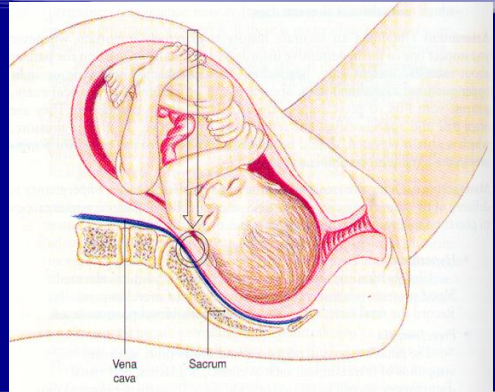


# The Miracle of Life...Almost

## PRE-DELIVERY COMPLICATIONS

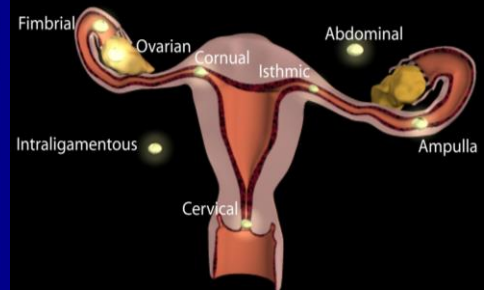
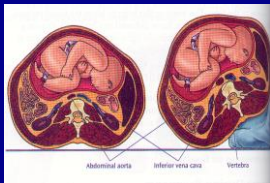
### Trauma in Pregnancy

- Causes of maternal injury in decreasing order of frequency:
  - Vehicular crashes
  - Falls
  - Penetrating objects
- The greatest risk of fetal death is from maternal distress



### Supine Hypotensive Syndrome

- Check to see if volume depletion is an issue
  - Orthostatic VS
  - Hx of diarrhea, vomiting
  - Dehydration
- Manage with LLR positioning and fluids





## Ectopic Pregnancy

### WHY?

- Infections
  - PID, IUD's, previous abortions
- Pelvic/Ovarian tumors
- Tubal surgery
- Anatomical defect
  - Rare



**All women of childbearing age who present with acute onset of abdominal pain and signs or symptoms of shock should be considered to have an *ectopic pregnancy* until proven otherwise!**

## Ectopic Pregnancy

### Wadda Ya See?

Depends on how intact the tubes are

## Ectopic Pregnancy

- **Before rupture**
  - LMP was usually < 6 weeks
    - No more than 8 weeks
  - Mild vaginal bleeding or brown-stained discharge
  - Mild spasmodic cramping/acute stabbing pain

## Ectopic Pregnancy

- **After rupture**
  - Severe bleeding into the abdomen
    - Vaginal bleeding minimal
  - Compensated/decompensated shock S/S

## Ectopic Pregnancy

### OPTIONS ?

- Rapid ABC assessment/recognition
- Priority transport
- Shock management

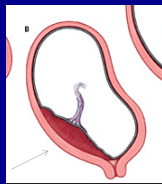


## Placenta Previa

- Placenta implants partially or completely in the lower part of the uterus
- Happens in 1 in every 200 pregnancies

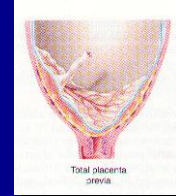
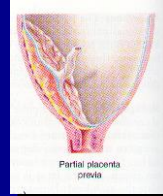
## Placenta Previa

- Low-lying (Type 1)
- Marginal (Type 2)



## Placenta Previa

- Partial (Type 3)
- Complete (Type 4)



## Placenta Previa

- Risk Factors
  - Age
  - Multiparity
  - Previous C-section
  - D&C
  - Smoking

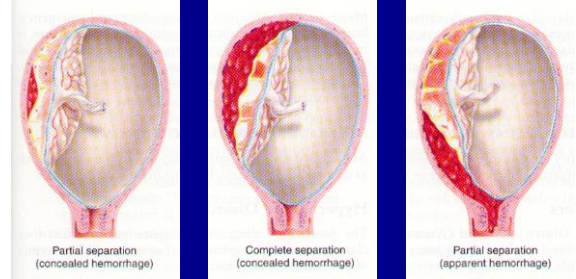


## Placenta Previa

- S/S
  - Bleeding
    - **Bright red**
    - **Painless**
  - Spontaneous
  - Non-tender abdomen
  - Fundal height OK
- Treatments
  - ABC support
  - I.V. fluid support
  - Transport for definitive treatment
    - C-Section

## Abruptio Placenta

- Premature separation of a normally situated placenta in the upper part of the uterus
- Typically a 3<sup>rd</sup> Trimester complication



## Abruptio Placenta

### What's Goin' On?

- Pre-eclampsia
- Chronic HTN
- Trauma
- Don't know...

