N432-Focus Sheet Unit 3—2020—Complications of Pregnancy, Labor, and Delivery

Ricci, Kyle & Carman Ch 19, 20 & 21; ATI Ch 7-10

Some of the problems which cause complications of Pregnancy as well as Labor and Delivery were discussed during Unit 1 e.g. some of the infections, and during some of Unit 2 on labor and delivery. So be sure and look at this information from Unit 1 & 2 as you work through this focus sheet. The information will be used to compare and analyze the normal versus the abnormal occurrences and be able to make decision for nursing interventions.

Also note that the focus sheet is arranged by chapters in RKC whereas the topics fit more under the chapters in ATI. The information is in both, it is just how the two different authors lay it out.

RKC Ch 19; ATI Ch 7, 9, 10 (Bleeding in pregnancy)

1. List 5 factors that can place a woman at risk for bleeding during pregnancy. **RKC Ch 19 p 686-7 introduction to section on bleeding in pregnancy; ATI Ch 7 p 41 Box 7.1--- So what you want to think about is why these factors put a woman at risk for bleeding in the pregnancy. The specifics for each cause are later on this Focus sheet.**
2. **Previous c-section that causes scarring and can cause improper implantation of the placenta See RKC p699**
3. **AMA- Advanced maternal age –over 35 years of age—Why does this make the woman at risk for bleeding.**
4. **Multiparity—at risk for dystocia (Weak and uncoordinated contractions); lack of uterine involution aka uterine atony (uterus not contracting well enough after birth during the 3rd and 4th stages of labor--see postpartum material);**
5. **Uterine insult or injury—trauma to the uterus →abruptio placentae**
6. **Cocaine use-→abruptio placentae---WHY?**
7. **Prior placenta previa—increases risk for placenta previa in current pregnancy.**
8. **Infertility treatment→ difficulty with implantation and maintaining pregnancy with subsequent spontaneous abortion.**
9. **Multiple gestation at risk for dystocia (Weak and uncoordinated contractions); lack of uterine involution aka uterine atony (uterus not contracting well enough after birth during the 3rd and 4th stages of labor due to over distention of the uterus--see postpartum material);**
10. **Previous induced surgical abortion→ causes scarring and can affect implantation of the placenta p699**
11. **Smoking-→abruptio placentae—WHY?**
12. **Previous myomectomy to remove fibroids→ causes scarring and can affect implantation of the placenta p699**
13. **Short interval between pregnancies at risk for dystocia (Weak and uncoordinated contractions); lack of uterine involution aka uterine atony (uterus not contracting well enough after birth during the 3rd and 4th stages of labor due to "over use" or "over distention of the uterus--see postpartum material);**
14. **Hyypertension or diabetes -→abruptio placentae---WHY? Think about constriction of the blood vessels.**

15. **Caffeine**
16. **Alcohol and substance abuse—negative impact on healthy pregnancy.**
17. **Maternal obesity at risk for dystocia; lack of uterine involution (contracting well enough after birth--see postpartum material);**
18. **Situational crisis.**

2. Define abortion, miscarriage, and stillbirth.—Look at PPT for definitions of types
   - **Abortion** is the loss of an early pregnancy, usually before week 20 of gestation
   - spontaneous or induced
   - A **stillbirth** is the loss of a fetus after the 20th week of development

   A **miscarriage** refers to a loss before the 20th week- An abortion that has occurred spontaneously, usually occurs in early pregnancy, many women do not know that they have miscarried or were pregnant.

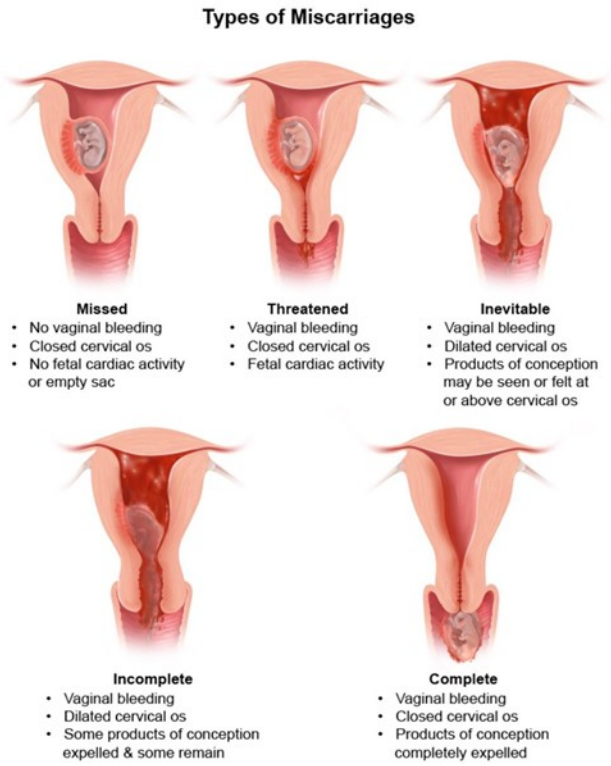
   Stillbirth – Stillbirth is the loss of a pregnancy/fetus after the 20th week of development, however it usually occurs later in the pregnancy. It can occur up to the labor and delivery time in a pregnancy.

3. Describe the following for spontaneous abortion: p687-689

Pathophysiology	Most common complication of early pregnancy—loss of early pregnancy before 20 weeks of gestation from natural causes. Most common cause is fetal genetic abnormalities i.e. chromosomal causes more common in first trimester usually (unrelated to mother) and maternal disease more common cause in second trimester.i.e. cervical insufficiency, congenital or acquired of the uterine cavity, hypothyroidism, diabetes melletus, chronic nephritis, use of crack cocaine, inherited or acquired thrombocytopenia, lupus, polycystic ovarian syndrome, severe hypertension, acute infection e.g. cCMV, rubella virus, herpes simplex virus, bacterial vaginosis, and toxoplasmosis.al
Nursing Assessment	Vaginal bleeding, low back pain, abdominal cramping, S & S= bright red blood saturating pad freq, passage of fetal tissue. When a pregnant woman reports vaginal bleeding, she must be seen ASAP. Ask about color of bleed, frequency, and the passage of any clots or tissue. Ask her to rate pain level, and describe the abdominal cramping that she is experiencing..
Testing	Continuous monitoring of woman and assessment, prep for surgery if needed. If symptoms persist, may require D & C . Assist in preparing the woman for procedures and treatments such as surgery to evacuate the uterus or medications such as misoprostol or PGE2. **If the woman is Rh negative and not sensitized, expect to administer RhoGAM within 72 hours after the abortion is complete**
Management	Monitoring and provide psychological support
Patient education needs	Tell woman to talk about her pain and all feelings she is experiencing.
Management	Provide psychological support.
Patient education needs	Tell woman to talk about her pain and all feelings she is experiencing.

3. 4. Define threatened abortion, inevitable abortion, incomplete abortion, complete abortion, missed abortion and habitual abortion. Look at PPT for definitions of types as well as RKC Ch 19 p 689 & ATI

4. **Threatened abortion**
    a. Vaginal bleeding (often slight) early in pregnancy
    b. No cervical dilation or change in cervical consistency
    c. Mild abdominal cramping
    d. Closed cervical os
    e. No passage of fetal tissue
    f. Vaginal US to confirm if sac is empty
    g. Declining maternal serum hCG and progesterone levels to provide additional information about viability of pregnancy
5. **Inevitable abortion**
    a. Vaginal bleeding (greater than that associated with threatened abortion)
    b. Rupture of membranes
    c. Cervical dilation
    d. Strong abdominal cramping
    e. Possible passage of products of conception
    f. US and hCG levels indicate pregnancy loss
6. **Incomplete abortion**
    a. Intense abdominal cramping
    b. Heavy vaginal bleeding
    c. cervical dilation
    d. US confirms products of conception still in uterus
7. **Complete abortion**
    a. History of vaginal bleeding and abdominal pain
    b. Passage of tissue with subsequent decrease in pain and significant decrease in vaginal bleeding
    c. US demonstrating an empty uterus
8. **Missed abortion**
    a. Nonviable embryo retained in utero for at least 6 weeks
    b. Absent uterine contractions
    c. Irregular spotting
    d. Possible progression to inevitable abortion
    e. US to identify products of conception in uterus
9. **Habitual abortion**
    a. History of three or more consecutive spontaneous abortions
    b. Not carrying the pregnancy to viability or term
    c. Validation via client's history



5. What are the actions and implications of the use of Cytotec (misoprostol), Cervidil (dinoprostone)/ Prepidil (Gel), Rh immunoglobin Rhogam related to abortions?

Misoprostol (Cytotec)— **Used for induction of labor as well as post delivery if excessive bleeding occurs or there is a high quantitative blood loss (QBL)**.

