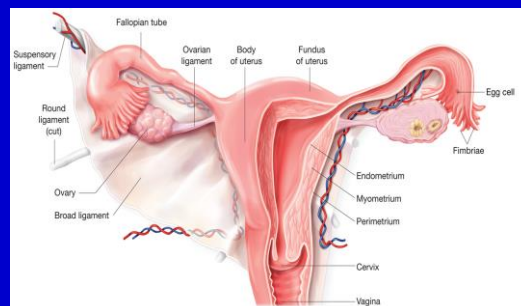


Chapter 13

Childbirth

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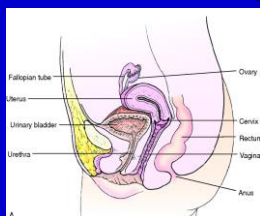
Anatomy and Physiology of Pregnancy



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Anatomy and Physiology of Pregnancy

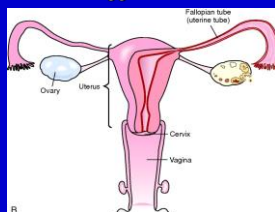


• Uterus

- Pear-shaped muscular organ that houses unborn infant

• Fallopian tube

- Extends from each ovary and acts as a path for egg to reach uterus



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Anatomy and Physiology of Pregnancy

• Ovaries

- Pair of almond-shaped organs located in right and left lower quadrants of the abdomen
- Function to release eggs and hormones
 - Once a month an egg is released from ovary and travels through fallopian tube to uterus

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A & P of Pregnancy

• Cervix

- Neck of uterus—lower portion where it enters vagina
- Contains mucous plug that acts as barrier between uterus and vaginal opening during pregnancy
 - Once labor begins—mucous plug will separate and discharge from vagina—sometimes termed bloody show

• Vaginal/birth canal

- Sheath that encloses lower portion of uterus and extends down to vaginal opening

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Anatomy and Physiology of Pregnancy

• Perineum

- Area between vaginal opening and anus

• A fertilized egg

- Grows and develops in uterus
- Is linked to the mother via the placenta

• Umbilical cord

- Fetus passes waste material back through umbilical cord and placenta to mother's circulatory system to be eliminated

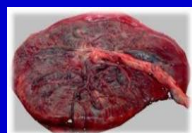


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Anatomy and Physiology of Pregnancy

- Placenta
 - O₂ and nutrients from mother's blood pass through placenta and enter circulatory system of fetus through the umbilical cord



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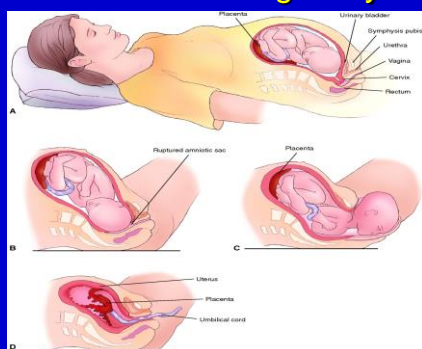
Anatomy and Physiology of Pregnancy

- Amniotic sac
 - Fluid-filled sac that surrounds fetus during pregnancy
 - Helps protect developing fetus
- Rupture of the membranes
 - Amniotic sac will typically rupture before delivery of the fetus
 - Some mothers refer to this as "My water has broken"

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A & P of Pregnancy



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Labor

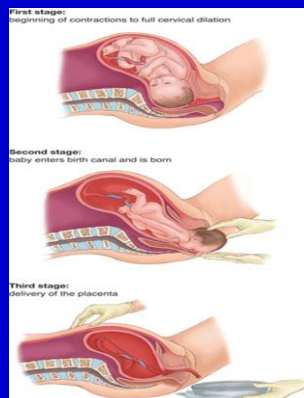
- Process that occurs when woman is preparing to give birth
- Can last from a few hours to many hours or days
- Length of labor depends on:
 - Age of mother
 - Whether it is first or subsequent pregnancy
 - General health of mother
 - Overall health of fetus

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Three Stages of Labor

First Stage



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Second Stage



Third Stage



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Delivery

- First decide
 - Will you need to deliver baby at scene?
 - Is there enough time for mother to reach hospital
- As birth nears:
 - Contractions last longer (up to 90 seconds) and become more intense
 - Shorter interval of time between contractions

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Delivery

- Indicators to help determine if delivery is imminent
 - Ask questions
 - Are you bleeding or having other kinds of vaginal discharge (bloody show)?
 - Do you feel like you need to have a bowel movement?
 - Do you feel increasing pressure in your vaginal area?
 - What is your due date?
 - Is there any chance of a multiple birth?
 - Is this your first pregnancy?
 - How long have you been having contractions?
 - How far apart are your contractions?
 - Has your water broken?

