N432 Focus Sheet #2 Spring 2021 with highlights

Ricci, Kyle, & Carman Ch 13, 14, 21 and ATI Ch 11, 12, 13, 14, 15,16 Focused Reading

Fill in the following table with associated s/s of each

	TRUE LABOR	**FALSE LABOR**
Uterine Contractions	Sometimes starts as vaginal pressure. Can begin irregularly but become regular in frequency stronger, last longer, and more frequent felt in lower back, radiating to the abdomen. Continue no matter what patient does to alleviate the discomfort. Backache that progresses	Painless, irregular frequency, and intermittent decrease w/walking or position changes felt in lower back or a pulling or tightening sensation at the top of the uterus in the abdomen above umbilicus (Braxton Hicks) Increasing fluid intake will cause to go away.
Cervical Dilation & Effacement	**progressive change in dilation and effacement** **moves to anterior position**	no significant change in dilation or effacement often remains in posterior position
Bloody show	Present-at the onset of labor or before (often mucous plug expelled with the start of bloody show)—cervical capillaries are rupturing.	no significant bloody show
Fetus: Engagement What level is	presenting part engages in pelvis (Entrance of the largest	presenting part is not

the presenting part in the pelvis?	diameter of the fetal presenting part into the smallest diameter of the maternal pelvis.) Can occur 2 weeks before labor starts in primgravidas and where as multigravidas may experience it weeks before or not until labor begins. (NOTE: terms "floating" or "ballotable" mean the fetal presenting part is not engaged.	engaged in pelvis

Define lightening. **Not only know these signs and symptoms but know the rationale behind them.**

- ➔ fetal head descends into true pelvis-Can occur about 14 days or more before labor begins for primigravidas
- ➔ Uterus lowers and moves into a more anterior position resulting in the shape of the abdomen changing.
- ➔ feeling that the fetus has "dropped" easier breathing more pressure on bladder, resulting in urinary frequency more pronounced in clients who are primigravida

Describe the Bishop score and the indications for doing it.

Bishop Score: used to determine maternal readiness for labor by evaluating whether the cervix is favorable by rating the following: Done by the provider prior to induction of labor.

- ➔ cervical dilation
- ➔ cervical effacement
- ➔ cervical consistency (firm, medium, or soft)
- ➔ cervical position (posterior, midposition, or anterior)
- ➔ station of presenting part

The factors are assigned a numerical value of 0-3 and a total is calculated

What are Leopold's maneuvers (make sure to understand all 4 maneuvers) and what 4 questions do each maneuver answer?
Know this and be able to utilize it to make nursing judgements/assessments.
Leopold maneuvers - performing external palpations of the maternal uterus through the abdominal wall to determine the following:

1. number of fetuses
2. the fetal presenting part (cephalic or breech), fetal lie (longitude or transverse), and fetal attitude (flexed with vertex presentation or extended with face presentation)
    a. **Flexed with vertex presentation:** if cephalic prominence is on the same side as the small parts
    b. **Extended with face presentation:** if the cephalic prominence is on the same side as the back
3. degree of descent of presenting part into pelvis
4. probable location of fetus' back to assess for fetal heart tones

➔ **Vertex (Also called Cephalic)Presentation -** fetal heart tones assessed BELOW mother's umbilicus in either right or left lower quadrant

➔ **Breech Presentation -** fetal heart tones assessed ABOVE the mother's umbilicus in either right or left upper quadrant

List the "pre-procedures" done on admission to labor and delivery. Be able to use these in a scenario to make decisions.
What questions do you want to ask? Think about questions regarding signs of membranes being ruptured; whom is their support person; what their plans are for pain management during labor and what their contraction pattern is.

Leopold maneuvers: This will help you find where to place the ultrasound transducer.
External electronic monitoring (tocotransducer):

➔ applied to maternal abdomen over fundus that measures uterine activity
➔ displays uterine contraction patterns

External fetal monitoring (EFM) Ultrasound transducer.:

➔ transducer applied to abdomen to assess FHR patterns during labor and birth

Labs:

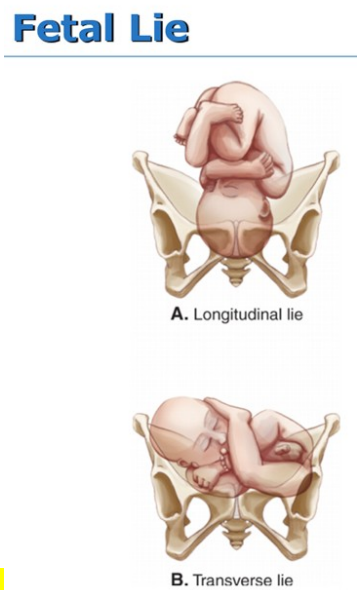
➔Type and screen (even though it has been done at first prenatal visit. Needs documentation so that blood products for that patient can safely ordered in the event that they are needed. Also to determine if mother with need Rhogam after delivery.
➔CBC with platelet count: need baseline of Hbg & Hct as well as adequate platelet count (if epidural or spinal anesthesia is needed), in order to compare to counts after delivery because of blood loss.

Do you want to know the status of the membranes i.e. amniotic sac and the cervical dilation?

State the 5 "P's" of the labor progress and what each P is composed of. Be able to use these to understand the scenarios on problems in labor.

Passageway: birth canal, pelvis & soft tissues
Passenger: fetus and placenta
Powers: contractions; how sensitive is the uterus to the drugs
Position: maternal -- upright, lying down, walking around, etc.
Psychological response: this can impact labor & birth

Define fetal lie and fetal attitude. Definitely know these



Fetal Lie: relationship of the maternal longitudinal axis (spine) to the fetal longitudinal axis

- ➔ **Transverse:** fetal long axis is horizontal
  - ◆ forms a right angle to maternal axis and will not accommodate vaginal birth

- ◆ the shoulder is the presenting part and can require C section if fetus does not rotate spontaneously

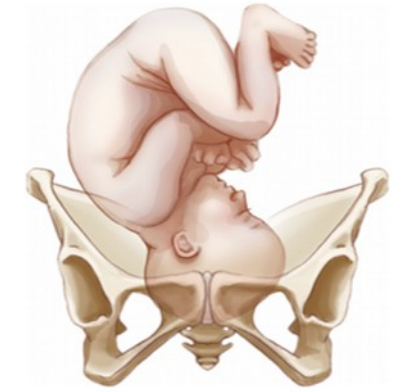
➔ **Parallel or Longitudinal**: fetal axis is parallel to maternal axis

