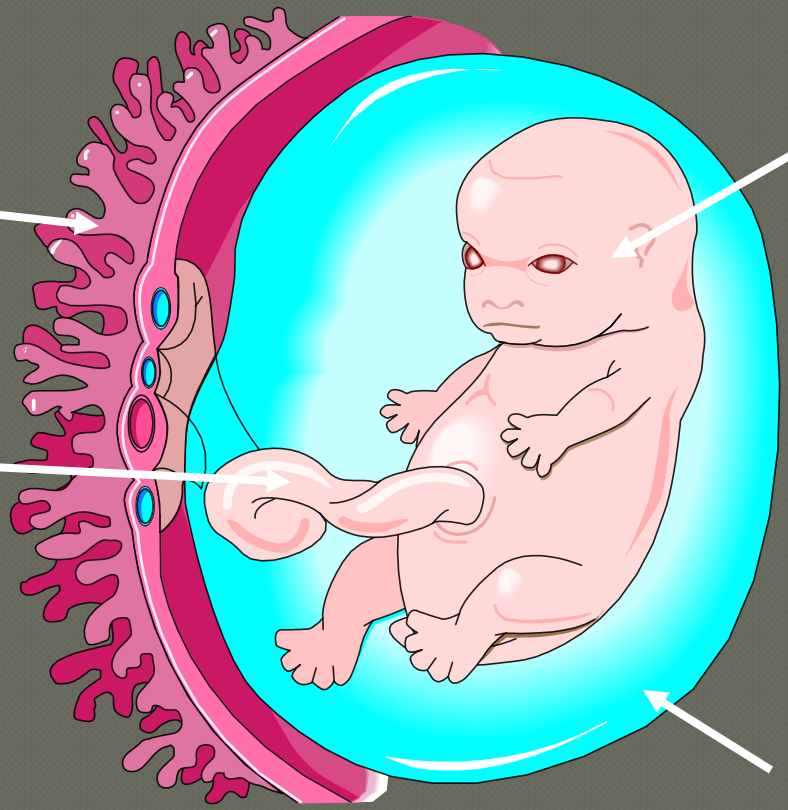
- Signs and Symptoms
  - “Tearing” abdominal pain
  - Severe hypovolemic shock
  - Firm, rigid abdomen
  - Possible palpation of fetal parts through abdominal wall
  - Vaginal bleeding may or may not be present

# Uterine Rupture

- Management
  - 100% $O_2$
  - Anticipate shock
  - ALS/helicopter intercept

# Emergency Childbirth

# Developing Fetus



Placenta

Umbilical cord

Fetus

Amniotic Sac
"Bag of waters"

# Labor

- 1st stage:
  - Onset of contractions to dilation of cervix
- 2nd stage:
  - Complete dilation of cervix to delivery of baby
- 3rd stage:
  - Delivery of baby to delivery of placenta

# Signs of Imminent Delivery

- Crowning
- Rupture of Amniotic Sac
- Need to bear down
- Sensation of needing to move bowels
- Contractions
  - 1 to 2 minutes apart
  - Regular
  - Lasting 45 to 60 seconds

# Delivery

- Place gloved hand on presenting part to prevent “explosive” delivery
- On delivery of head, **suction mouth then nose**

# Delivery

- Gently guide baby's head down to deliver upper shoulder
- Gently guide baby's head up to deliver lower shoulder
- Gently assist with delivery of rest of baby; Do NOT pull
- Note time of delivery of baby

# Delivery

- **Control** slippery baby during delivery
  - Support head, shoulders, feet
  - Keep head lower then feet to facilitate drainage of secretions from mouth
- Dry baby
- Keep baby warm