- **Stimulates uterine contractions** to terminate a pregnancy; to evacuate the uterus after abortion to ensure passage of all the products of conception or reduce the bleeding.
  - Monitor for side effects such as diarrhea, abdominal pain, nausea, vomiting, dyspepsia
  - Assess vaginal bleeding and report any increased bleeding, pain, or fever
  - **Monitor for signs and symptoms of shock, such as tachycardia, hypotension, and anxiety**

Methergine® **(methylergonovine maleate)** is a semi-synthetic ergot alkaloid used for the prevention and control of postpartum hemorrhage.
Methergine is available in tablets for oral ingestion containing 0.2 mg methylergonovine maleate.
Tablets
Active ingredient: Methylergonovine maleate, USP, 0.2 mg.
Inactive ingredients: acacia, corn starch, gelatin, lactose monohydrate, methylparaben, microcrystalline cellulose, povidone, propylparaben, stearic acid, and tartaric acid.
Chemically, methylergonovine maleate is designated as ergoline-8-carboxamide, 9, 10-didehydro-N- [1-(hydroxymethyl) propyl]-6-methyl-, [8β(S)]-, (Z)-2-butenedioate (1:1) (salt). Its structural formula is:

Indications & Dosage

INDICATIONS

Following delivery of placenta, for routine management of **uterine atony**, hemorrhage and subinvolution of the uterus. For control of uterine hemorrhage in the second stage of labor following delivery of the anterior shoulder.

DOSAGE AND ADMINISTRATION

Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration.

Can not be given to clients with hypertension as it will add to the elevated B/P!!!!! Used less often than misoprostol

Routes: Intramuscularly 1 mL, 0.2 mg, after delivery of the anterior shoulder, after delivery of the placenta, or during the puerperium. May be repeated as required, at intervals of 2-4 hours.
Intravenously 1 mL, 0.2 mg, administered slowly over a period of no less than 60 seconds (See WARNINGS.)
Orally One tablet, 0.2 mg, 3 or 4 times daily during the immediate postpartum period. If it requires more than 3 doses, the client is evaluated for the cause of the uterine bleeding.

PGE2--prosteglandin, (Prepidil gel, Cervidel -dinoprostone)- Induction of labor or

- Stimulates uterine contractions, causing expulsion of uterine contents; to expel uterine contents in fetal death or missed abortion during second trimester, or to efface and dilate the cervix in pregnancy at term
    - Bring gel to room temperature before administration
    - Avoid contact with skin
    - Use sterile technique to administer
    - Keep client supine for 30 minutes after administering
    - Document time of insertion and dosing intervals
    - Remove insert with retrieval system after 12 hours or the onset of labor
    - Explain purpose and expected response to client

Prostaglandin E_2 (**PGE2**), also known as **dinoprostone**, is a naturally occurring prostaglandin which is used as a medication.[1] As a medication it is used in labor induction, bleeding after delivery, termination of pregnancy, and in newborn babies to keep the ductus arteriosus open.[1][2] In babies it is used in those with congenital heart defects until surgery can be carried out.[2] It may be used within the vagina or by injection into a vein.[1][3]

Common side effects include vomiting, fever, diarrhea, and excessive uterine contraction.[1] In babies there may be decreased breathing and low blood pressure.[2] Care should be taken in people with asthma or glaucoma and it is not recommended in those who have had a prior C-section.[4] Prostaglandin E2 is in the **oxytocics** family of medications. It works by binding and activating the prostaglandin E2 receptor which results in the opening and softening of the cervix and dilation of blood vessels.[1][2]

Prostaglandin E2 was first made in 1970 and approved for medical use in the United States in 1977.[2][1] It is on the World Health Organization's List of Essential Medicines, the most effective and safe medicines needed in a health system.[5] In the United Kingdom a dose costs the NHS about 8.50 to 30.00 pounds.[3][6] In the United States a course of treatment costs more than US$200.[4] Prostaglandin E2 works as well as prostaglandin E1 in babies; however, it is much less expensive.[2]

Rh(D) immunoglobulin (RhoGAM)

- Suppresses immune response of non-sensitized Rh-negative clients who are exposed to Rh-positive blood; to prevent isoimmunization in Rh-negative women exposed to Rh-positive blood after abortions, miscarriages, and pregnancies
    - Administer intramuscularly in deltoid area

- Give only MICRhoGAM for **abortions and miscarriages <12 weeks** unless fetus or father is Rh negative (unless client is Rh positive, Rh antibodies are present)
- Educate woman that she will need this after subsequent deliveries if newborns are Rh positive, also check lab study results prior to administering the drug

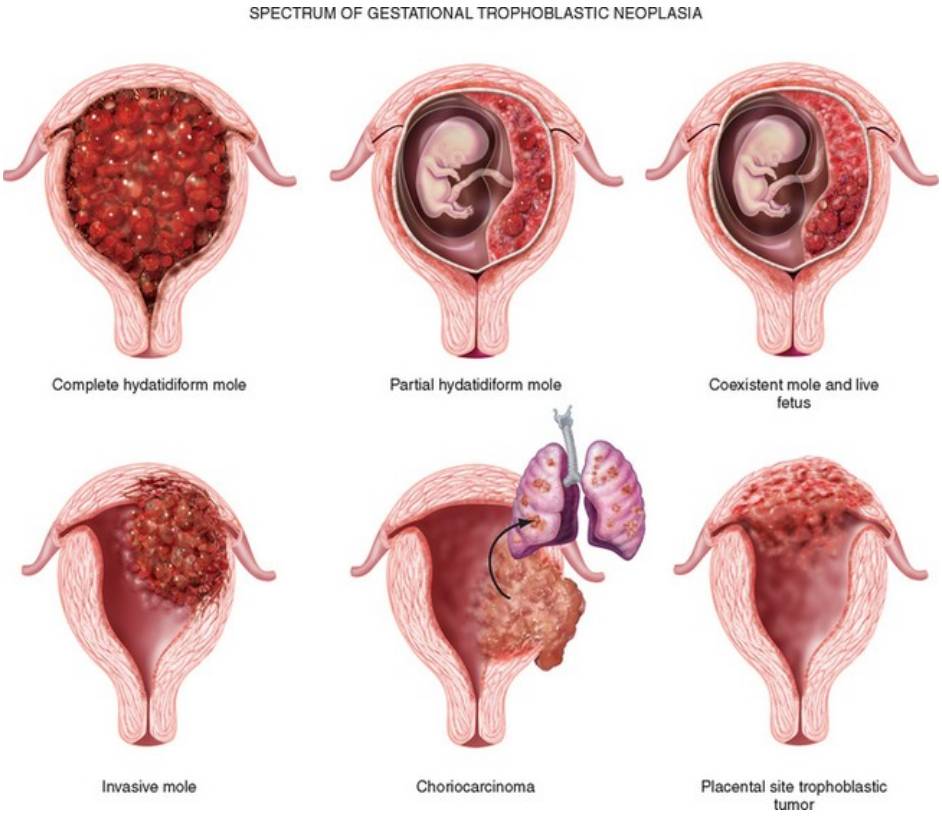
6. Describe the following for **ectopic pregnancy:**

Pathophysiology	• Ectopic pregnancy is the abnormal implantation of a fertilized ovum outside of the uterine cavity usually in the fallopian tube, which can result in tubal rupture causing a fatal hemorrhage. Ectopic pregnancy is the second most frequent cause of bleeding in early pregnancy and a leading cause of infertility.
Nursing Assessment	• **Unilateral stabbing pain and tenderness** in the lower-abdominal quadrant • Delayed (1 to 2 weeks), lighter than usual, or irregular menses • Scant, dark red, or brown vaginal spotting occurs 6 to 8 weeks after last normal menses; red, vaginal bleeding if rupture has occurred • Referred shoulder pain due to blood in the peritoneal cavity irritating the diaphragm or phrenic nerve after tubal rupture • Report of indications of shock such as faintness • Clinical finding of hemorrhage and shock
Testing	• Transvaginal ultrasound, serum beta hCG; additional testing to rule out other conditions
Management	• Medical: drug therapy (methotrexate, prostaglandins, misoprostol, and actinomycin) • Surgery if rupture o Salpingostomy is done to salvage the fallopian tube if not ruptured o Laparoscopic salpingectomy (removal of the tube) is performed when the tube has ruptured • Rh immunoglobulin if woman Rh negative
Patient education needs	• Instruct client who is taking methotrexate to avoid alcohol consumption and vitamins containing folic acid • Advise the client to protect herself from sun exposure • Provide client education and psychological support

7. Describe the following for **Gestational Trophoblastic Disease.**

Pathophysiology	• GTD is the proliferation and degeneration of trophoblastic villi in the placenta that becomes swollen, fluid-filled, and takes on the appearance of grape-like clusters. The embryo fails to develop beyond a primitive state and these structures are associated with choriocarcinoma, which is a rapidly metastasizing malignancy. Two types of molar growths are identified by chromosomal analysis.
Nursing Assessment	• Prior molar pregnancy • Clients in early teens or older than age 40

	• Excessive vomiting due to elevated hCG levels • Rapid uterine growth more than expected for the duration of the pregnancy due to the over proliferation of trophoblastic cells • Bleeding is often dark brown resembling prune juice, or bright red that is wither scant or profuse and continues for a few days or intermittently for few weeks and can be accompanied by passage of vesicles. • Anemia from blood loss • Clinical findings of preeclampsia that occur prior to 24 weeks of gestation
Testing	• Immediate evacuation of uterine contents (D&C) • Long-term follow-up and monitoring of serial hCG levels
Management	• Preoperative preparation • Emotional support • Education: treatment, serial hCG monitoring, prophylactic chemotherapy
Patient education needs	• Provide client education and emotional support • Offer referral for clients and partners to pregnancy loss support groups • Instruct the client to use reliable contraception as a component of follow-up care • Reinforce the importance of follow-up due to the increased risk of choriocarcinoma



When would you anticipate that Methotrexate would be prescribed?