- ◆ can be cephalic or breech presentation (breech can require C section)

Fetal Attitude: relationship of fetal body parts to one another

➔ **Fetal flexion:** chin flexed to chest, extremities flexed into torso

➔ **Fetal extension:** chin extended away from chest, extremities extended



Fetal Position (Fetopelvic): the relationship of the presenting part of the fetus (sacrus, mentum, or occiput), preferably the occiput, in reference to its directional position as it relates to one of the four maternal pelvic quadrants. I am only going to ask about ROP, ROA, LOP, LOA

Labeled with 3 letters:

- ➔ **Right (R) or Left (L):** the first letter references either side of the maternal pelvis
- ➔ **Occiput (O), Sacrum (S), Mentum (M), or Scapula (S):** second letter references the presenting part of the fetus
- ➔ **Anterior (A), Posterior (P), or Transverse (T):** third letter references the part of the maternal pelvis

Fetal Station: measurement of fetal descent in cm with station *"0"* being at the level of an imaginary line at the level of the ischial spines, minus stations superior to the ischial spines, and plus stations inferior to the ischial spines. Coming in to the pelvis is a minus number; Coming out of the pelvis is a + number.

What role do the fetal skull, suture lines, and fontanelles play in identifying fetal position?

Fetal Skull: diameters of the fetal skull can affect the birth process Understand this in relation to the fetal position.

- ➔ if fetus presents in flexed position (chin resting on chest) the smallest fetal skull dimensions are demonstrated
- ➔ if fetus is not fully flexed the dimensions are increased and may prevent the fetal skull from entering the maternal pelvis

Suture Lines: palpation of sutures during pelvic exam reveals position of fetal head and degree of rotation that has occurred

Fontanelles: (anterior and posterior) anterior is the famous "soft spot" on a baby's head and is diamond shaped; posterior is located at back of head and is triangular

Define the various fetal presentations (RKC p 462-464 & ATI p 76). I am only going to ask about Cephalic and Breech as they can be assessed using Leopold maneuver.

Three Main Presentations: Cephalic, Breech, or Shoulder

Cephalic (Vertexa): head first

Breech: occurs when fetal buttocks or feet enter the maternal pelvis first and the fetal skull enters last

- ➔ poses several challenges at birth: skull may become "hung up" or stuck in pelvis
- ➔ umbilical cord can become compressed between the fetal skull and maternal pelvis
- ➔ feet or buttocks are not as effective as the skull to be a cervical dilator during labor
- ➔ possibility of trauma to the head due to lack of opportunity for molding
- ➔ **Full Breech:** fetus sits cross-legged above the cervix
- ➔ **Frank Breech:** the buttocks present first with both legs extended up toward the face; can result in vaginal birth
- ➔ **footling or incomplete breech:** one or both legs are presenting
- ➔ breech presentations are often associated with prematurity, placenta previa, multiparity, uterine abnormalities (fibroids), and some congenital anomalies (hydrocephaly)

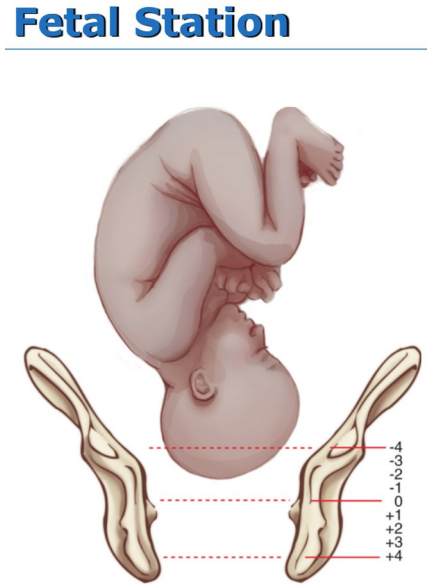
Shoulder: shoulder dystocia; occurs when fetal shoulders present first with head tucked inside (This is part of Unit III as a complication but you need to understand what is meant by a shoulder presentation.)

- ➔ signs appear while woman is pushing as the neonate's head slowly extends and emerges over the perineum but then retracts back into the vagina ("turtle sign")
- ➔ often associated with placenta previa, prematurity, high parity, premature rupture of membranes, multiple gestation, or fetal anomalies
- ➔ c section is usually necessary if identified before labor begins

What do each of the 3 letters associated with fetal positioning stand for? I will ask about ROA, ROP, LOA, LOP

Right (R) or Left (L): the first letter references either side of the maternal pelvis
Occiput (O), Sacrum (S), Mentum (M), or Scapula (S): second letter references the presenting part of the fetus
Anterior (A), Posterior (P), or Transverse (T): third letter references the part of the maternal pelvis

Fetal station is assessed in relation to what?This will be in a scenario and not a picture. Remember coming in to the pelvis inlet is a – number but coming out is a + number (station)
ischial spines- they are typically the narrowest part of the pelvis and natural measuring point for the birth progress



Outline the rationale for and the pros and cons of external cephalic version. Understanding the risks and a potential complications is what I want you to know.
External Cephalic Version: ultrasound-guided (with fetal monitoring) hands-on procedure to externally manipulate the fetus into a cephalic lie done at 36-37 weeks gestation in the hospital

- ➔ high risk of placental abruption, umbilical cord compression, and emergent C section
- ➔ Contraindications: uterine anomalies, previous C section, cephalopelvic disproportion, placenta previa, multifetal gestation, and oligohydramnios
- ➔ successful in 50% of cases

Describe methods of cervical ripening and the indications for their use?