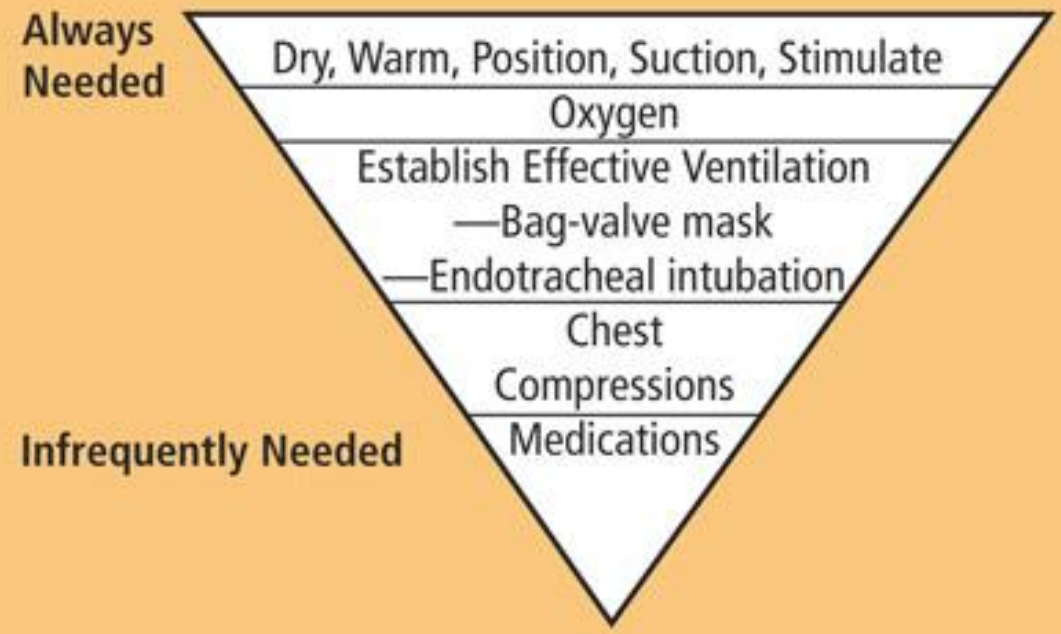
# Delivery

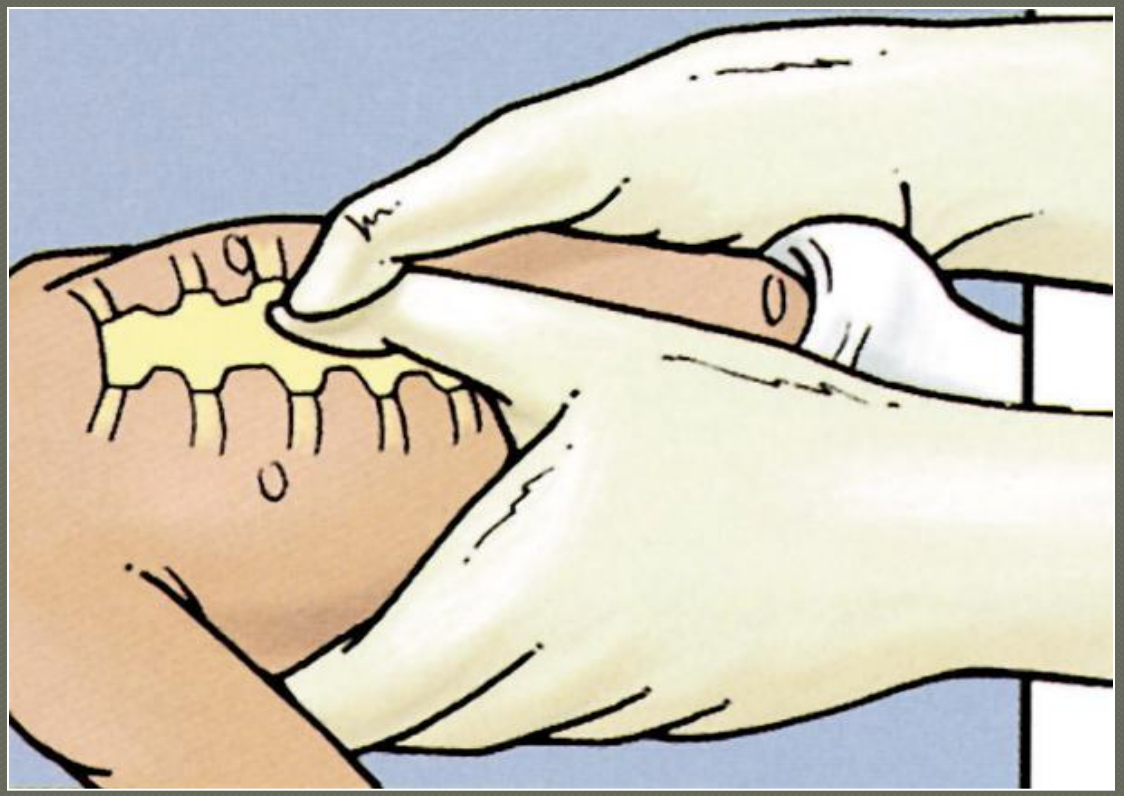
- Clamp, cut cord
  - First clamp about 4” from baby
  - Second clamp 2” further away from first
  - Cut between clamps
  - Use umbilical tape to control any bleeding from cord