- Methotrexate is started prophylactically after the evacuation of the fetus. Follow-up care involves close clinical surveillance for approximately one year, and it reinforces the importance of monitoring the patient's condition. Serial serum beta-hCG levels are used to detect residual trophoblastic tissue. Continued high or increasing hCG titers are abnormal and need further valuation.

1. Describe the following for Cervical Insufficiency**: Remember to look at general risk for preterm labor and to review and know the use of tocolytics. This section coincides with the Preterm labor information in ATI CH 10 pp 65-66 . Also is related to the sections on Premature rupture of membranes which can lead to premature labor. See RKC Ch 19 pp721-723; ATI Ch 10 pp67-68**

Pathophysiology	• Premature dilation of cervix • Cause unknown; possibly due to cervical damage
Nursing Assessment	• Risk factors because of—Can lead to preterm labor • Pink-tinged vaginal discharge or pelvic pressure • Cervical shortening via transvaginal ultrasound
Testing	• Bed rest, pelvic rest, avoidance of heavy lifting • Cervical cerclage
Management	• Continuing surveillance; close monitoring for preterm labor • Emotional support • Education • If preterm labor occurs→tocolytics –possibly Terbutaline (an asthma drug) but not used as much. Magnesium Sulfate→relaxes the smooth muscles→ stopping labor.
Patient education	• Emotional support

needs	• Education

Preterm labor: What are some of the risk factors that could cause preterm labor?
Urinary tract or uterine infection can stimulate preterm labor.
Polyhydramnios, multifetal pregnancy—both enlarge the uterus—can stimulate preterm labor.
Uterine wall or cervical abnormalities
Previous history of preterm labor.

Tocolytics are drugs that are used to delay delivery for a short time (up to 48 hours) if labor begins too early in the pregnancy.
Providers use these drugs to delay delivery while a client is being transferred to a hospital that specializes in preterm care, or so that they can give corticosteroids like betamethasone. The corticosteroid injections help mature the baby's lungs.
The provider will decide whether to intervene to stop the preterm labor based on:

1. The probability of progression of labor due to progressive effacement and dilation of the cervix
2. Thegestational age of the fetus (if the fetus is severely preterm and they can stop the labor safely with tocolytic drugs, it is safer for the infant.)
3. The risks of the treatments to stop the labor e.g. the effects of longer term use of magnesium sulfate can have significant side effects for the mother and the fetus.

Magnesium sulfate is also given as it protects a baby under 32 weeks from the uterine pressure on the immature fetal health and reduces the risk of cerebral palsy, **but it can also be used as a tocolytic**. Magnesium sulfate is also used to prevent seizures in pregnant women with preeclampsia (high blood pressure).
Other drugs that can be used as a tocolytic include:

- beta-mimetics (for example, **terbutaline)**
- **calcium channel blockers (for example, nifedipine)**
- **non-steroidal anti-inflammatory drugs or NSAIDs (for example, indomethacin)**

What kind of tocolytic medication should be used?
There is no data showing that one drug is consistently better than another, and providers in different parts of the country have different preferences.
In many hospitals, terbutaline is given especially if a woman is at low risk of delivering her baby early. For women at high risk of delivering within the next week, magnesium sulfate (administered intravenously) is usually the drug of choice.

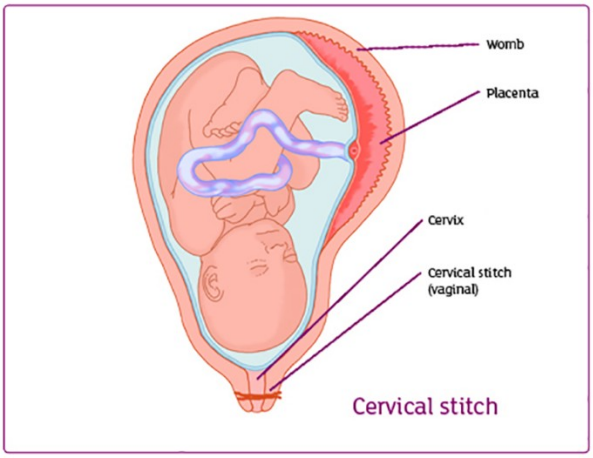
At what point during the pregnancy can tocolytic medications be used?
Tocolytic medications for preterm labor aren't normally used before 24 weeks of pregnancy, but in certain situations, the provider may use it as early as 23 weeks of pregnancy.
Many providers stop giving tocolytics after a woman has reached her 34th week of pregnancy, but some providers begin tocolytics as late as 36 weeks.
How long should tocolytic medications be continued?
The provider may first try treating preterm labor with bed rest, extra fluids, pain medicine, and a single dose of a tocolytic medication. They may also do further screening (like a fetal fibronectin test and transvaginal ultrasound) to better determine the risk for preterm cervical dilation and preterm delivery.

If the contractions do not stop, the decision to continue tocolytic medicines, and for how long, will be based on the actual risk of preterm delivery (as determined by the screening tests), the age of the baby, and the status of the baby's lungs.
If tests indicate that the client is at high risk for preterm delivery, the provider will probably give magnesium sulfate for at least 24 to 48 hours as well as corticosteroid medication to improve the baby's lung function.
If the contractions stop, the provider doctor will reduce and then discontinue magnesium sulfate. If contractions continue, the provider may order additional tests to rule out underlying infection in the uterus. The provider may also do a test to determine the status of the baby's lungs.
How successful are tocolytic medicines?
No tocolytic medication has been shown to consistently delay delivery for a significant period of time.
However, tocolytic medications can delay delivery for at least a short while (usually a few days). This usually provides enough time for the mother to to receive a course of steroids. The corticosteroid injections reduce the risks for the baby if they arrive early by promoting the production of surfactant in the fetal lungs.
Who should not use tocolytic medications?
Women should not use tocolytic medications when the risks of using the medications outweigh the benefits.
These complications may include women with severe preeclampsia or eclampsia (high blood pressure that develops during pregnancy and can cause complications), severe bleeding (hemorrhage), or infection in the womb (chorioamnionitis).
Tocolytic medications should also not be used if the baby has died in the womb or if the baby has an abnormality that will lead to death after delivery (anacepaly).
In other situations, a provider may be cautious about using tocolytic medications, but may prescribe them because the benefits outweigh the risks. These situations may include when the mother has:

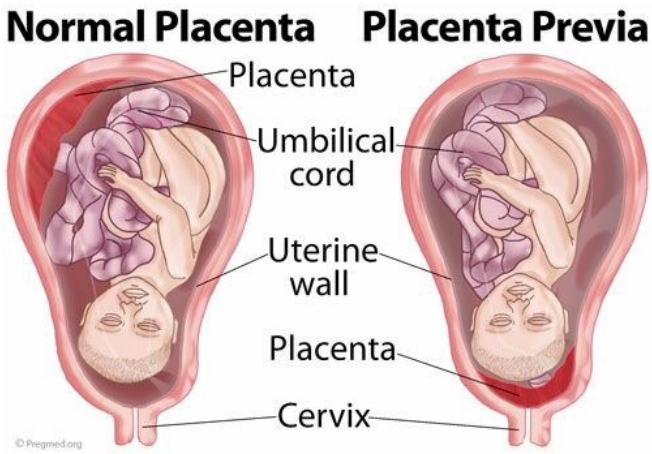
- mild preeclampsia
- relatively stable bleeding during the second or third trimester (not from placenta previa or placenta abruption.)
- serious medical conditions
- a cervix that has already dilated 4 to 6 centimeters or more but the fetus is so preterm that the risk of the infant being born at that time outweigh the risks to the mother. Often this is to delay delivery until the woman can be transferred to a higher level of care center.

The provider may still use tocolytics when the baby has an abnormal heart rate (as shown on the fetal monitor), or slow growth depending on the gestation.

9. Describe the following for Placenta Previa:



Pathophysiology	•	Cause unknown; placenta implants over cervical os
Nursing Assessment	•	Risk factors
	•	Vaginal bleeding **(painless, bright red in second or third trimester, spontaneous cessation then recurrence)**
Testing	•	Transabdominal or transvaginal US
	•	Fetal monitoring for fetal well-being assessment
Management	•	Monitoring of maternal–fetal status
	•	Vaginal bleeding; pad count
	•	Avoidance of vaginal exams-- Think about why!!!
	•	FHR
	•	**If acute** and heavy bright red bleeding→ admission into hospital-→**IV access**→labs for CBC, type & screen & crossmatch; prep for c/section. Remember: bleeding means O2 is also decreased to fetus so fetus and mother are at risk for hypovolemia; decreased to No oxygenation—can be fatal.
Patient education needs	•	Support and education: fetal movement counts, effects of prolonged bed rest (if necessary); signs and symptoms to report
	•	Preparation for possible cesarean birth



10. Why is it important to know if a woman who is presenting to labor and delivery has a placental previa?

- **Bleeding.** Severe, possibly life-threatening vaginal bleeding (hemorrhage) can occur during labor, delivery or in the first few hours after delivery.