Cervical Ripening: ripening by various methods increases cervical readiness for labor through promotion of cervical softening, dilation, and effacement

- ➔ can eliminate the need for oxytocin administration to induce labor, lower the dose of oxytocin needed, and promote a more successful induction
- ➔ administration of low-dose infusion of oxytocin is used for cervical priming
- ➔ balloon catheter is inserted into intracervical canal to dilate the cervix
- ➔ membrane stripping and an amniotomy may be performed—as a part of the induction
- ➔ hygroscopic dilators may be inserted to absorb fluid from surrounding tissues and then enlarge. Fresh dilatros may be inserted if further dilation is required
  - ◆ **Laminaria tents** are made from desiccated seaweed
  - ◆ **Synthetic dilators** contain magnesium sulfate
- ➔ chemical agents based on prostaglandins are used to soften and thin the cervix. They can be in the form of oral medication or vaginal suppositories/ gels
  - ◆ **Misoprostol (Cytotec):** prostaglandin E1
  - ◆ **Dinoprostone (Cervidil) :** prostaglandin E2
- ➔ **Indications:**
  - ◆ any condition in which augmentation or induction of labor is indicated
  - ◆ failure of the cervix to dilate and efface
  - ◆ failure of labor to progress

You will need to know these in order to make decisions about Nursing actions.

Use this chart to summarize the Stages & phases of labor. Write it so that it makes sense to you.

What is happening during this Stage/Phase?	***Stage of Labor***	***Expected effacement & dilation of cervix***	***Expected Frequency of Contractions***	***Expected duration of contractions***	***Expected Maternal characteristics***	***Anticipated Nursing assessments & interventions***
1. onset of labor	First Stage 1. Latent	1. 1-3 cm Effacement 0-40%	1. irregular, mild-moderate; frequency 5-30 min	1. 30-45 sec	1. talkative & eager; some dilation and effacement 2. feeling of	Perform Leopold procedure Assess VS & FHR

2. labor 3. transitioning from labor >> birth	2. Active 3.Transition	2. 4-7cm Effacement 40-100% 3. 8-10 cm (complete dilation)	2. more regular, moderate-strong; 3-5 min 3. strong - very strong; 2-3 min	2. 40-70 sec 3. 45-90 sec	helplessness; anxiety & restlessness; rapid dilation and effacement 3. tired, restless, irritable, feels out of control "cannot continue" increased bloody show	Assess uterine contraction characteristics Assist with repositioning & comfort measuresepidural Vaginal exams as determined by progression of contractions Encouraging voiding at least every 2 hours Assess pain Monitor IUPC if inserted
lasts from 10cm dilation of cervix to birth	Second Stage	cervix dilated 10 cm	1-2 min	n/a	pushing results in birth	assess VS & FHR assess uterine contraction characteristics monitor IUPC
birth of infant to placental separation	Third Stage	delivery of neonate	n/a	n/a	Appearance of lengthening of umbilical cord and rise of uterine fundus indicates separation of the placenta.	assess VS
1-4 hours after delivery	Fourth	delivery of placenta	n/a	n/a	maternal stabilization of	1. Maternal vital signs q 15 minutes for at least

	Stage				vital signs	the first hour 2. Palpate the fundus q 15 minutes for at least the first hour and massage the fundus if it is not firm 3.Asses the color, consistency, and amount of the lochia 4. Assess the perineum 5. Assess urinary output and bladder distention 6. Administer oxytocin in IV fluid as prescribed by the provider 7. Initiate maternal/newborn baby-friendly activities

***Assessments for the 4th stage of Labor: KNOW

- ➔ BP & pulse should be assessed at least every 15 min for the first 2 hours after birth and temperature every 4 hours for the first 8 hours postpartum and then at least every 8 hours
- ➔ assess fundus and lochia q15 min for the first hour and then according to protocol
- ➔ massage uterine fundus and/or administer oxytocic's as prescribed to maintain uterine tone to prevent hemorrhage
- ➔ assess perineum and provide comfort measures as indicates
- ➔ encourage voiding to prevent bladder distention
- ➔ promote an opportunity for maternal/newborn bonding

How can we confirm rupture of membranes?

What is our priority nursing intervention after confirmation of rupture of membranes?

What information do we want to gather from the mother about rupture of membranes if we did not witness it?

Rupture of Membranes: spontaneous rupture of membranes can initiate labor or can occur at any time during labor, most commonly during the transition phase.

- ➔ The integrity of membranes can be determined during the vaginal examination, but CONFIRMATION involved a sample of fluid taken from the vagina via a nitrazine yellow dye swab to determine the fluid's pH
  - ◆ vaginal fluid is acidic while amniotic fluid is alkaline
  - ◆ the swab should turn blue, but it can be a false positive if the woman has a large amount of bloody show

- if the test is inconclusive, the Fern Test can be done. A sample of vaginal fluid is observed under a microscope for a characteristic fern pattern indicating presence of amniotic fluid

➔ Labor usually occurs within 24 hours of the rupture of membranes

➔ **RN Intervention**: **immediately following the rupture of membranes, a nurse should assess the FHR for abrupt decelerations, which are indicative of fetal distress to rule out umbilical cord prolapse**

- if this occurred prior to the women coming to the hospital, ask **WHEN** it happened; she'll report sudden gush of fluid
- Note **color, amount, odor, and consistency**
- prolonged rupture of membranes greater than 24 hours before delivery of fetus can lead to an infection
- **Signs of infection:** maternal fever (Check every 2 hours) , fetal and maternal tachycardia, foul odor of vaginal discharge, and an increase in WBC count
- **So what nursing actions would you do to prevent and/or assess for an infections?**

Describe when an induction might be warranted and the difference between induction and augmentation? I am not going to ask about this.

Induction of Labor: deliberate initiation of uterine contractions to stimulate labor before spontaneous onset to bring about the birth by chemical or mechanical means

➔ **Indications:**

- Nonmedical indication (39 weeks gestation) or post term pregnancy (over 42 weeks)
- **Dystocia:** prolongs, difficult labor due to inadequate contractions
- Prolonged rupture of membranes
- Maternal medical conditions
  - Rh-isoimmunization
  - Diabetes Mellitus
  - Pulmonary Disease
  - Gestational Hypertension
- Fetal demise
- Chorioamnionitis

Augmentation of Labor: stimulation of hypotonic contractions once labor has spontaneously begun, but progress is inadequate

Describe what an amniotomy is, the indications for it to be done, and the considerations.

Amniotomy: artificial rupture of the amniotic membranes by the provider using an amnihook or another sharp instrument See above regarding nursing actions/assessments following spontaneous rupture of membranes.