# Delivery

- Flick baby's feet, rub back to stimulate
- Do NOT shake infant
- Do NOT slap buttocks
- "Blow by" $O_2$
- Resuscitate if necessary

**Assess and Support:** Temperature
(warm and dry)
Airway
(position and suction)
Breathing
(stimulate to cry)
Circulation
(heart rate and color)



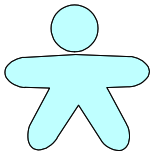
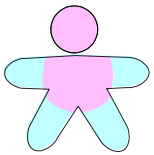
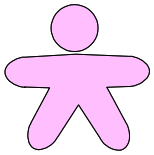
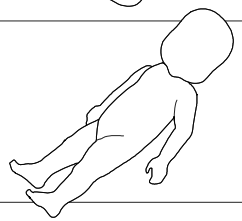
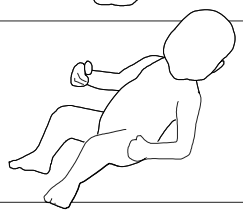
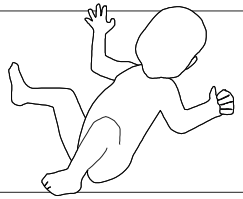


# Delivery

- "Deliver" Placenta
  - Place placenta in plastic bag and deliver to hospital to be examined for completeness
  - If placenta does not deliver within 10 minutes, transport

# APGAR Score

- Developed by Virginia Apgar
- Quick evaluation of infant's pulmonary, cardiovascular, neurological function
- Useful in identifying infant's needing resuscitation

| | Score 0 | Score 1 | Score 2 |
|---|---|---|---|
| **A**ppearance |  |  |  |
| **P**ulse | No pulse | <100/min. | >100/min. |
| **G**rimace |  |  |  |
| **A**ctivity |  |  |  |
| **R**espirations | No respirations | Weak, slow | Strong cry |

# APGAR Score

Determine at 1 and 5 minutes postpartum!

# Maternal Care: Postpartum

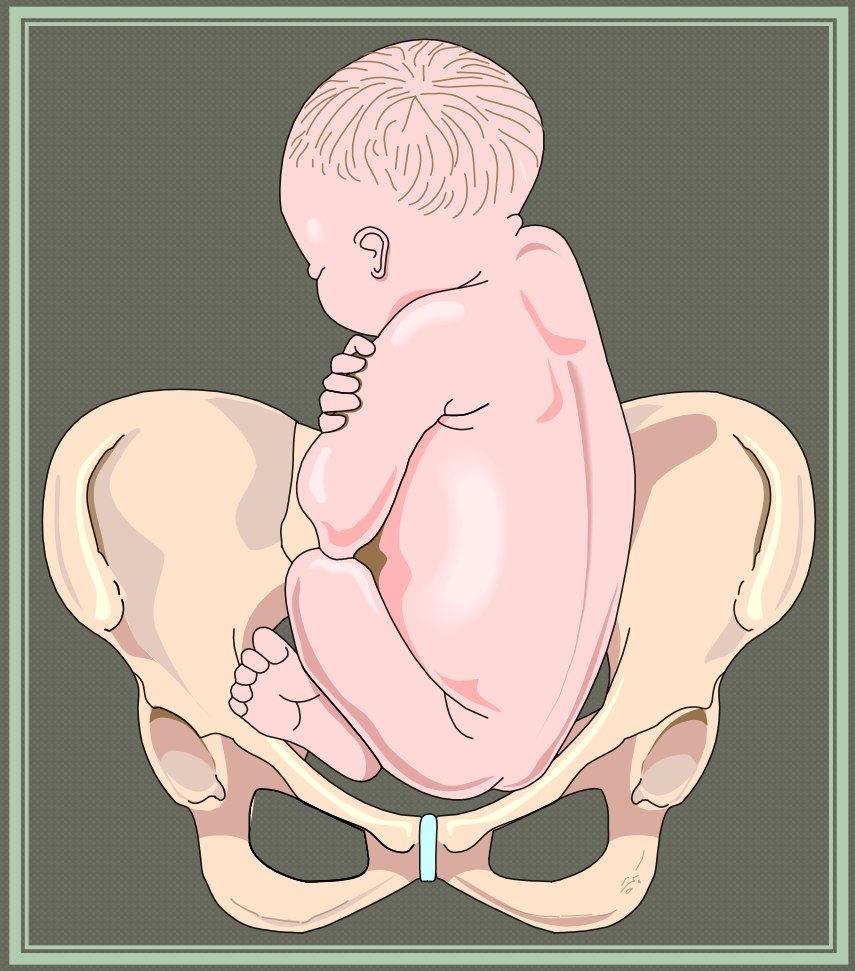
- Bleeding
  - Place sterile pad over vaginal opening
  - If bleeding is excessive:
    - Rapidly transport to hospital
    - Uterine massage
    - Encourage breastfeeding