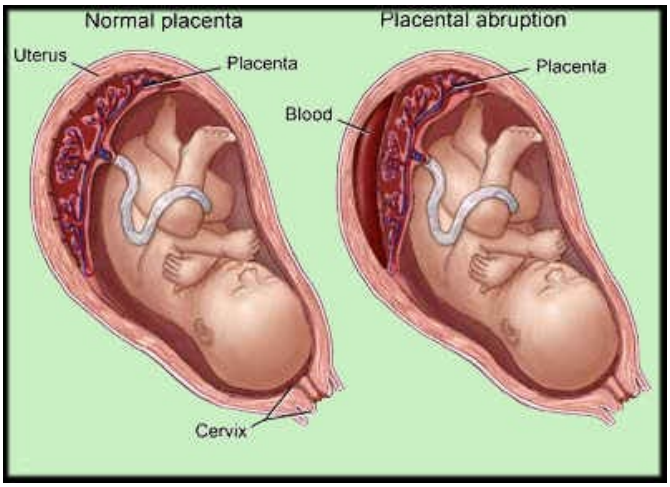
- **Preterm birth.** Severe bleeding may prompt an emergency C-section before the baby is full term.
    - Doctors and nurses need to be on standby and have necessary equipment and surgical room ready prior to admitting the patient. Also, due to blood loss that can occur during this type of birth, type and cross of mom's blood is necessary to replace any blood lost during the delivery. All admission care done quickly including Type and Screen, CBC with platelets, signing consents etc..if this is an acute episode. If time allows and c section is not immediate, betamethasone might be given to promote the production of surfactant in the infant's lungs.

How would her care be altered? Depends on the symptoms on admission—**If not excessive bleeding but no history of placenta previa; will do an ultrasound to visualize the placenta**

- Constant assessment to the degree of vaginal bleeding; inspect the perineal area for blood that may be pooled underneath the woman. Estimate and document the amount of bleeding. **Perform a peripad count on an ongoing basis, making sure to report any changes in amount or frequency to the health care provider**. If the woman is experiencing active bleeding, prepare blood typing and cross-matching in the event a blood transfusion is needed
- Prophylactic low-dose aspirin can be prescribed if deemed appropriate by the health care provider

11. Describe the following for Abruptio Placentae (Abruption): Go back to #1—What are the risk factors for this? What makes them risk factors? Think through the pathophysiology.

Pathophysiology	• Separation of placenta leading to compromised fetal blood supply • Etiology unknown
Nursing Assessment	• Risk factors==Hypertension caused by pregnancy complication of severe preeclapmsia or cocaine use, trauma, cigarette smoking (constriction of the vascular system.) • Bleeding (dark red) • Pain (knife like), uterine tenderness at placental site , contractions • Fetal movement and activity (decreased) • FHR
Testing	• CBC, fibrinogen levels, PT/aPTT, type and cross-match, nonstress test, biophysical profile
Management	• Tissue perfusion: left lateral position, strict bed rest, oxygen therapy, vital signs, fundal height, continuous fetal monitoring
Patient education needs	• Empathy, understanding, explanations, possible loss of fetus, reduction of recurrence

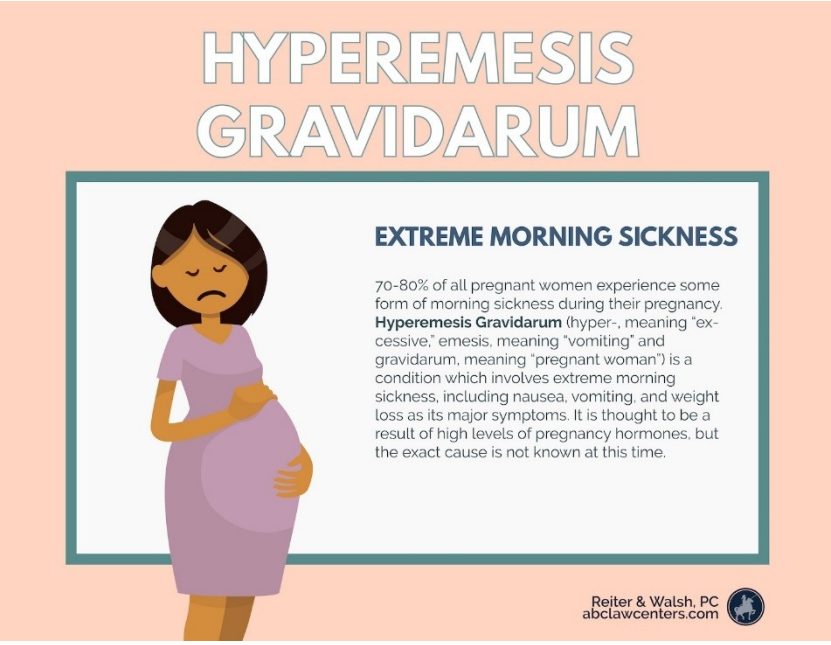


12. In your own words describe Disseminated intravascular coagulation (DIC).

- A bleeding disorder characterized by an abnormal reduction in the elements involved in blood clotting resulting from widespread intravascular clotting. This disorder can occur secondary to **abruptio placentae**, amniotic fluid embolism, endotoxin sepsis, retained dead fetus, **post-hemorrhagic shock**, hydatidiform mole, and gynecologic malignancies. DIC is usually associated with high mortality and morbidity rates. Often first seen as petechiae and bleeding around the IV access site.

13. Describe the following for Hyperemesis Gravidarum

Pathophysiology	• Severe form of nausea and vomiting • Symptoms usually resolve by week 20 • Weight loss >5% of pre-pregnancy body weight-→ **need daily weights** • Dehydration, metabolic acidosis, alkalosis, and hypokalemia
Nursing Assessment	• Onset, duration, course of N/V; diet history; risk factors, weight, associated symptoms, perception of situation • Liver enzymes, CBC, BUN, electrolytes, urine specific gravity,; ultrasound—**What findings would you expect to see? urine ketones (because of dehydration); elevated liver enzymes, elevated HCT due to hemoconcentration; decreased serum glucose**
Testing	• **Conservative (diet and lifestyle changes)** • **Hospitalization with parenteral therapy and NPO until the do not have vomiting for 24 hours**
Management	• Comfort and nutrition (NPO, IV fluids, hygiene, oral care, I&O)
Patient education needs	• Reassurance –Be specific. What would the nurse educate the mother about i.e. how it normally progresses? • Home care follow-up—What can they do to decrease the symptoms? What to eat? How much activity?



14. What three medications are commonly used for hyperemesis gravidarum? What nursing considerations should be addressed for each of these?

- Promethazine (Phenergan)
  - Symptomatic relief of nausea and vomiting, and motion sickness
    - Be alert for urinary retention, dizziness, hypotension, and involuntary movements
    - Institute safety measures to prevent injury secondary to sedative effects
    - Offer hard candy and frequent rinsing of mouth for dryness
- Prochlorperazine (Compazine)
  - Controls nausea and vomiting
    - Be alert for abnormal movements and neuroleptic malignant syndrome such as seizures, hyper/hypotension, tachycardia, and dyspnea
    - Assess mental status, intake and output
    - Caution client not to drive as a result of drowsiness or dizziness
    - Advise to change position slowly to minimize effects of orthostatic hypotension
- Ondanestron (Zofran)
  - Blocks serotonin release, which stimulates the vagal afferent nerves, thus stimulating the vomiting reflex
    - Monitor for possible side effects such as diarrhea, constipation, abdominal pain, headache, dizziness, drowsiness, and fatigue
    - Monitor liver function studies as ordered

15. What is the difference between chronic and gestational hypertension?

- Chronic hypertension
  - **B/P>140/90 mmHg before pregnancy or before 20 weeks** gestation. When hypertension is first identified during a woman's pregnancy and she is less than 20 weeks' gestation, blood pressure elevations usually represent chronic hypertension. Women with chronic hypertension in pregnancy should be monitored for the development of worsening hypertension and/or the development of superimposed preeclampsia
- Gestational hypertension

- **B/P>140/90 without proteinuria after 20 weeks gestation resolving by 12 weeks postpartum.** Gestational hypertension is defined as systolic pressure >140 mmHg **and/or** diastolic >90 mmHg on at least two occasions at least 4 to 6 hours apart after the 20th week of gestation in women known to be normotensive prior to this time and prior to pregnancy

Definitions

Preeclampsia :

• Systolic BP ≥ 140 Mm Hg Or Diastolic BP ≥ 90 Mm Hg Occurring ≥ 20 Weeks' Gestation
• Proteinuria ≥ 300 Mg In A 24 Hour Urine Collection.

Eclampsia: The Development Of Grand Mal Seizures In A Woman With Preeclampsia.