➔ labor typically begins within 12-24 hours after the membranes rupture

➔ can decrease duration of labor by up to 2 hours

- ➔ increased risk for cord prolapse or infection
- ➔ **Indications:**
  - ◆ labor progression is slow, and augmentation or induction of labor is indicated
  - ◆ an amnioinfusion is indicated for cord compression
- ➔ **Considerations:**
  - ◆ ensure that the presenting part of the fetus is engaged prior to an amniotomy to prevent cord prolapse
  - ◆ monitor FHR prior to and immediately following AROM to assess for cord prolapse as evidenced by variable or late decelerations
  - ◆ assess and document characteristics of amniotic fluid including color, odor, and consistency -- obtain temperature every 2 hours & provide comfort measures

Medications: ***What is each medication used for? What does it do? Nursing indications/interventions? Understand the category of drug; their mechanism of action; and implications for nursing***

Oxytocin (Pitocin) **Uterine stimulant/** **oxytoxic**	**Actions/Indications** ● Acts on uterine myofibrils to contract/to initiate or reinforce labor **Nursing Implications** ● Administer as an IV infusion via pump, increasing dose based on protocol until adequate labor progress is achieved ● Assess baseline vital signs and FHR and then frequently after initiating oxytocin infusion ● Determine frequency, duration, and strength of contractions frequently ● Notify health care provider of any uterine hypertonicity or abnormal FHR patterns ● Maintain careful I&O, being alert for water intoxication ● Keep client informed of labor progress ● Monitor for possible adverse effects such as hyperstimulation of the uterus, impaired uterine blood flow leading to fetal hypoxia, rapid labor leading to cervical lacerations or uterine rupture, water

	intoxication (if oxytocin is given in electrolyte-free solution or at a rate exceeding 20 mU/min), and hypotension
Misoprostol ((**Cytotec):**	**Action/Indication** ● Ripens cervix/to induce labor **Nursing Implications** ● Instruct client about purpose and possible adverse effects of medication ● Ensure informed consent is signed per hospital policy ● Assess vital signs and FHR patterns frequently ● Monitor client's reaction to drug ● Initiate oxytocin for labor induction at least 4 hours after last dose was administered ● Monitor for possible adverse effects such as nausea and vomiting, diarrhea, uterine hyperstimulation, and category II FHR patterns
Penicillin G Antibiotic.	**Action/Indication** ● used to treat a wide variety of bacterial infections. It may also be used to prevent certain bacterial infections (such as rheumatic fever). This medication is a long-acting penicillin antibiotic. It works by stopping the growth of bacteria ○ Narrow-spectrum medication indicated for IM or IV use ○ ***Penicillin G is most commonly prescribed for GBS+*** **Nursing Considerations** ● Administer penicillin 5 million units initially IV bolus, followed by 2.5 million units intermittent IV bolus every 4 hours. The client may receive ampicillin 2 grams IV initially, followed by 1 gram every 4

	hours
Methylergonovine Methergine. Uterine stimulant	**Action/Indication** • Contracts the uterus and is used for emergency intervention for serious postpartum hemorrhage **Nursing Considerations** • Monitor vital signs • Monitor for manifestations of HTN crisis (headache, nausea, vomiting, increased blood pressure) • Monitor for uterine tone and vaginal bleeding • Provide emergency interventions • Do not give if patient has elevated b/p
Betamethasone- A Glucocorticoid-Enhances fetal lung maturation and surfactant production in fetus between 24 and 34 weeks gestation	**Action/Indication** • Reduces neonatal respiratory distress syndrome, intraventricular hemorrhage, necrotizing enterocolitis and death • Maintain continuous fetal monitoring **Nursing Considerations** • Administer betamethasone 12 mg IM for two doses 24 hours apart • Administer between 24 and 34 weeks gestation • Administer deep IM using ventral gluteal or vastus lateralis muscle
Terbutaline Sulfate—This is covered under Unit III (preterm labor) but you need to understand that it may be used during the antepartum period.	**Actions/Indication** • Terbutaline selectively activates beta2-adrenergic receptors (beta2-adrenergic agonist), resulting in uterine smooth muscle relaxation **Nursing Considerations**

Nifedipine—ATI p 68 Tocolytic Calcium channel blocker	• Monitor vital signs, blood glucose, and potassium levels • Notify the provider for intolerable adverse effects • Have propranolol available
Methotrexate I am not going to ask about this one on this exam as it is also part of a complication of pregnancy treatment but you will see it again.	**Action/Indication** • Inhibits cell division and embryo enlargement, dissolving the pregnancy ○ Ectopic pregnancy **Nursing Considerations** • Instruct the client who is taking methotrexate to avoid alcohol consumption and vitamins containing folic acid to prevent a toxic response to the medication • Advise client to protect herself from sun exposure (photosensitivity)
Indomethacin- Tocolytic—ATI p68 Non-steroidal anti-inflammatory drug that suppresses preterm labor by blocking the production of prostaglandins→suppression of contractions.	**Action/Indication** • GI bleeding, hypersensitivity **Nursing Considerations** • Use caution with seizures, renal/hepatic disease, GI disorders, cardiac disorders, depression, and DM • Use for clients less than 32 weeks of gestation • Administer for no more than 48 hours
Magnesium	**Action/Indication** • Medication of choice for prophylaxis or treatment to depress the

Sulfate ATI p 68 $mooth muscle relaxant—effects uterus and inhibits uterine activity by suppressing contractions. Decreases reflexes and inhibits seizure activity.	CNS and prevent seizures in the client who has eclampsia and severe preeclampsia **Nursing Considerations** ● Use an infusion control device to maintain a regular flow rate ● Avoid concurrent use with nifedipine ● Inform the client that she can initially feel flushed, hot, and sedated with the magnesium sulfate bolus ● Monitor blood pressure, pulse, respiratory rate, deep-tendon reflexes, LOC, urinary output (indwelling urinary catheter for accuracy), presence of headache, visual disturbances, epigastric pain, uterine contractions, and FHR and activity ● Place the client on fluid restriction of 100 to 125 mL/hr, and maintain a urinary output of 30 mL/hr or greater ● Monitor for signs of magnesium sulfate toxicity: ○ Absence of patellar DTRs ○ Urine output less than 30 mL/hr ○ Respirations less than 12/min ○ Decreased LOC ○ Cardiac dysrhythmias ● If magnesium toxicity is suspected: ○ Immediately discontinue infusion ○ Administer antidote calcium gluconate or calcium chloride ○ Prepare for actions to prevent respiratory or cardiac arrest
Naloxone (What is the trade name?)	**Actions/Implications**