# Maternal Care: Postpartum

- Shock
  - If mother shows signs, symptoms of shock:
    - High concentration $O_2$
    - Rapid transport
    - ALS intercept

# Complicated Deliveries

# Breech Presentation



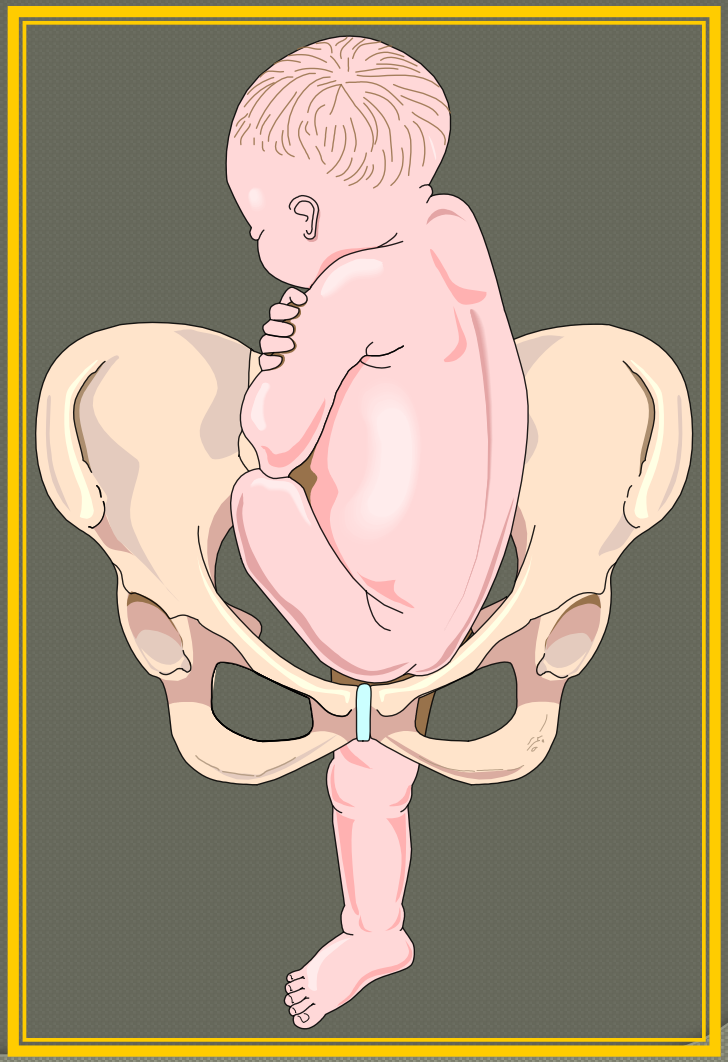
# Breech Presentation

- Management
  - High concentration $O_2$
  - Rapid transport
  - Prepare for neonatal resuscitation
  - Assist delivery

# Breech Presentation

- Management
  - If head does not deliver within 3 minutes of body:
    - Insert gloved hand into vagina forming “V” around baby’s nose, mouth
    - Push vaginal wall away from baby’s face to create airway