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Delivery

- Indicators to help determine if delivery is imminent
 - If mother states any of the following, consider performing a visual inspection
 - Needs to push
 - Needs to have a bowel movement
 - Has bloody show
 - Amniotic sac has ruptured

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Delivery

- Visual inspection
 - Have patient lie on back
 - Elevate hips with padding
 - Knees should be bent and feet flat on floor
 - Knees should be spread apart
 - Protect patient's modesty and privacy
 - Check for crowning during contraction

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Delivery

- Breech birth (limb presentation)
 - Occurs when baby's head is not presenting part
 - Complicated delivery
 - Be sure EMS has been called
 - If birth is not imminent
 - Provide emotional support
 - Call for help
 - Continue to monitor mother while waiting for EMS
 - Position mother on left side

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Breech Presentations



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Delivery

- Breech birth (limb presentation)
 - If birth is not imminent
 - Provide emotional support
 - Call for help
 - Continue to monitor mother while waiting for EMS
 - Position mother on left side



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Delivery

- BSI for Delivery
 - Proper body substance isolation (BSI)
 - Gloves
 - Gown
 - Mask
 - Eye protection

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Delivery

- Supplies for delivery
 - Commercially prepared OB kit includes:
 - Gloves, gown, mask, and eye protection
 - Clean, absorbent materials including sheets and towels
 - Blankets
 - Bulb syringe
 - Scissors
 - Gauze Pads
 - Waste bag



- Sanitary napkins or bulky trauma dressings
- Rolled gauze, umbilical clamps
- Container for the placenta

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Delivery

- Delivery procedure
 - Prepare for delivery
 - Put on BSI
 - Prepare supplies and equipment to assist mother
 - Provide reasonable privacy for mother by asking unneeded bystanders to leave or turn back and look away
 - Have mother remove undergarments and lie on back with knees drawn up and spread apart
 - Elevate mother's hips

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Delivery

- Delivery procedure
 - As baby moves down into birth canal:
 - Mother's urge to push will be very strong
 - Remind her not to arch her back
 - Have her tuck her chin to chest, grab behind her knees, and curl body forward

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Delivery

- Delivery procedure
 - As baby moves down into birth canal:
 - Encourage mother to hold her breath for 6-10 seconds as she bears down; pushing longer can cause
 - Strain
 - Rupture of blood vessels
 - Exhaustion
 - Tearing of perineum

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Skill 13-1: Normal Delivery

- Prepare for delivery



- As the infant's head appears, place the palm of your hand on top of baby's head



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Skill 13-1: Normal Delivery

- Support baby's head and check baby's neck for presence of umbilical cord



- Support infant's head as it rotates



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Skill 13-1: Normal Delivery

- Guide infant's head downward to deliver anterior shoulder



- Guide infant's head upward to release posterior shoulder



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Skill 13-1: Normal Delivery

- Suction baby's mouth first and then baby's nostrils two or three times with bulb syringe



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Skill 13-1: Normal Delivery

- If you do not have a bulb syringe, the mouth and then nose should be wiped with a gauze pad
- Support and assist in delivery of infant's shoulders—rest of baby will be born very quickly
- Once infant is delivered keep the infant at or around level of vagina until umbilical cord has been cut

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Skill 13-1: Normal Delivery

- When umbilical cord stops pulsating—tie it with gauze between mother and newborn
- Wipe blood or mucus from baby's mouth and nose with sterile gauze and suction baby's mouth and nose again
- Dry and wrap baby



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Skill 13-1: Normal Delivery

- Stimulate baby to breathe by rubbing its back or flicking the soles of its feet
- Position baby on side, with head slightly lower than trunk, or place baby on mother's abdomen
- Record time of delivery



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Skill 13-1: Normal Delivery

- If there is a chance of multiple births, prepare for a second delivery
- Observe for delivery of placenta—could take up to 30 minutes

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Skill 13-1: Normal Delivery

- When placenta is delivered
 - Wrap placenta and approximately $\frac{3}{4}$ of attached umbilical cord in towel and place them in plastic bag for transport to hospital
- Place bulky pad over vaginal opening
 - Lower mother's legs
 - Encourage mother to hold her legs together
 - Never place anything directly in vagina

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Post-Delivery

- Postdelivery vaginal bleeding
 - Vaginal and perineal bleeding is normal during and after birth process
 - Mother's perineum tissue can tear during crowning and delivery of head causing moderate bleeding

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Post-Delivery

- Post-delivery vaginal bleeding
 - Normal to lose 300-500 mL of blood (from inside uterus) after delivery
 - Watch for signs that bleeding is excessive
 - Anxiety
 - Changing in level of consciousness or lethargy
 - Rapid pulse
 - Rapid respirations
 - Bleeding that does not slow down or stop

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Post-Delivery

- To help control excessive postdelivery bleeding and minimize risk of shock:
 - Control bleeding by massaging lower abdomen over uterus