Chronic Hypertension:
Systolic Pressure > Or =140 mmHg, Diastolic Pressure > Or =90 mmHg, Or Both, That Is Present Before The 20th Week Of Pregnancy.

Gestational Hypertension (Transient Hypertension Of Pregnancy):

Systolic Pressure ≥ Or =140 mmHg, Diastolic Pressure ≥ Or =90 mmHg, Or Both, That Develop ≥ 20th Week Of Pregnancy In A Previously Normotensive Woman, But With Out Proteinuria.

16. Please fill in the table below: **KNOW THESE—THINK THROUGH SCENARIOS**

	Mild Preeclampsia	Severe Preeclampsia	Eclampsia
Blood pressure	>140/90 mmHg after 20 weeks gestation	>160/110 mmHg	>160/110 mmHg
proteinuria	300 mg/24 hour or greater than 1+ protein on a random dipstick urine sample	>500 mg/24 hour; greater than 3+ on random dipstick urine sample	Marked proteinuria
Seizures/coma	No	No	Yes
hyperreflexia	No	Yes	Yes
Other signs or symptoms	• Mild facial or hand edema • Weight gain	• Headache • Oliguria • Blurred vision, scotomata (blind spots) • Pulmonary edema • Thrombocytopenia (platelet count <100,000 platelets/mm^3 • Cerebral disturbances • Epigastric or RUQ pain • HELLP	• Severe (often continuous) headache • Generalized edema • RUQ or epigastric pain • Visual disturbances • Cerebral hemorrhage • Renal failure • HELLP
Treatment/management	• Home management for mild preeclampsia	• Hospitalization for severe preeclampsia; quiet environment,	• Seizure management for eclampsia;

		sedatives, seizure precautions, antihypertensives DTR testing, assessing for magnesium toxicity and labor←**How do you assess for these?**	fetal monitoring; uterine contraction monitoring; preparation for birth

REMEMBER: ECLAMPSIA IS A MULTI ORGAN SYSTEM PHENOMENA

17. Protein/creatinine (P/C) ratio. This is not in your text. There is a urine protein test which detect and/or measure protein being released into the urine. Normal urine protein elimination is less than 150 mg/day and less than 30 mg of albumin/day. Elevated levels may be seen temporarily with conditions such as infections, stress, pregnancy, diet, cold exposure, or heavy exercise. Persistent protein in the urine suggests possible kidney damage or some other condition that requires additional testing to determine the cause.

18. Medications used with preeclampsia and eclampsia

Medication	Indications (why is this needed for THIS patient?)	**Nursing Implications (What are you watching for? What do you do about it?**	Dose
Magnesium Sulfate Tocolytic due to relaxation of the vascular system→	• Blockage of neuromuscular transmission, vasodilation • Prevention and treatment of eclamptic seizures • Relax uterine contractions	• Monitor for signs and symptoms of toxicity such as **depressed respirations due to CNS depression**; flushing, sweating, hypotension, and cardiac and central nervous system depression Monitor serum mag levels closely • Assess DTRs and check for ankle clonus • Have calcium gluconate readily available in case of toxicity	• Loading dose of 4-6 grams by IV in 100 mL of fluid administered over 15-20 minutes, followed by a maintenance dose of 2 grams as a continuous intravenous infusion
Hydralazine	• Vascular smooth	• Use parenteral	• Administer 5-10

hydrochloride (Apresoline)	muscle relaxant, thus improving perfusion to renal, uterine, and cerebral areas • Reduction in blood pressure	form immediately after opening ampule • Withdraw drug slowly to prevent possible rebound hypertension • Monitor for adverse effects such as palpitations, headache, tachycardia, anorexia, nausea, vomiting, and diarrhea	mg by slow intravenous bolus every 20 minutes as needed
Labetalol hydrochloride (Normodyne)	• Alpha-1 and beta blocker • Reduction in blood pressure	• Be aware that drug lowers blood pressure without decreasing maternal heart rate or cardiac output • Monitor for possible adverse effects such as gastric pain, flatulence, constipation, dizziness, vertigo, and fatigue • Monitor urinary output because of the effects on the renal system. • Watch for reduction of uterine contractility—postpartum can contribute to dystocia.	• Administer IV dose of 20-40 mg every 15 minutes as needed and then administer intravenous infusion of 2 mg/min until desired blood pressure value achieved
Nifedipine	• Calcium channel	• Monitor for	• Administer 10-20

(Procardia) Tocolytic	blocker/dilation of coronary arteries, arterioles, and peripheral arterioles • Reduction in blood pressure, stoppage of preterm labor	possible adverse effects such as dizziness, peripheral edema, angina, diarrhea, nasal congestions, cough	mg orally for three doses and then every 4-8 hours

Table 2. Medications Used to Treat Preeclampsia

Magnesium sulfate
- Loading dose 4-6 g diluted in 100 mL normal saline IV over 15-20 min
- Continuous infusion 2 g/h

Labetalol
- 20 mg IV × 1 dose; if no response, increase to 40 mg and then to 80 mg at 10-min intervals until target BP is achieved (max dose 220 mg)

Hydralazine
- 5-10 mg IV every 15-30 min (max dose 30 mg)

Betamethasone
- 12 mg IM × 1 dose, then repeat in 24 h

Dexamethasone
- 6 mg IM × 1 dose, then repeat every 12 h for 3 additional doses

BP: blood pressure; IM: intramuscularly; max: maximum; min: minimum. Source: References 1, 3, 7.

Medicine	Dose	Notes
Hydralazine	5mg IV or IM, then 5-10 mg q 20-40 min OR 0.5-10mg/h infusion	NHBEP drug of choice.
Labetalol	20mg IV then 20-80mg q20-30min < 300mg OR 1-2mg.min infusion	Less risk for tachycardia and arrhythmias. Risk for neonatal bradycardia
Nifedipine (short acting)	10-30mg po q 45min prn	May effect labor synergistic with MgSO4
Nitroprusside	0.5-10 µg.kg/min	Drug of last resort. Possible Cyanide toxicity.
Methyldopa	0.5-3g/day in two divided doses	NHBEP drug of choice.
Labetolol	200-1200mg po QD in 2-3 divided doses	Neonatal bradycardia

19. What are the signs of Magnesium toxicity? What is the therapeutic level for magnesium sulfate? What drug should always be at the bedside of a patient who has Magnesium sulfate infusing?

- Signs of magnesium toxicity
  - Absence of patellar deep tendon reflexes =0
  - Urine output less than 30 mL/hr
  - Respirations less than 12/min
  - Decreased level of consciousness
  - Cardiac dysrhythmias—tachycardia also

- Therapeutic level for magnesium sulfate
  - 4 to 7 mEq/L serum levels
- Antidote to magnesium sulfate
  - **Calcium gluconate**

WHAT DOES THE NURSE DO IF THEY SEE SIGNS OF MAGNESIUM TOXICITY? DO YOU CALL THE PROVIDER FIRST? WHAT CAN YOU DO BEFORE YOU CALL THE PROVIDER?—You can stop the magnesium sulfate. If the side effects are severe you would give the calcium gluconate.

20. When grading a deep tendon reflex, does the grading scale of 0-4 state no movement is graded as a 0 or a 4?

- 0 is recorded as no movement

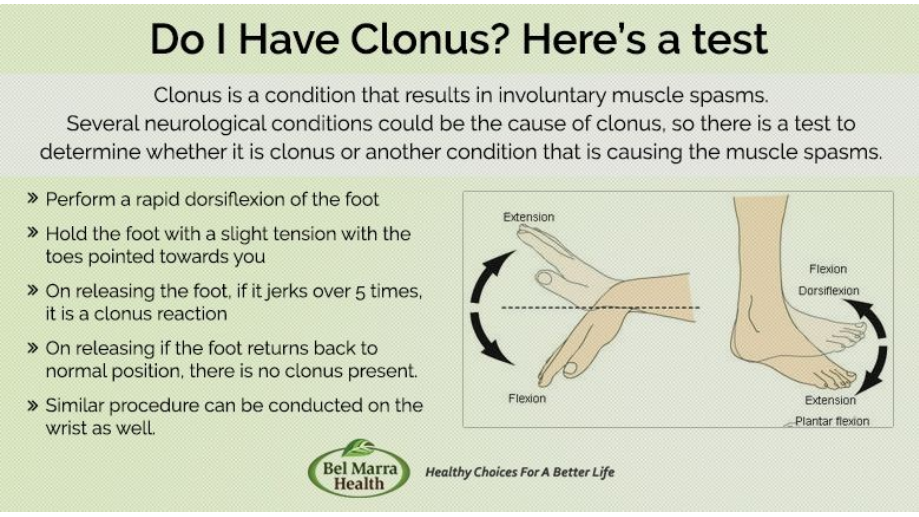
TABLE 4–4
Deep-Tendon Reflex Grading System

Grade	Description
0	No response
1+	Reduced, less than expected
2+	Normal
3+	Greater than expected, moderately hyperactive
4+	Hyperactive with clonus

What would you see regarding reflexes with severe preeclampsia? What would you see with magnesium toxicity?