# Limb Presentation

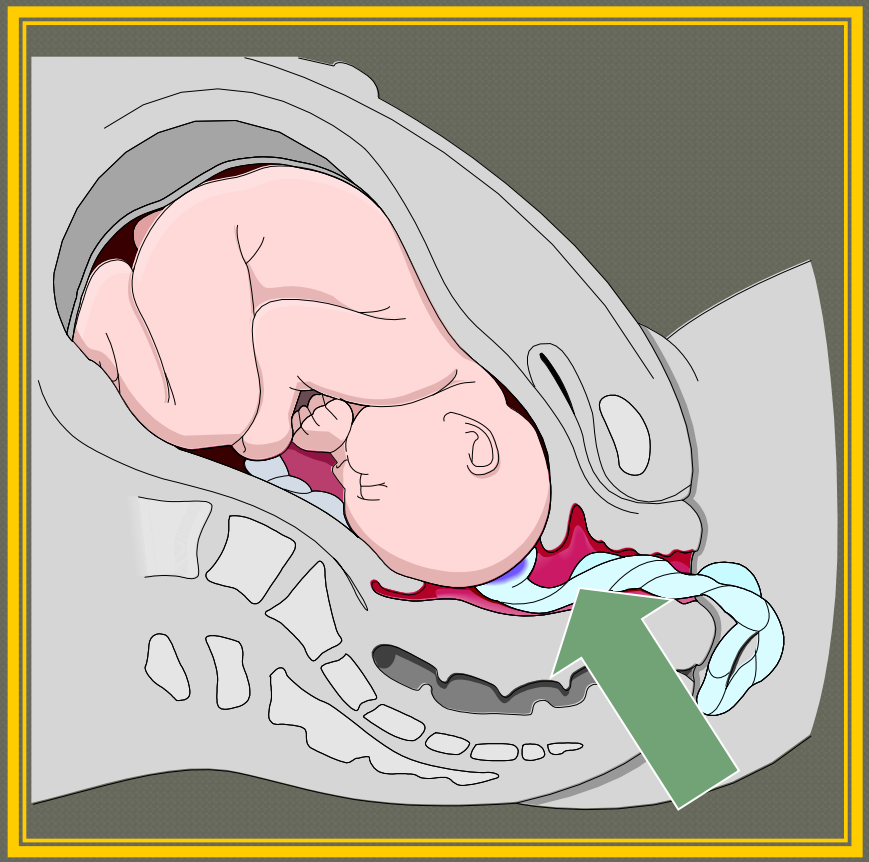


# Limb Presentation

- Management
  - High concentration $O_2$
  - Rapid transport

# Prolapsed Cord

- Umbilical cord enters vagina before infant's head
- Pressure of head on cord occludes blood flow, $O_2$ delivery to fetus



# Prolapsed Cord

- Management
  - High concentration $O_2$
  - Knee-chest position or exaggerated shock position
  - Place gloved hand in vagina
  - Apply **gentle** pressure inward to presenting part; relieve pressure on cord

# Umbilical Cord around Neck

- Management
  - Upon delivery of head look for cord is looped around neck
  - GENTLY slip cord over head if possible
  - If cord cannot be slipped over head:
    - Clamp in two places
    - Cut between clamps with surgical scissors

# Amniotic Sac Intact

- Management
  - Use clamp to tear sac, release fluid
  - Move sac away from baby's nose, mouth

# Meconium

- First stool of newborn
- Meconium-stained amniotic fluid
  - Baby has had bowel movement in utero
  - Greenish, black (pea soup) color
  - Indicative of distress