	○ Opioid antagonists interfere with the action of opioids by competing for opioid receptors. Opioid antagonists have no effect in the absence of opioids. Treatment of opioid abuse by preventing euphoria (naltrexone) ○ Reversal of effects of opioids, such as respiratory depression **(naloxone**) ○ Reversal of respiratory depression in an infant **(naloxone)** **Nursing Considerations** ● Monitor heart rhythm (risk of ventricular tachycardia and respiratory function ● Have resuscitative equipment, including oxygen, on standby during administration
Calcium Gluconate	**Action/Indications** ● It is the ***antidote for magnesium sulfate*** ● **Hypocalcemia** **Nursing Considerations** ● Observe IV site closely for tissue irritation and necrosis ● Monitor calcium, phosphorous, and magnesium levels ● Monitor ECG during IV administration to detect hypocalcemia, with moderate fall in blood pressure
Nubain (nalbuphine hydrochloride)-- opioid pain medication	**Action/Indications** Nalbuphine is used to treat moderate to severe pain during childbirth **Nursing Considerations** ● **Monitor vital signs for respiratory depression whether given IV push or in the epidural. i.e. <12 breaths per minute**

	• **Monitor for hypotension, less that 90/60** • **Check the cervical dilation prior to administering IV push. This goes to the baby as well as mother and can cause respiratory depression in the newborn if given to close to delivery.**
Fentanyl—Opiod analgesic—	**Action/Indications** **Can be given in small doeses IV push but is also used in combination with Ropivacaine in the epidural space for an epidural anesthetic.** **Nursing Considerations** • **Monitor vital signs for respiratory depression whether given IV push or in the epidural. i.e. <12 breaths per minute** • **Monitor for hypotension, less that 90/60 with epidural administration. Turn patient to side to increase perfusion by** reducing pressure on the vena cava. • **Check the cervical dilation prior to administering IV push. This go to the baby as well as mother and can cause respiratory depression in the newborn if given to close to delivery.** • **Give IV bolus of 500ml Lactated Ringers prior to the anesthesiologist using this for epidural anesthesia**

List procedures done during labor (“intra partum”). Know—Goes along with the chart on stages and phases of labor

Intrapartum surveillance: continuous external fetal monitoring is accomplished by securing an US transducer over the client's abdomen, which records the FHR pattern, and tocotransducer on the fundus that records the uterine contractions

Induction and augmentation of labor

Episiotomy: incision made into the perineum to enlarge the vaginal opening to facilitate birth and minimize soft tissue damage

- ➔ **Indications:**
  - ◆ shorten the 2nd stage of labor
  - ◆ facilitate forceps-assisted or vacuum-assisted delivery
  - ◆ prevent cerebral hemorrhage in a fragile preterm fetus
  - ◆ facilitate birth of a macrosomia (large) infant
- ➔ **Types:**
  - ◆ **Median (midline) episiotomy:** extends from the vaginal outlet toward the rectum, it is the most commonly used
    - generally, the least painful and is easily repaired
  - ◆ **Mediolateral episiotomy:** extends from the vaginal outlet posterolateral, either to the left or right of the midline, and is used when posterior extension is likely
    - blood loss is greater & repair is more difficult and painful

Operative vaginal delivery

Breech delivery: Baby comes out feet first

Cesarean delivery: A cesarean birth is the delivery of the fetus through a transabdominal incision of the uterus to preserve the life or health of the client and fetus when there is evidence of complications. Incisions are made horizontally into the lower segment of the uterus

Vacuum-Assisted Delivery: involves the use of a cuplike suction device that is attached to the fetal head. Traction is applied during contractions to assist in the descent and birth of the head, after which, the vacuum cup is released and removed preceding delivery of the fetal body

- ➔ **Risks:** scalp lacerations, subdural hematoma, cephalohematoma, maternal lacerations of the cervix, vagina, or perineum.

Forceps-Assisted birth: using an instrument with two curved spoon-like blades to assist in the delivery of the fetal head. Traction is applied during contractions

- ➔ **Indications:**
  - ◆ prolonged 2nd stage of labor and need to shorten duration (i.e. maternal exhaustion)
  - ◆ fetal distress during labor
  - ◆ abnormal presentation or breech position requiring delivery of the head
  - ◆ arrest of rotation

Amnioinfusion: NS or LRs are instilled into the amniotic cavity through a transcervical catheter introduced into the uterus to supplement the amount of amniotic fluid. Instillation reduces the severity of variable decelerations caused by cord compression.

Indications: scant amount or absence of amniotic fluid caused by Uteroplacental insufficiency, Premature rupture of membranes, or Post maturity of the fetus. Also, fetal cord compression secondary to post maturity of fetus

Define each of the 6 cardinal movements of labor (Mechanisms of labor). Know this to know how they affect the progress of labor.

Engagement occurs when the greatest transverse diameter of the head in vertex (biparietal diameter) passes through the pelvic inlet (usually 0 station). The head usually enters the pelvis with the sagittal suture aligned in the transverse diameter

Descent is the downward movement of the fetal head until it is within the pelvic inlet. Descent occurs intermittently with contractions and is brought about by one or more of the following:

- ➔ pressure of the amniotic fluid
- ➔ direct pressure of the fundus on the fetus's buttocks or head
- ➔ contractions of the abdominal muscles
- ➔ extension and straightening of the fetal body
- ➔ Descent occurs throughout labor ending with birth

Flexion occurs as the vertex meets resistance from the cervix, the walls of the pelvis, or the pelvic floor.

Internal rotation is a result of the head rotates about 45 degrees anteriorly to the midline under the symphysis. Internal rotation brings the anteroposterior diameter of the head in line with the anteroposterior diameter of the pelvic outlet. It aligns the long axis of the fetal head with the long axis of the maternal pelvis.