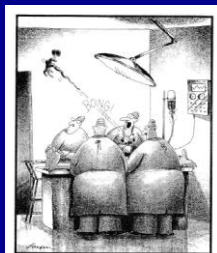


## Abruptio Placenta

- Findings
  - Scant outward **DARK** red blood flow **WITH** pain
  - Acute onset
  - Uterus becomes tender and rigid if hemorrhage is retained
  - S/S of shock inconsistent with amount of visible bleeding

## Abruptio Placenta

- Fluid resuscitation prn
- Transport in LLR position
- Definitive tx is C-Section



"Whoa! Watch where that thing lands - We'll probably need it."

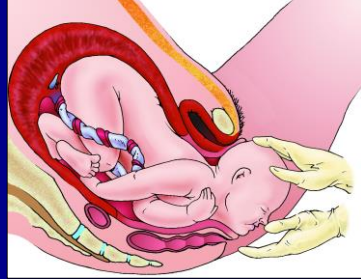
## General Assessment



Normal Delivery



Head and Perineum support



Normal Delivery



Normal Delivery



Normal Delivery



Normal Delivery



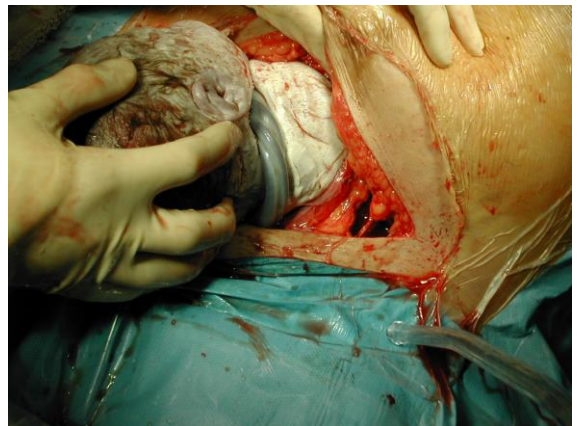
Normal Delivery

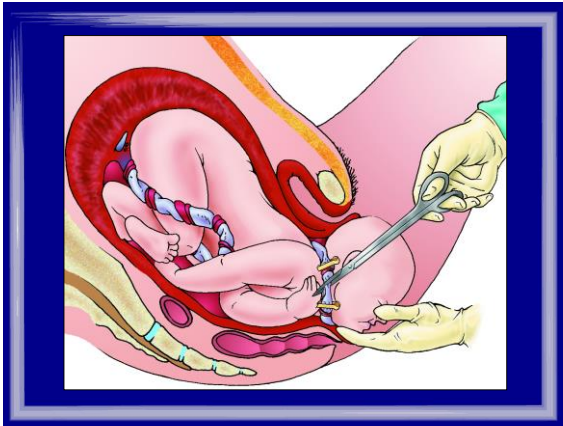


Normal Delivery




# ABNORMAL DELIVERIES






### Umbilical Cord Presentation

- The umbilical cord presents before the fetal head
- Cord becomes compressed between fetus and pelvis
- Associated with breech presentation, multigravidity, large fetus

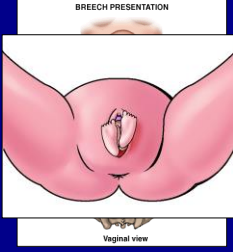


### Umbilical Cord Presentation

- Position the mother in a knee-chest position
- Check cord for pulsations and cover cord with sterile towel moistened with saline
- Have mother pant with contractions to avoid bearing down
- Insert a sterile, gloved hand into the birth canal and push the presenting part of the fetus off the cord
- High flow oxygen