21. What does clonus evaluate and what does a positive clonus look like?

- Clonus evaluates for nervous system irritability related to preeclampsia
- Positive clonus is movement that is jerky and rapid after quickly releasing the foot from a dorsiflexed position



22. What does HELLP stand for?

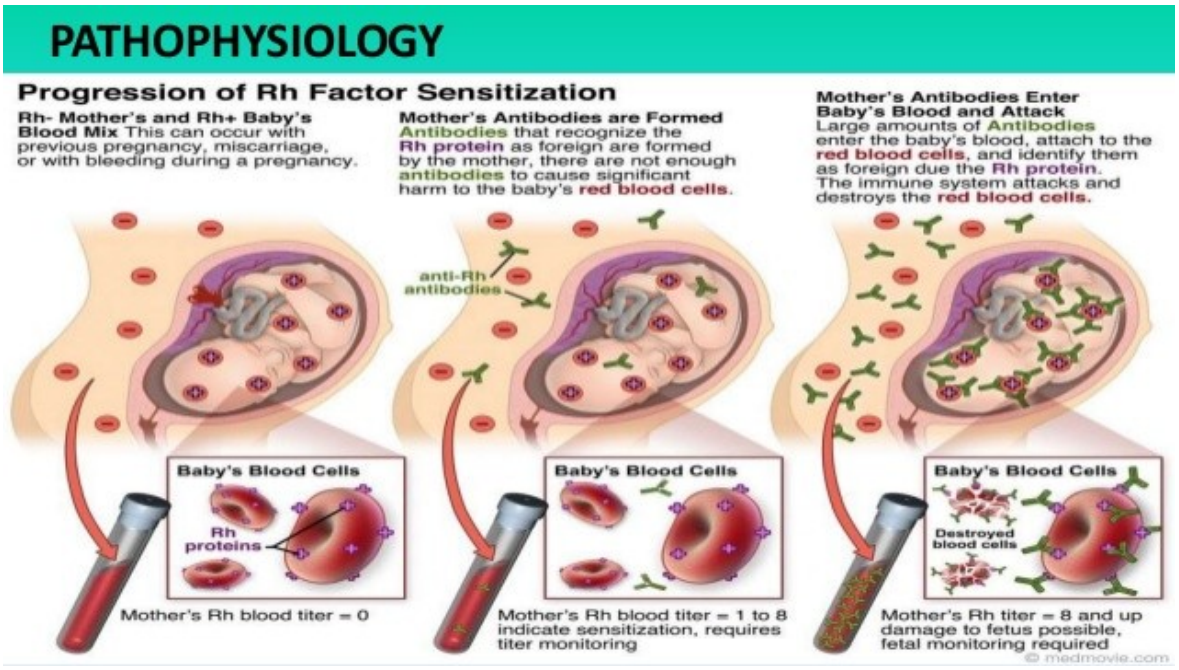
- **H**emolysis, **E**levated **L**iver enzymes, **L**ow **P**latelets

23. Describe the following for HELLP syndrome

Pathophysiology	Is a variant of GH in which hematologic conditions coexist with severe preeclampsia involving hepatic dysfunction. HELLP syndrome is diagnosed by laboratory tests, not clinically
Nursing Assessment	Hypertension, proteinuria, periorbital, facial, hand and abdominal edema; pitting edema of lower extremities, vomiting, oliguria, hyperreflexia, scotoma, epigastric pain, RUQ pain, dyspnea, diminished breath sounds, seizures, jaundice, signs of progression of HTN disease with indications of worsening liver involvement, kidney failure, worsening hypertension, cerebral involvement, and developing coagulopathies
Testing	Liver enzymes, serum creatinine, BUN, uric acid, and magnesium; CBC; clotting studies; chemistry profile
Management	Assess LOC, obtain pulse oximetry, monitor urine output, and obtain a clean-catch urine sample to assess for proteinuria; obtain daily weights; monitor vital signs; encourage lateral positioning; perform NST and daily kick counts; I and O
Patient education needs	Maintain the client on bed rest and encourage side-lying position; Promote diversional activities; Have the client avoid foods that are high in sodium; Instruct the client to drink six to eight 8-ounce glasses of water a day

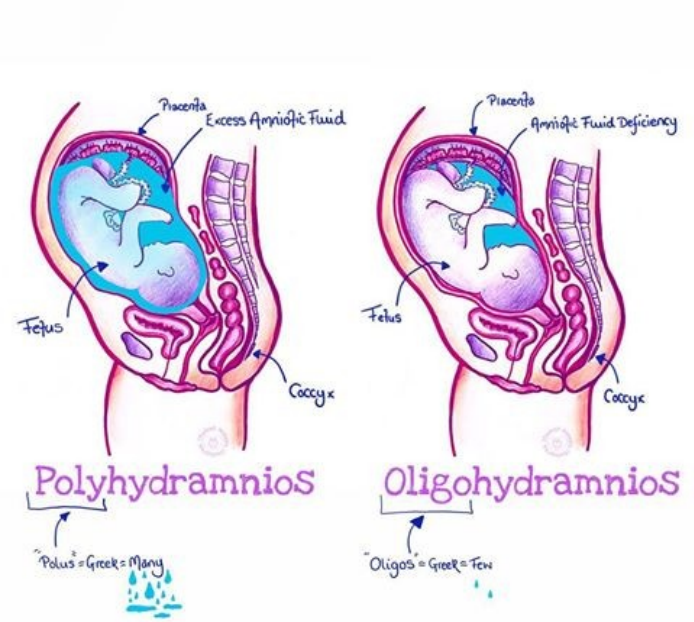
20. What is Rh factor incompatibility? When is RhoGAM administered? Who is at risk if it is not given? **Understand this process but concentrate on the rh factor now. We will revisit the ABO incompatiilty during Unit 5.**

- ABO incompatibility: type O mothers and fetuses with type A or B blood (less severe than Rh incompatibility)
- Rh incompatibility: exposure of Rh-negative mother to Rh-positive fetal blood; sensitization; antibody production; risk increases with each subsequent pregnancy; and fetus with Rh-positive blood
- Nursing assessment: maternal blood type and Rh status
- Nursing management: RhoGAM at 28 weeks
- If RhoGAM is not administered, future pregnancies are at risk



24. What fetal risks are associated with polyhydramnios and oligohydramnios?

- **Polyhydramnios**
  - Amniotic fluid >2,000 mL
  - Therapeutic management: close monitoring; removal of fluid, indomethacin (decreases fluid by decreasing fetal urinary output)
  - Nursing assessment: risk factors, fundal height, abdominal discomfort, difficulty palpating fetal parts, or obtaining FHR
  - Nursing management: ongoing assessment and monitoring; assisting with therapeutic amniocentesis
  - Enlarged uterus can set mother up for dystocia (weak and ineffective uterine contractions) and uterine atony (lack of uterus' ability to contract) post-delivery in the 3rd & 4th stages of labor.
- **Oligohydramnios**
  - Amniotic fluid <500 mL
  - Therapeutic management: serial monitoring; amnioinfusion and birth for fetal compromise
  - Nursing assessment: risk factors, fluid leaking from vagina
  - Nursing management: continuous fetal surveillance; assistance with amnioinfusion, comfort measures, position changes



25. Define multiple gestation and explain why it may be concerning for the mother/fetus.

- A pregnancy with two or more fetuses
- **The increasing number of multiple gestations is a concern because women who are expecting more than one infant are at high risk for preterm labor, polyhydramnios, hyperemesis gravidarum, anemia, preeclampsia, and antepartum and postpartum hemorrhage.**
- Fetal/newborn risks or complications include prematurity, respiratory distress syndrome, birth asphyxia/perinatal depression, congenital anomalies, twin-to-twin transfusion syndrome, intrauterine growth restriction, and becoming conjoined twins

26. What do monozygotic and dizygotic mean?

- Monozygotic
  - Identical twins; single fertilized ovum splits during the first 2 weeks after conception
- Dizygotic
  - Two sperm fertilizing two ova produce fraternal twins
    - separate amnions, chorions, and placentas

27. Describe the following for Premature rupture of membranes:

Pathophysiology	• PROM—women beyond 37 weeks' gestation • PPROM—women less than 37 weeks' gestation
Nursing Assessment	• Risk factors, signs and symptoms of labor, electronic FHR monitoring, amniotic fluid characteristics
Testing	• Nitrazine test, fern test, ultrasound , or ROM Plus (ROM=Rupture of membranes)
Management	• Infection prevention • Identification of uterine contractions
Patient education needs	• Discharge home (PPROM) if no labor within 48 hours-this is dependent upon multiple variables. • Monitor baby's activity by counting fetal kicks-why do this? • Check temperature daily and report any temperature increases- why do

	this? • Take showers daily for hygiene needs—No baths→ risk introducing bacteria into vagina.