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Post-Delivery

- To help control excessive postdelivery bleeding and minimize risk of shock:
 - Treat for shock
 - Provide mother with O₂
 - Maintain mother's normal body temperature by covering her with blankets
 - Encourage breast feeding
 - Stimulates contraction of uterus and may help control rate of bleeding

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Post-Delivery

- Postdelivery care of mother
 - After mother has delivered you should:
 - Continue to monitor mother's breathing and pulse
 - Make mother comfortable and monitor her for bleeding by replacing blood-soaked sheets, blankets, and pads with clean, dry ones
 - Maintain contact with mother while awaiting her transport to hospital

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Newborn Care

- Initial care of newborn
 - During delivery—clear baby's airway
 - Once baby delivered—stimulate baby to breathe
 - Babies are bluish in appearance when first born and "pink up" as their breathing becomes more regular



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Newborn Care

- Dry the baby
 - Dry infant completely
 - Keep infant warm by wrapping infant in dry, warm blanket
 - Cover head to reduce heat loss



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Newborn Care

- Clear airway
 - Once delivered, position infant on side with head slightly lower than body
 - Wipe mouth and then nose with gauze pad
 - Use bulb syringe to suction mouth and then nose



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Newborn Care

- Check for breathing
 - Provide stimulation for infant to breathe within first 30 seconds of life
 - Once infant begins breathing:
 - Check that infant is taking >40 breaths/minute and is awake and alert
 - Crying is normal for newborns
 - If newborn does not begin to breathe or continues to have breathing difficulty:
 - Ensure an open airway
 - Provide ventilation with mouth-to-mask or bag-mask technique at a rate of 40-60 breaths/minute for approximately 30 seconds

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Newborn Care

● Check circulation

- Monitor pulse at brachial artery
- Pulse rate should be >100 beats/minute
- Baby should be "pinking up" in color
- If no pulse:
 - Begin CPR
 - Rate 120/minute
 - 2 thumbs encircling method
 - 15:2 ratio with 2 rescuers



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Newborn Scoring (1 & 5 minutes)

Apgar Scoring System

Indicator		0 Points	1 Point	2 Points
A	Activity (muscle tone)	Absent	Flexed limbs	Active
P	Pulse	Absent	< 100 BPM	> 100 BPM
G	Grimace (reflex irritability)	Floppy	Minimal response to stimulation	Prompt response to stimulation
A	Appearance (skin color)	Blue/Pale	Pink body Blue extremities	Pink
R	Respiration	Absent	Slow and irregular	Vigorous cry

HIE Help Center
hiehlpcenter.org

Complications

● Miscarriage/spontaneous abortion

- For unknown reasons, mother's body rejects developing fetus and expels products of pregnancy
- Usually occurs before week 20 of pregnancy
- Be prepared to offer comfort and psychological support in addition to physical care
- Signs and symptoms
 - Bleeding
 - Abdominal cramps or pain
 - Passing of pregnancy and fetal tissue

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Complications

● Miscarriage/spontaneous abortion

- Treatment
 - Support mother's airway, breathing, and circulation
 - Save any passed blood or tissue for transport to hospital
 - Provide O₂
 - Arrange for transport
 - Provide psychological support

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Complications

● Multiple births

- Watch each infant closely for breathing difficulties and rapid cooling
- Things to remember
 - Mother is often not at full term when she goes into labor
 - Labor may not last as long
 - Babies often are smaller than full-term baby
 - Each baby typically weighs less than or equal to 5½ pounds

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Complications

● Prolapsed cord

- Occurs when umbilical cord is presenting part in delivery
- Cord become pinched between baby's head and mother's birth canal blocking delivery of O₂ to baby
- Do not attempt to push cord back into birth canal



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Complications

- Prolapsed cord
 - Position mother in a knee-chest position
 - Place wet dressings over exposed umbilical cord
 - Provide psychological support to mother
 - Provide mother with O₂
 - Immediate transport necessary

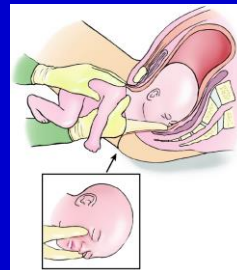


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Complications

- Breech birth
 - Occurs when head is not the presenting part
 - If buttocks emerges first labor and delivery may proceed normally
 - Be prepared to support the infant during delivery



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Complications

- Breech birth
 - If head does not appear shortly after rest of body create an airway for the baby
 - Support baby's body on your forearm
 - Do not pull on baby to deliver head
 - Using same hand that is supporting baby's body, slide two gloved fingers into mother's vagina and place them on each side of baby's mouth
 - Give mother O₂

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Complications

- Breech birth
 - If presenting part is an extremity
 - Delivery will probably not occur out of hospital
 - Remain calm
 - Comfort and reassure mother
 - Position mother in knee-chest position
 - Place mother on O₂
 - Provide psychological support while waiting for her to be transported to hospital

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Questions?

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