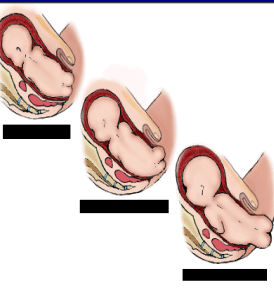


### Breech Presentation




- Occurs when the fetus' buttocks or lower extremities are the presenting part
- Increased risk of prolapsed cord, cord compression
- Associated with pre-term birth, placenta previa

### Breech Presentation



### Breech Presentation



- If the head will not deliver, then form a "V" with fingers and press the vagina away from the newborn's nose
- Temporary airway is established
- Transport with mom's hips elevated

## Cephalopelvic Disproportion

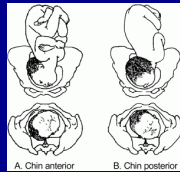
- Size of the fetus head vs. mom's pelvis
- One of the most common causes of difficult labor
- The mother is often primigravida and experiencing strong, frequent contractions for a prolonged period



## Cephalopelvic Disproportion

### Causes

- Increased fetal weight
  - >10 lbs.
  - Diabetic mother
  - Multigravida mother
- Cervical rigidity



## Cephalopelvic Disproportion

- Remedy
  - Basic standard of care
  - 3 D's
    - Discovery
    - Delivery to ambulance
    - Diesel

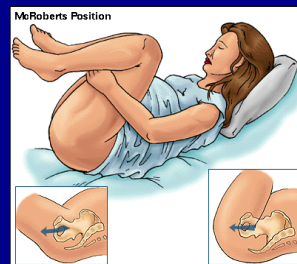


## Shoulder Dystocia



- Fetal shoulder becomes lodged against the mother's pubic bone
- Cannot be detected until after the head delivers

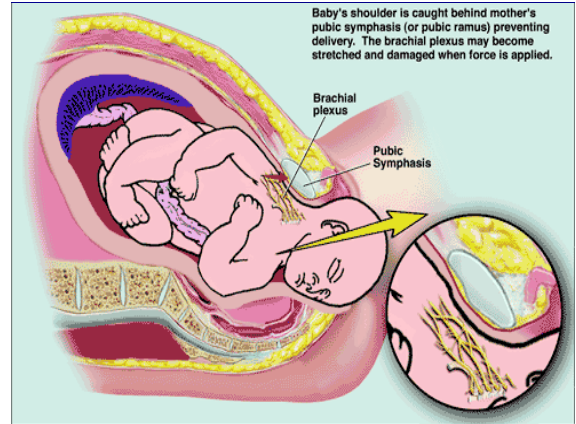
## Shoulder Dystocia



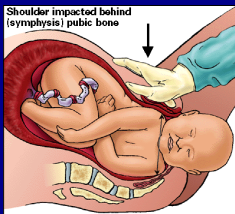


## Shoulder Dystocia

- MATERNAL
  - Postpartum bleed
  - Perineal tear
  - Uterine rupture
  - Fracture of symphysis pubis
  - Vaginal lacerations
- FETAL
  - Clavicle fx.
  - Humerus fx.
  - Fetal hypoxia
  - Brachial plexus injury
  - Fetal death



## Shoulder Dystocia



- Be prepared to transport immediately in case delivery is not possible
- Also be prepared to resuscitate the newborn

## Meconium Staining

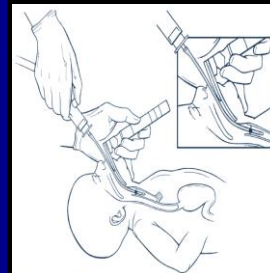
- Light green to darker green, thick
- Intubation/suction may be necessary to clear the airway



## Suctioning Meconium



## Suctioning Meconium



# POSTPARTUM COMPLICATIONS



## Postpartum Bleeding

- Loss of more than 500 cc's of blood immediately following delivery
- Caused by:
  - Lack of uterine tone
    - Multigravida, multiple births, large newborn
  - Vaginal/Cervical tears
  - Retained placental pieces

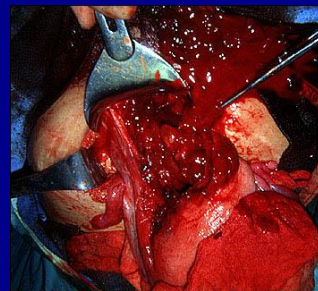
## Postpartum Bleeding

- ABC's
- High flow Oxygen
- Place baby at breast, uterine massage
- Consider 2 large I.V.'s
- Consider Oxytocin prn