RKC Ch 20; ATI Ch 9

1. Discuss each of the following for **Gestational Diabetes**:

Pathophysiology	• Fetal demands • Role of placental hormones • Changes in insulin resistance • Effects on mother • Effects on fetus
Nursing Assessment	• Health history; physical examination; risk factors • Screening at first prenatal visit; additional screening at 24 to 28 weeks for women considered at risk
Testing	• Maternal surveillance: urine for protein, ketones, nitrates, and leukocyte esterase; evaluation of renal function/trimester; eye exam in first trimester; HbA1c q4–6 weeks How often does the mother check her blood sugar? • Fetal surveillance: ultrasound; alpha-fetoprotein levels; biophysical profile; nonstress testing; amniocentesis
Management	• Optimal glucose control • Blood glucose levels; medication therapy←What are used? • Nutritional therapy • Measures during labor and birth; postpartum • Prevention of complications
Patient education needs	• **Instruct the client to perform daily kick counts** • **Educate the client about die, including standard diabetic diet and restricted carbohydrate intake. Dietary counseling by a registered dietitian should occur** • **Educate client about exercising—do you recommend increase or decrease? Why?** • **Instruct the client about self glucose testing and administration of oral medications to help with insulin uptake or on insulin administration and monitoring for hypoglycemia (insulin reaction) or hyperglycemia.**

2. What effects can uncontrolled gestational diabetes have on the fetus/newborn?
   - Cord prolapse secondary to polyhydramnios and abnormal fetal presentation
   - Congenital anomaly due to hyperglycemia in the first trimester
   - Macrosomia resulting from hyperinsulinemia stimulated by fetal hyperglycemia
   - Fetal asphyxia secondary to fetal hyperglycemia and hyperinsulinemia
   - Perinatal death due to poor placental perfusion and hypoxia
   - Subsequent childhood obesity and carbohydrate intolerance

3. What cardiovascular changes are noted during pregnancy? –Not going to ask about this on exam
   - The prevalence of cardiac disease is increasing as a result of lifestyle patterns, including cigarette smoking, diabetes, and stress. As women are delaying childbearing, the incidence of cardiac disease in pregnancy will continue to increase. The cardiovascular adaptations during pregnancy are well tolerated by the normal heart, but may unveil undiagnosed underlying heart disease, or tip the hemodynamic balance and lead to decompensation in those with existing heart disease. Classic symptoms of heart disease mimic common symptoms of late pregnancy:

- palpitations
- SOB with exertion
- occasional chest pain

Why might these put a woman at risk for cardiovascular disease?

- Women are delaying childbearing, the incidence of cardiac disease in pregnancy will continue to increase

4. Discuss each of the following for **iron deficiency anemia**.—Review this from antepartum and think about it's relationship to bleeding disorders i.e. if the Hbg and Hct are already low, the risks are greater for hypovolemia causing sever decrease in oxygen to the fetus.

Pathophysiology	Usually due to inadequate dietary intake
Nursing Assessment	Fatigue, weakness, malaise, anorexia, susceptibility to infection (frequent colds), pale mucous membranes, tachycardia, pallor
Testing	Low hemoglobin, low hematocrit, low serum iron, microcytic and hypochromic cells, and low serum ferritin
Management	• Compliance with drug therapy: prenatal vitamin and iron supplement • Dietary instruction and counseling
Patient education needs	• Education for drug therapy

5. After reading about adolescence and pregnancy, discuss how you as the nurse would care for this patient. What would you do differently?
   - Vision of self in future
   - Realistic role models; emotional support
   - Level of child development education
   - Financial and resource management; work and educational experience
   - Anger and conflict resolution skills
   - Knowledge of health and nutrition for self and child
   - Challenges of parenting role
   - Community resources

   How would you approach topics?
   - Support
   - Future planning (return to school; career or job counseling); options for pregnancy
   - Frequent evaluation of physical and emotional well-being
   - Stress management; self-care
   - Education
   - Birth control

   Would you focus more on the support people?
   - Tackling the many issues surrounding adolescent pregnancy is difficult. Making connections with clients is crucial regardless of how complex their situation is. Nurses must take proactive positions in knowing how and when to advise a teen and when to listen and refrain from giving advice. Giving advice can be misinterpreted as "preaching", and the adolescent will probably ignore the information. The nurse must be perceptive, flexible, and sensitive and must work to establish a therapeutic relationship.

6. What changes would you incorporate in the nursing care of the advanced maternal age (AMA) woman?
   - Nursing assessment

- Preconception counseling; lifestyle changes; beginning pregnancy in optimal state of health
- Laboratory and diagnostic testing for baseline; amniocentesis; quadruple blood test screen

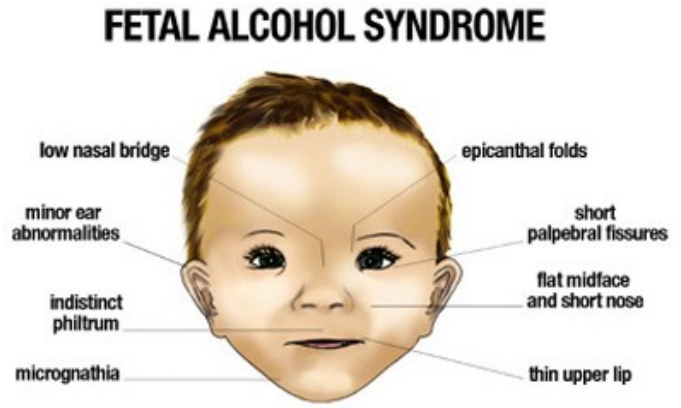
- Nursing management
  - Promotion of healthy pregnancy; education; early and regular prenatal care; dietary teaching; continued surveillance

7. Define teratogen.
   a. A substance known to be toxic to human development

8. Fill in the following table.

Substance	Effects on pregnancy and fetus/newborn—**Think pathophysiology**
Alcohol	• Spontaneous abortion, inadequate weight gain, IUGR, fetal alcohol spectrum disorder, the leading cause of intellectual disability
caffeine	• **Vasoconstriction and mild diuresis in mother; fetal stimulation, but teratogenic effects not documented via research**
nicotine	• **Vasoconstriction, reduced uteroplacental blood flow, decreased birth weight, abortion, prematurity, abruptio placentae, fetal demise**
cocaine	• **Vasoconstriction, gestational HTN, abruptio placentae, abortion, "snow" baby syndrome, CNS defects, IUGR**
marijuana	• Anemia, inadequate weight gain, "amotivational syndrome," hyperactive startle reflex, newborn tremors, prematurity, IUGR
Opiates/narcotics	• **Maternal and fetal withdrawal, abruptio placentae, preterm labor, premature rupture of membranes, perinatal asphyxia, newborn sepsis and death, intellectual impairment, malnutrition**
methamphetamines	• **CNS stimulant, risk for preterm birth, low birth weight, placental abruption, fetal growth restriction, and congenital anomalies**

9. List five possible characteristics of Fetal Alcohol Spectrum Disorder.
1. Craniofacial dysmorphia (thin upper lip, small head circumference, and small eyes)
2. IUGR
3. Microcephaly
4. Congenital anomalies
5. Cardiac defects



RKC Chapter 21

1. Why is the term “failure to progress” often used?

   a. The term is often used because **dystocia** cannot be predicted or diagnosed with certainty
   b. Includes lack of progressive cervical dilation, lack of descent of the fetal head, or both
   c. An adequate trial of labor is needed to declare with confidence that dystocia or “failure to progress” exists

2. What factors are associated with an increased risk for dystocia? Think about why Uterine atony – a=lack of; tony = tone—occurs. It could be dystocia

- Epidural analgesia/excessive analgesia
- Multiple gestation
- Hydramnios
- Maternal exhaustion
- Ineffective maternal pushing technique
- Occiput posterior position
- Longer first stage of labor
- Nulliparity, short maternal stature
- Fetal birth weight over 8.8 lb
- Shoulder dystocia
- Abnormal fetal presentation or position
- Fetal anomalies
- Maternal age over 35 years
- High caffeine intake
- Overweight
- Gestational age over 41 weeks
- Chorioamnionitis
- Ineffective uterine contractions
- High fetal station at complete cervical dilation

3. Familiarize yourself with the common Diagnosis and management of common problems associated with **dystocia**, their therapeutic management and nursing management i.e.what does this mean for the care delivered by the nurse (p799-804)

- Problems with powers

- Hypertonic uterine dysfunction-=What can cause this?
- Hypotonic uterine dysfunction -What can cause this?
- Protracted disorders
- Arrest disorders
- Precipitate labor- What can cause this?
- Problems with the passageway
- Pelvic contraction
- Obstructions in maternal birth canal

- Problems with passenger
  - Occiput posterior position, the forehead (mentum) as the presenting part, the shoulder as the presenting part or a large infant with large shoulders causing it to be difficult to delivery the shoulders after the fetal head is delivered.—

Remember from Unit 1

- Breech presentation-- presenting part gets in the way of coming through the passageway
- Multifetal pregnancy—enlarged uterus can function as effectively
- Macrosomia and CPD-- enlarged uterus can function as effectively or presenting part gets in the way of coming through the passageway
- Structural abnormalities==ex. shoulder dystocia—may require McRobert's manuevers to assist with delivery of the shoulders.
- Problems with psyche
- Psychological distress

- Nursing assessment
  - History of risk factors
  - Maternal frame of mind
  - Vital signs
  - Uterine contractions
  - Fetal heart rate, fetal position
- Nursing management
  - Promoting labor progress—may require augmentation with Pitocin (oxytocin).
  - Providing physical and emotional comfort
  - Promoting empowerment