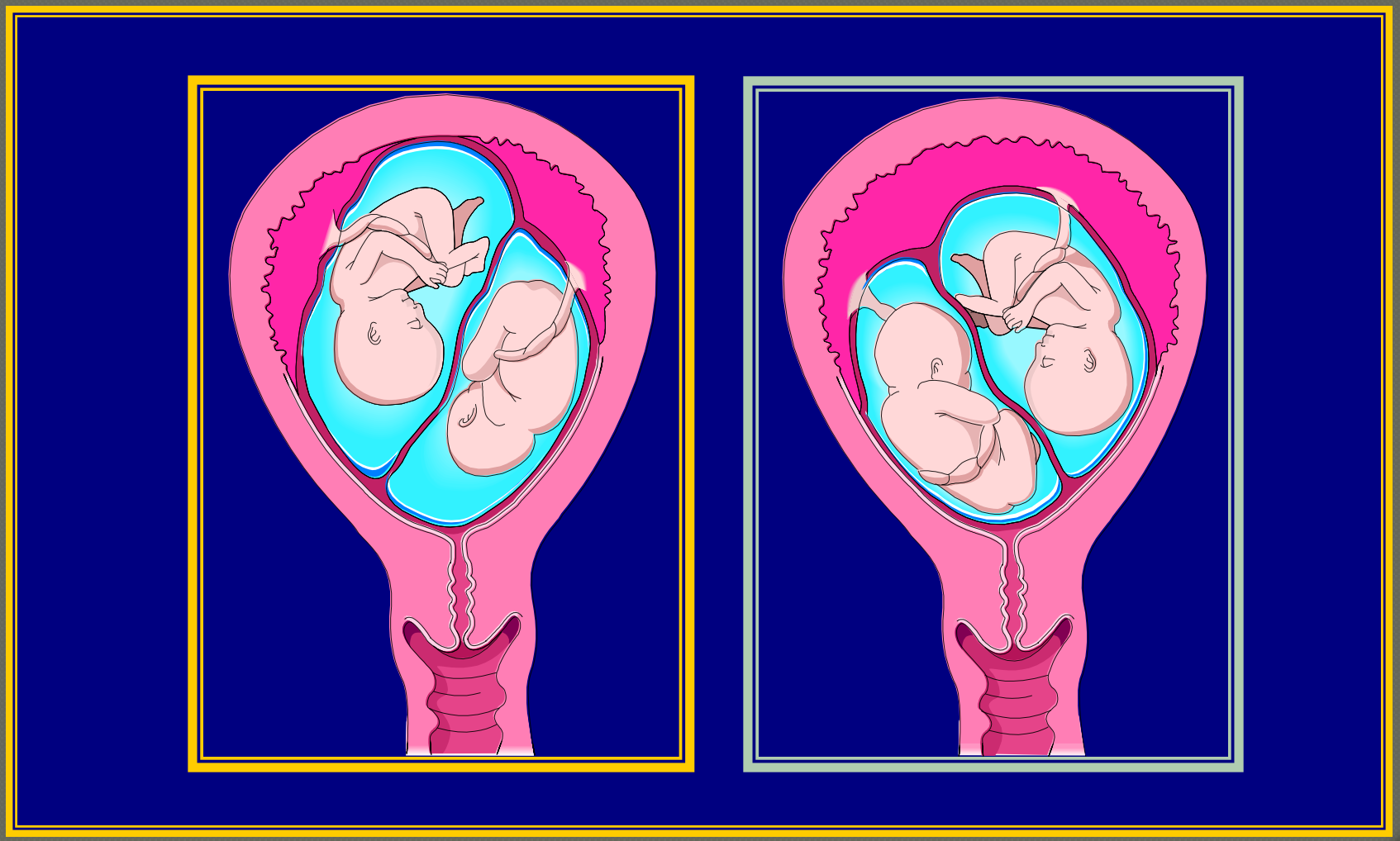
# Meconium

- Meconium can:
  - Occlude airway
  - Cause pneumonitis

# Meconium

- Management
  - Avoid early stimulation of baby to prevent aspiration
  - Aggressively suction airway until all meconium is removed

# Multiple Births



# Multiple Births

- Consider as possibility if:
  - Mother's abdomen appears abnormally large prior to delivery
  - Mother's abdomen remains large after delivery of first baby
  - Contractions continue after delivery of first baby

# Multiple Births

- Delivery
  - Clamp cord of first baby before delivery of second
  - Usually second baby will deliver shortly after first
  - Care for babies, mother, and placenta(s) as you would in a single birth

# Multiple Births

- Multiple babies are usually small
- It is important to keep them warm!

# Premature Infants

- Definition
  - < 28 weeks gestation, or
  - < 5.5 pounds birth weight

# Premature Infants

- Management
  - Keep baby warm
  - Keep airway clear
  - Assist ventilations if necessary
  - Resuscitate if necessary
  - Watch umbilical cord for bleeding
  - “Blow by” $O_2$
  - Avoid contamination
  - Consider ALS intercept

Thanks for Coming

Captain Gene McDaniel

Phoenix Fire Department