## Uterine Rupture

- Spontaneous or traumatic rupture of the uterine wall
  - Occurs in 1 out of 1400 deliveries
  - 5-15% maternal mortality
- May result from previous uterine scar
- Prolonged labor, trauma

## Uterine Rupture



## Uterine Rupture

- Characterized by sudden abdominal pain, steady tearing sensation, active labor
- Early signs of shock, weakness, dizzy, may not see bleeding, abdomen rigid, fetus may be palpated through abdomen
- Sudden cessation of labor and/or fetal heart tones

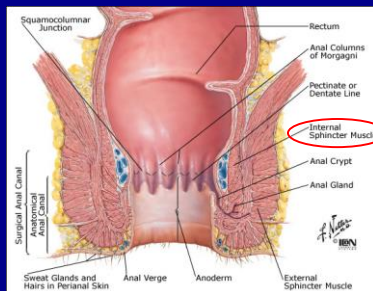
## Uterine Inversion

- Infrequent (0.05% of all deliveries)<sup>1</sup>
- Uterus gets turned inside-out after delivery
  - Umbilical cord traction
  - Fundal implantation of placenta
- Inverted uterus usually appears as a protruding bluish-gray mass
  - Placenta is often still attached

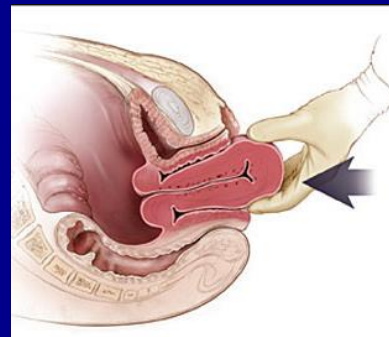


## Uterine Inversion

- **S/S**
  - Profuse vaginal bleeding
    - 800ml – 2L
  - Severe lower abdominal pain
  - Vasovagal effects
- Treat for shock and bleeding



S2-S4



## THE END... Any Questions?



## It's Been My Pleasure... Christopher Ebright

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National EMS Academy  
Covington, LA

## Resources

1. [www.aafp.org/afp/20070315/875.html](http://www.aafp.org/afp/20070315/875.html)
- <http://www.mhhe.com/socscience/deve/libank/image/0038.jpg>
- <http://www.babiesonline.com/pregnancy/monthbymonth/trimester1.asp>
- <http://ms.yuba.cc.ca.us/vet02/bio/photos/bio46.jpg>
- <http://www.w-cpc.org/fetal3.html>

## Resources

- <http://www.w-cpc.org/fetal2.html>
- <http://www.w-cpc.org/fetal1.html>
- Brady Paramedic CD Vol. 3
- <http://images.google.com/imgres?imgurl=medlib.med.utah.edu/WebPath/jpeg4/FEM083.jpg&imgrefurl=http://medlib.med.utah.edu/WebPath/FEMHTML/FEM083.html&h=331&w=504&sz=74&tbnid=jl06AA6rJJ0J:&tbnh=84&tbnw=127&start=4&prev=/images%3Fq%3Duterine%2Brupture%26hl%3Den%26lr%3D%26ie%3DUTF-8>

## Resources

- [http://medlib.med.utah.edu/kw/human\\_reprod/mml/hr\\_ob\\_oh\\_5.jpg](http://medlib.med.utah.edu/kw/human_reprod/mml/hr_ob_oh_5.jpg)
- Commander Diane Miller, NC, USN
- [http://www.who.int/reproductive-health/impac/Images\\_P/3.22.1manualreposit.gif](http://www.who.int/reproductive-health/impac/Images_P/3.22.1manualreposit.gif)
- <http://prometheus.frii.com/~jenine/summer98/bman/baby.jpg>
- Mosby Paramedic CD ch. 40
- Matthew Zavarella, RN, EMT-P
- <http://www.med-help.net/ECB11.jpg>
- <http://www.udel.edu/Biology/Wags/histopage/colorpage/efr/efr3.CIF>