Extension occurs after internal rotation is complete. The head emerges through extension under the symphysis pubis along with the shoulders. The anterior fontanel, brow, nose, mouth, and chin are born successively

External rotation of the fetal head allows shoulders to rotate internally to fit the maternal pelvis

Expulsion of the rest of the body occurs more smoothly after the birth of the head and the anterior and posterior shoulders

Describe the benefits for a woman to change position while in labor. Include what suggestions the nurse can give the laboring woman about position changes? Know this for both first AND second stage labor.

- ➔ Walking with support from the partner (adds the force of gravity to contractions to promote fetal descent)
- ➔ Slow-dancing position with the partner holding the woman (adds the force of gravity to contractions and promotes support from and active participation of the partner)
- ➔ Side lying with pillows between the knees for comfort (offers a restful position and improves oxygen flow to the uterus)
- ➔ Semi-sitting in bed or on a couch leaning against the partner (reduces back pain because fetus falls forward, away from the sacrum)
- ➔ Sitting in a chair with one foot on the floor and one on the chair (changes pelvic shape)

- ➔ Leaning forward by straddling a chair, a table, or a bed or kneeling over a birth ball (reduces back pain, adds the force of gravity to promote descent; possible pain relief if partner can apply sacral pressure)
- ➔ Encourage any position of comfort the woman chooses to labor in and give birth
- ➔ Sitting in a rocking chair or on a birth ball and shifting weight back and forth (provides comfort because rocking motion is soothing; uses the force of gravity to help fetal descent)
- ➔ Lunge by rocking weight back and forth with foot up on chair during contraction (ses force of gravity by being upright; enhances rotation of fetus through rocking)
- ➔ Open knee-chest position (helps to relieve back discomfort)

What are the 4 techniques used to assess ongoing data during labor and birth?

- ➔ **Assess**
  - ◆ maternal vital signs, including temperature, blood pressure, pulse, respiration, and pain
  - ◆ FHR
  - ◆ Uterine labor contraction characteristics (frequency, duration, intensity, & resting tone of uterine contractions)
- ➔ **Intrauterine Pressure Catheter—I am not going to ask about this but know that it is that it is the only accurate way to assess contraction intensity.**
- ➔ **Vaginal Examination**
- ➔ **Mechanism of Labor in Vertex Presentation**
- ➔ **Review** the prenatal record to identify risk factors that may contribute to a decrease in uteroplacental circulation during labor.
- ➔ If there is no vaginal bleeding on admission, a vaginal examination is performed to assess cervical dilation, after which it is monitored periodically as necessary to identify progress.
- ➔ **Evaluate** maternal pain and the effectiveness of pain management strategies at regular intervals during labor and birth.

What is a vaginal exam (SVE-sterile vaginal exam)? How often should it be done according to WHO (World Health Organization)?

The purpose of performing a vaginal examination is to assess the amount of cervical dilation, the percentage of cervical effacement, and the fetal membrane status and to gather information on presentation, position, presentation, degree of fetal head flexion, and presence of fetal skull swelling or molding.

The World Health Organization recommends digital vaginal examinations at intervals of 4 hours for routine assessment and identification of a delay in active labor.

Why is important to assess frequency, duration and intensity of contractions?

The contraction resembles a wave, moving downward to the cervix and upward to the fundus of the uterus.

Frequency is established from the beginning of one contraction to the beginning of the next. The time between the beginning of a contraction to the end of that same contraction is **duration**. **Intensity** is the strength of the contraction at its peak, described as mild (slightly tense, like pressing finger to tip of nose), moderate (firm, like pressing finger to chin), or strong (rigid, like pressing finger to forehead.
It is important to assess frequency, duration, and intensity because a prolonged contraction duration greater than 90 seconds or too frequency contractions (more than 5 in a ten-minute period) without sufficient time for uterine relaxation (less than 30 seconds) in between can reduce blood flow of the placenta. This can result in fetal hypoxia and decreased FHR.

What 2 ways can you assess uterine contractions?
The two ways you can assess uterine contractions is to palpate the fundus for contraction intensity. This is done by **placing the pads of your fingers on the fundus and describe how it feels**.
The second methods used is **electronic monitoring**, either external or internal.
Both methods provide a reasonable measurement of the intensity of uterine contractions. Although the external fetal monitor is sometimes used to estimate the intensity of uterine contractions, it is not as accurate.

To palpate uterine contraction intensity, a mild contraction feels like your _____ , a moderate contraction feels like your _____, and strong contraction feels like your _____.

- ➔ The tip of your nose
- ➔ The chin
- ➔ The forehead

List the sources of pain during labor.

- ➔ Cervical stretching
- ➔ Hypoxia of the uterine muscle due to a decrease in perfusion during contractions
- ➔ Pressure on the urethra, bladder, and rectum
- ➔ Distention of the muscles of the pelvic floor

List how pain assessment is done during labor.
A pain assessment tool named the Coping with Labor Algorithm uses the FOUS format “Plan, Do, Check, and Act” cycle in laboring women. This tool provides a mechanism for pain documentation and links it to nursing interventions.

List 3 non-pharmacologic pain intervention methods.

- ➔ Imagery
- ➔ Therapeutic touch and massage

- ➔ Breathing techniques
- ➔ Focus techniques
- ➔ Walking
- ➔ Rocking
- ➔ Hydrotherapy in a warm bath/shower
- ➔ Reduce the lighting

Describe how epidural analgesia is administered, what are the implications, and what is the difference between this and a spinal epidural? I am mainly interested in the side effects of epidural anesthesia and the nursing interventions to address these.

An **epidural** involves the injection of a drug into the epidural space, which is located outside the dura mater between the dura and the spinal canal. The epidural space is typically entered through the third and fourth lumbar vertebrae with a needle, and a catheter is threaded into the epidural space.

NOTE: Lab: CBC to assess platelet count

Bolus of IV fluids before insertion

- ➔ **Complications:**
  - ◆ nausea and vomiting
  - ◆ hypotension: **What is done prior to administration of epidural to avoid this? What can you do if it occurs after administration?**
  - ◆ fever
  - ◆ pruritus
  - ◆ intravascular injection
  - ◆ maternal fever
  - ◆ allergic reaction
  - ◆ respiratory depression

- ➔ **Effects on the fetus during labor include:**
  - ◆ fetal distress secondary to maternal hypotension---**So what do you "the Nurse" do to correct this?**
  - ◆

Ensuring that the woman avoids a supine position after an epidural catheter has been placed will help to minimize hypotension.