4. Define the following: **Review the drug oxytocin from Unit 2. What might you see on the Fetal Heart rate & contraction monitor that would lead to you stop the oxytocin infusion?**

Hypertonic uterine dysfunction:

- Occurring in the latent phase of the first stage of labor; uncoordinated
- Force of contraction typically in the midsection of the uterus at the junction of the active upper and passive lower segments of the uterus rather than in the fundus
- Loss of downward pressure to push the presenting part against the cervix
- Woman commonly becomes discouraged due to lack of progress; also has increased pain secondary to anoxia

Hypotonic uterine dysfunction:

- Often termed secondary uterine inertia because the labor begins normally and then frequency and intensity of contractions decrease. Possible contributing factors:

overdistended uterus with multifetal pregnancy or large single fetus, too much pain medicine given too early in labor, fetal malposition, and regional anesthesia

Precipitate labor:

- Abrupt onset of higher intensity contractions occurring in a shorter period instead of the more gradual increase in frequency, duration, and intensity that typifies most spontaneous labors

5. Why is occiput posterior positioning of the fetus an issue during labor and delivery?

- Fetus is born facing upward instead of the normal downward position
- Labor usually much longer and more uncomfortable (causing increased back pain during labor) if fetus remains in this position
- Possible extensive caput succedaneum and molding from the sustained occiput posterior position

6. What risks increase with a persistent breech presentation?

- Placenta previa, hydramnios, fetal anomalies, and multifetal pregnancy

7. What is a shoulder dystocia? What maneuvers are used to attempt a vaginal delivery when a shoulder dystocia is noted? Describe each.

- Delivery of the fetal head with neck not appearing; retraction of chin against the perineum; shoulders remaining wedged behind the mother's pubic bone, causing a difficult birth with potential for injury to both mother and baby
  - McRoberts maneuver
    - The mother's thighs are flexed and abducted as much as possible to straighten the pelvic curve
  - Suprapubic pressure
    - Light pressure is applied just above the pubic bone, pushing the fetal anterior shoulder downward to displace it from above the mother's symphysis pubis. The newborn's head is depressed toward the mother's anus while light suprapubic pressure is applied

8. Macrosomia is defined as a newborn who weighs **4,000** to **4,500** grams.

9. Why is it important to monitor the bowel and bladder status during labor?

- Monitor the client's bladder for distention at least every 2 hours and encourage her to empty her bladder often. In addition, monitor her bowel status. A full bladder or rectum can impede descent.

10. What are 3 ways you can empower, inform and advocate for your patient?

1. Educate the client and family about dysfunctional labor and its causes and therapies
2. Explain therapeutic interventions that may be needed to assist with labor process
3. Encourage the client and her partner to participate in decision making about interventions

11. Define preterm labor and list 3 risks that are associated with the infant due to preterm labor/birth.

- Preterm labor is defined as the occurrence of regular uterine contractions accompanied by cervical effacement and dilation before the end of the 37th week of gestation. If not halted, it leads to preterm birth
  1. Respiratory distress syndrome

2. Congenital heart defects
3. Thermoregulation problems

12. What factors influence the decision to intervene when a woman present with preterm labor? Review this from chapter 19 as well on the Focus sheet.

- Many factors influence the decision to intervene when women present with symptoms of preterm labor, including the probability of progressive labor, gestational age, and the risks of treatment**. –Think through what determines whether the provider will try to stop the labor or allow/stimulate the labor to continue.**
  - Risk prediction
    - Tocolytic drugs: there are no clear first-line drugs to manage preterm labor; may prolong pregnancy for 2 to 7 days while steroids can be given for fetal lung maturity
    - Antibiotic prophylaxis for women with group B streptococcus
    - Corticosteroids (Betamethasone) decrease respiratory distress in the newborn if given between 24 and 34 weeks gestation.

13. When are tocolytics used?

- **Tocolytic therapy is most likely ordered if preterm labor occurs before the 34th week of gestation to delay birth and thereby to reduce the severity of respiratory distress syndrome and other complications associated with prematurity**

14. Name 5 subtle symptoms of **preterm labor**.

1. Change or increase in vaginal discharge with mucus, water, or blood in it
2. Pelvic pressure (which can also be felt in early pregnancy as well as in later pregnancy so it is best to get checked
3. Low, dull backache
4. UTI symptoms
5. GI upset: n/v/d

NOTE: Infection of the cervix or vaginal tract with **Group Beta Strep can increase the risk for urinary tract infections, premature rupture of membranes, and preterm labor**.

Also note risk factors for preterm labor: History of uterine abnormalities
Urinary tract infections
Multifetal pregnancy
Diabetes

15. What does a fetal fibronectin test determine?

- A glycoprotein produced by the chorion is found at the junction of the chorion and decidua. It acts as biologic glue, attaching the fetal sac to the uterine lining. It normally present in cervicovaginal secretions up to 22 weeks of pregnancy and again at the end of the last trimester. It usually cannot be detected between 24 and 34 weeks of pregnancy unless there has been a disruption between the chorion and decidua
  - The test is a useful marker for impending membrane rupture within 7 to 14 days if the level increases to greater than 0.05 mcg/mL. The accuracy of fetal fibronectins decreased in the presence of lubricants, blood, recent intercourse, or cervical manipulation within previous 24 hours. Conversely, a negative fetal fibronectin test is a strong predictor that preterm labor in the next 2 weeks is unlikely. RKC pp812-813.

16. Define prolonged pregnancy.

- A pregnancy that continues past the end of the 42nd week of gestaton

17. What is the difference between labor induction and labor augmentation?

- **Induction**: stimulating contractions via medical or surgical means
- **Augmentation**: enhancing ineffective contractions after labor has begun
- **Indications**: prolonged gestation, prolonged premature rupture of the membranes, gestational hypertension, cardiac disease, renal disease, chorioamnionitis, dystocia, intrauterine fetal demise, isoimmunization, and diabetes

18. What is the most common adverse effect of oxytocin?

- The most common adverse effect of oxytocin is **uterine hyperstimulation**, leading to fetal compromise and impaired oxygenation—**What would you see on the fetal monitor strip?**

19. When administering oxytocin what are the primary assessments that need to be made?

- Close monitoring of the uterus throughout labor
- Oxytocin has an antidiuretic effect resulting in decreased urine flow that may lead to water intoxication
    - Symptoms: headache and vomiting

20. What does VBAC stand for?

- **V**aginal **B**irth **A**fter **C**esarean What criteria are used to determine if a woman can attempt to have a VBAC? See ATI There is more than one criteria by the primary criteria is the type of incision. A horizontal incision is more likely tolerate the stress of the contractions where as a vertical incision that goes up towards the top of the already enlarged and stretched uterus can get stretched even more and is more likely to rupture.

21. What would you do if you encounter an umbilical cord prolapse?

- Prompt recognition—call for assistance but don't leave the patient.
- Measures to relieve compression
- Change the woman's position to a modified Sims, Trendelenburg, or Knee-chest
- See ATI—place sterile gloved hand into vaginal with two fingers attempting to push the fetal presenting part up off the cord.
- DO NOT ATTEMP TO REPLACE THE CORD IN THE UTERUS
- Monitor FHR, maintain bedrest, and oxygen if needed

REMEMBER THAT COMPRESSION ON THE CORD WITH CORD PROLAPSE CAN CAUSE LACK OF OXYGEN TO THE INFANT---FETAL DEATH.

22. What is a typical sign of uterine rupture?

- Onset marked by **sudden fetal bradycardia**

23. Why might an amnioinfusion be done?

- **Indications**
    - Severe variable decelerations due to cord compression
    - Oligohydramnios due to placental insufficiency
    - Post-maturity or rupture of membranes
    - Preterm labor with premature rupture of membranes
    - Thick meconium fluid

24. What are the indications for use of forceps or vacuum extractor?

- **Indications**: prolonged second stage of labor, non-reassuring FHR pattern, failure of presenting part to fully rotate and descend, limited sensation or inability to push effectively, presumed fetal jeopardy or fetal distress, maternal heart disease, acute pulmonary edema, intrapartum infection, maternal fatigue, infection

25. What are the leading indications for cesarean birth?

- Maternal, fetal, or placental factors that interfere with a vaginal birth
  - MALPRESENTATION- particularly breech presentation
  - dystocia
  - fetal distress—non-reassuring fetal heart tones
  - cephalopelvic disproportion
  - Placental abnormalities
  - Placenta previa
  - Abruptio placentae
  - High-risk pregnancy
  - Positive HIV status
  - Hypertensive disorders such as preeclampsia and eclampsia
  - Diabetes mellitus
  - Active genital herpes lesions
  - Previous cesarean birth
  - Multiple gestations
  - Umbilical cord prolapse

Last but not least: You need to review the FHR monitoring PPT and the RKC and ATI book. What you need to know is how to interpret the abnormal variability and deceleration patterns and what that means in terms of your response as a nurse. There is only one strip on the exam but multiple scenarios describing the decelerations by when it starts and ends, how deep it goes, what it looks like, and then what this means in terms of cause so you know what the nurse should do in each scenario.