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CSE: involves inserting the epidural needle into the epidural space and subsequently inserting a small-gauge spinal needle through the epidural needle into the subarachnoid space.

- ➔ CSE is advantageous because of its rapid onset of pain relief (within 3 to 5 minutes) that can last up to 3 hours.
- ➔ **Advantage of CSE versus epidural is ambulation is not contraindicated after administration**.

I am not going to ask about this part on this exam

What added considerations are there for the nurse caring for a woman who has undergone general anesthesia?

Primary complication with general anesthesia: fetal depression, along with uterine relaxation and potential maternal vomiting and aspiration.

➔ General anesthesia complications are usually due to maternal aspiration or the inability to intubate the woman.

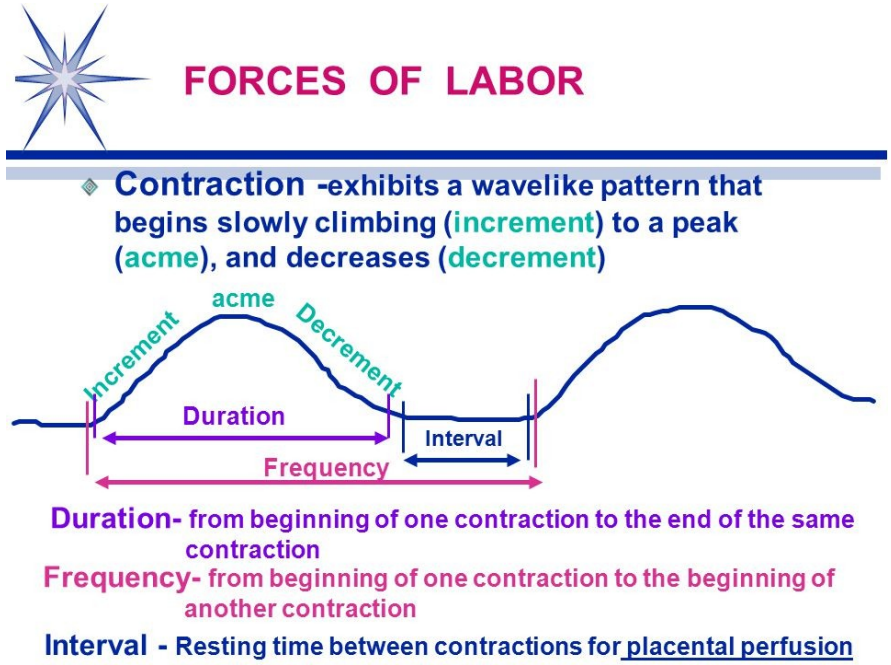
The nurse needs to be knowledgeable about the pharmacologic aspects of the drugs used and must be aware of airway management.

- Nothing by mouth (NPO)
- Patent intravenous line
- Administer a nonparticulate oral antacid or PPI as ordered to reduce gastric acidity
- Placement of a wedge under the woman's right hip
    - this helps to displace the gravid uterus and prevent vena cava compression in the supine position.

Where in the contraction do the increment, acme and decrement happen?

- **Increment**: the beginning of the contraction as intensity is increasing
- **Acme**: the peak intensity of the contraction
- **Decrement**: the decline of the contraction intensity as the contraction is ending

KNOW how to assess the duration and frequency by looking at a strip.



Also need to know how to assess the baseline rate on a fetal monitor strip.

When is a contraction too long and what do you do about it?

Briefly describe what Category I, Category II and Category III fetal heart rate tracings look like. I am not so much concerned about knowing the category name as wanting you to know that degrees of severity are defined by this. Look at them in relationship to the variability, the accelerations, tachycardia, bradycardia, the type of decelerations←what causes it. Be able to define and identify:

Baseline Fetal heart rate-absent, minimal, moderate,

Variability—present or not

Accelerations—Transitory abrupt increases in the FHR above the baseline that last less than 30 seconds from onset to peak with elevations of more than 15 bpm above the baselineand last longer than 15 seconds but less than 2 minutes.

Decelerations—What do early, variable, late decelerations occur?

What do they look like?

Category I

- Baseline fetal heart rate of 110 to 160/min
- Baseline fetal heart rate variability: moderate
- Accelerations: present or absent
- Early decelerations: present or absent
- Variable or late decelerations: absent

Category II

- Baseline rate
    - Tachycardia
    - Bradycardia not accompanied by absent baseline variability

- Baseline FHR variability
  - Minimal baseline variability
  - Absent baseline variability not accompanied by recurrent decelerations
  - Marked baseline variability
- Episodic or periodic decelerations
  - Prolonged fetal heart rate deceleration equal or greater than 2 minutes but less than 10 minutes
  - Recurrent late decelerations with moderate baseline variability
  - Recurrent variable decelerations with minimal or moderate baseline variability
  - Variable decelerations with additional characteristics, including "overshoots," "shoulders," or slow return to baseline fetal heart rate
- Accelerations: absence of induced accelerations after fetal stimulation

Category III

- Sinusoidal pattern
- Absent baseline fetal heart rate variability and any of the following:
  - Recurrent variable decelerations
  - Recurrent late decelerations
  - Bradycardia
- Each uterine contraction is comprised of the following:
  - **Increment**: the beginning of the contraction as intensity is increasing
  - **Acme**: the peak intensity of the contraction
  - **Decrement**: the decline of the contraction intensity as the contraction is ending
- Non-reassuring FHR patterns are associated with fetal hypoxia and include the following:
  - Fetal bradycardia
  - Fetal tachycardia
  - Absence of FHR variability
  - Late decelerations
  - Variable decelerations

Why is support so vital for laboring women? What is a doula? What is a CNM? I am not asking about this.

Nursing care during the second stage of labor focuses on supporting the woman and her partner in making active decisions about her care and labor management, implementing strategies to prolong the early passive phase of fetal descent, supporting involuntary bearing-down effort, providing instruction and assistance, and using maternal positions that can enhance descent and reduce pain. A **doula** is a trained professional who provides continuous physical, emotional and informational support to a mother before, during and shortly after

childbirth to help her achieve the healthiest, most satisfying experience possible. A **certified nurse midwife** is an advanced-practice registered nurse (post-baccalaureate) who specializes in women's reproductive health and childbirth.

What is "crowning"? Know

- perineal bulging (appearance of the fetal head at the perineum). This means the birth of the infant will happen very soon so the nurse needs to prepare for delivery.

List a summary of assessments during second , third and fourth stages of labor.

Second Stage This goes along with the Chart on stages and phases of labor.

- Begins with complete dilation and effacement
  - Blood pressure, pulse, and respiration measurements every 5 to 30 minutes
  - Uterine contractions
  - Pushing efforts by client
  - Increase in bloody show
  - Shaking of extremities
  - FHR every 15 minutes and immediately following birth

Third Stage This goes along with the Chart on stages and phases of labor

- Blood pressure, pulse, and respiration measurements every 15 minutes
- Clinical findings of placental separation from the uterus as indicated by
  - Fundus firmly contracting
  - Swift gush of dark blood from introitus
  - Umbilical cord appears to lengthen as placenta descends
  - Vaginal fullness on exam
- Assignment of 1- and 5-minutes Apgar scores to the neonate

Fourth Stage This goes along with the Chart on stages and phases of labor

- Maternal vital signs How often?
- Fundus How often?
- Lochia How often?
- Urinary output
- Baby-friendly activities of the family

What are the signs of placental separation and how long can it take for the placenta to be expelled? Definitely know this

The placenta can take up to 4 hours after birth to be expelled out of the uterus but most often it occurs within 20 minutes. Signs of placental separation is a pulse typically slower (60 to 70 bpm) than during labor. This may be associated with a decrease in blood volume following placental separation. The nurse continues to monitor for:

- Firmly contracting uterus
- Change in uterine shape from discoid to globular ovoid
- Sudden gush of dark blood from vaginal opening
- Appearance of lengthening of umbilical cord protruding from vagina

What is the difference between a laceration and an episiotomy?I am not going to ask about this on this Exam

An episiotomy is an incision made in the perineum to enlarge the vaginal outlet and theoretically to shorten the second stage of labor. Perineal lacerations or tears can occur during the second stage when the fetal head emerges through the vaginal introitus. The extent of the laceration is defined by depth:

- First-degree laceration extends through the skin
- Second-degree laceration extends through the muscles of the perineal body
- Third-degree laceration continues through the anal sphincter muscle
- Fourth-degree laceration also involves the anterior rectal wall

What are the normal blood loss amounts for a vaginal and a cesarean delivery? KNOW this.

- Vaginal blood loss during delivery= 500mL
- Cesarean blood loss during delivery= 1,000mL

List "post procedures" done during the fourth stage of labor. Know this

Assess fundal height, position, and firmness every 15 minutes during the first hour following birth. The fundus needs to remain firm to prevent excessive postpartum bleeding. The fundus should be firm (feels like the size and consistency of a grapefruit), located in the midline and below the umbilicus. Assess the perineum, including the episiotomy if present, for possible hematoma formation. Assess the woman's comfort level frequently to determine the need for analgesia. Ask the woman to rate her pain on a scale of 1 to 10. Assess vaginal discharge (lochia) every 15 minutes for the first hour and every 30 minutes for the next hour. Palpate the fundus at the same time to ascertain its firmness and help to estimate the amount of vaginal discharge. Also, palpate the bladder for fullness to ensure proper emptying and filling for women with epidural.

What are important interventions for the newborn at birth? Why is skin to skin time with mom so important? I am not going to ask about this on this exam.

Assessment of the newborn begins at the moment of birth and continues until the newborn is discharged. Drying the newborn and providing warmth to prevent heat loss by evaporation is essential to help support thermoregulation and provide stimulation. lacing the

newborn under a radiant heat source and putting on a stockinette/knitted cap will further reduce heat loss after drying. Assess the newborn by assigning an Apgar score at 1 and 5 minutes. **The Apgar score assesses five parameters- (1) heart rate (absent, slow, or fast), (2) respiratory effort (absent, weak cry, or good strong yell), (3) muscle tone (limp, or lively and active), (4) response to irritation stimulus, and (5) color-that evaluate a newborn's cardiorespiratory adaptation after birth**. The parameters are arranged from the most important (heart rate) to the least important (color). The newborn is assigned a **score of 0 to 2 in each of the five parameters**. Secure two identification bands on the newborn's wrist and ankle that match the band on the mother's wrist to ensure the newborn's identity.

Skin-to-skin contact immediately after birth and the newborn's first attempt at breastfeeding further augment maternal oxytocin levels, strengthening the uterine contractions that will help the placenta to separate and the uterus to contract to prevent hemorrhage. Endorphins, the body's natural opiates, produce an altered state of consciousness and aid in blocking out pain.

I am not going to ask about this on this exam What does Apgar stand for? What 5 parameters does it assess? How often is it assessed?
Assess the newborn by assigning an Apgar score at 1 and 5 minutes. **The Apgar score assesses five parameters- (1) heart rate (absent, slow, or fast), (2) respiratory effort (absent, weak cry, or good strong yell), (3) muscle tone (limp, or lively and active), (4) response to irritation stimulus, and (5) color-that evaluate a newborn's cardiorespiratory adaptation after birth**. The parameters are arranged from the most important (heart rate) to the least important (color). The newborn is assigned a **score of 0 to 2 in each of the five parameters.**

What important assessments as the nurse are you continuing to make, in relation to mom, during the third stage of labor Goes along with the chart on stages and phases of labor.

Monitoring placental separation by looking for the following signs:

- Firmly contracting uterus
- Change in uterine shape from discoid to globular ovoid
- Sudden gush of dark blood from vaginal opening
- Lengthening of umbilical cord protruding from vagina

Examining placenta and fetal membranes for intactness the second time (the health care provider asses the placenta for intactness the first time)

Assessing for any perineal trauma, such as the following, before allowing the birth attendant to leave:

- Firm fundus with bright-red blood trickling: laceration
- Boggy fundus with red blood flowing: uterine atony
- Boggy fundus with dark blood and clots: retained placenta

Inspecting the perineum for condition of episiotomy, if performed

Assessing for perineal lacerations and ensuring repair by birth attendant