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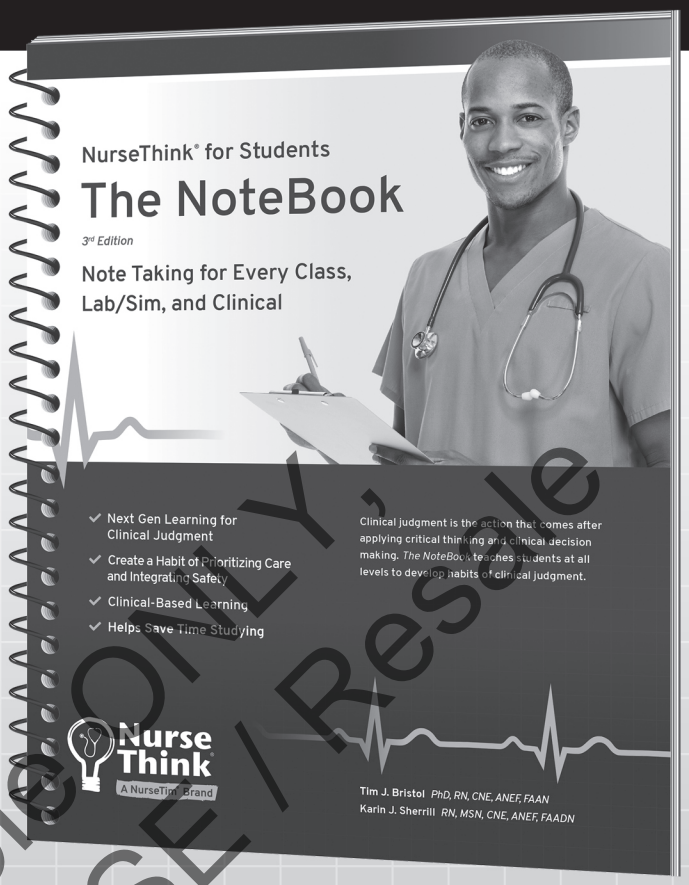

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NCLEX-RN® Client Needs

Priority Exemplars that emphasize different parts of the NCLEX-RN®.

Pharmacological and Parenteral

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Physiological Adaptation

About the Authors

Dr. Judith W. Herrman is a nurse, educator, and researcher with a passion for learning and teaching. Judy's experiences in and love for nursing education provide context for work in creative teaching strategies, curriculum development, evaluation and test development, building positive workplaces, preparing for NCLEX®, and applying the principles of brain science to clinical decision-making. Judy's research interests include healthy decision-making across the lifespan, enhancing sexual health and promoting access to sexual education and healthcare, and advocacy for marginalized populations, especially children with health issues, young parents, and vulnerable youth. Judy has published widely and is excited that the team's hard work on these resources may help students join the great profession of nursing!

Dr. Tim Bristol is a nurse educator from Minneapolis, Minnesota. He has taught students at all levels to include LPN, ADN, BSN, MSN, and PhD. Through NCLEX® reviews and coaching, NurseTim® brings clinical judgment to life for students and faculty at all levels. He works with programs and organizations internationally on everything from student remediation and retention to exams and curricular success. He helps ensure that clinical is the focus of everything that happens in nursing education. He also enjoys working internationally and leads many service learning trips each year with his wife and four children. Over the past 12 years his family has led over 600 travelers abroad. These trips focus on nursing and community empowerment in developing countries.

Dr. Winsome Stephenson is a Nurse Educator whose expertise includes test item writing, NCLEX® student success, use of transformative learning strategies in the classroom and faculty development. She has taught students at both undergraduate and graduate levels and trained faculty on all levels. Dr. Stephenson is passionate about nursing education and ensuring that the next generation of nurses are fully trained to use clinical judgment in the provision of quality patient care. She believes in giving back to the community and has coordinated a health ministry to serve the health needs of congregants in her church. She has served as a community member on the IRB of two local hospitals and in her free time, she enjoys travelling and spending time with her family.

Acknowledgements

I would like to thank the entire Nurse Tim, Inc. team, especially Tim and Winsome, for their tireless work and sincere desire to assist nursing students become nurses! I wish to thank Dan, my husband, for his unwavering support, love, and encouragement. I would also like to acknowledge the energy, enthusiasm, and inspiration that comes from our three sons, their three wives, and our six fantastic grandchildren! They bring joy to our lives and provide hope for the future!

- Dr. Judith W. Herrman

My family sacrificed so much for me to be able to be a part of this book. So I must first and foremost say thank you to my best friend Christina and my four amazing children. Then I have to acknowledge our team to include Judy, Winsome, Rebecca, Kristofer, Kelly, Cory, Shayla, Mitch, Sharon and the army of contributors, item writers, and reviewers. We wanted this book to change the way students study and that could only happen with the best team in the world. I have the pleasure of being on that team.

- Dr. Tim Bristol

I would like to express sincere gratitude to Tim and Judy for the opportunity to co-author this book. My thanks also to those who provided support and constructive feedback. I would be remiss not to extend my profound thanks to the contributors and reviewers who took the time to review the chapters. Finally, thank you to all the many students and faculty who will purchase, and be benefited by this book.

-Dr. Winsome Stephenson

CHAPTER

5

Sexuality

Reproduction / Sexuality

This chapter addresses pregnancy, labor, and delivery along with conditions that impair or interfere with sexuality and reproduction. Sexuality is a basic human trait and need. Reproduction is a routine process in which nurses support pregnancy, labor, and delivery.

Nurses play a significant role in teaching and supporting clients during the reproductive cycle and in conditions that interfere or impair reproduction or sexual functioning.

Study Hint: Remember, the birth process often needs little intervention. But nurses need to know their role when working with clients who need assistance!

Study Hint: (GTPAL)

- Gravida: # of pregnancies
- Term pregnancy: 37 weeks or greater
- Preterm pregnancy: 20 weeks to 36 6/7 weeks
- Abortion/miscarriage: Stillborn
- Living: Living at time of birth

Priority Exemplars:

- Hypertensive disorders of pregnancy
- Newborn care
- Contraception
- Erectile dysfunction
- Pregnancy
- Abortion/miscarriage
- Preterm labor
- Stages of labor
- Dystocia
- Placental abruption
- Placenta previa
- Postpartum hemorrhage
- Breastfeeding
- STI: Chlamydia
- STI: Human papillomavirus
- STI: Syphilis

Go To Clinical Case 1

You are a registered nurse working in the emergency department. A client bursts into the triage area. The woman is noticeably pregnant and being supported by a man and the taxi driver that drove them to the agency. The woman reports that she is dizzy, seeing double, and has severe upper abdominal pain. You attempt to escort her to a wheelchair and the woman begins to have a seizure. She is incontinent of urine and is having rhythmic, tonic-clonic movements in her upper and lower extremities. The client is safely lowered to the floor and the seizure lasts 20 seconds.

The client is moved to a stretcher after the seizure and the client's vital signs are 99°F—120-22-166/122. Baseline blood pressure is not available. The client is sleepy but alert. The client is asking what happened and about her baby. The client is put on a fetal monitor and the fetus's heart rate is strong at 130-140 bpm with good variation. She is not contracting at this time. Vaginal examination reveals that she is one fingertip dilated without effacement. The client states she is 8 months pregnant. She did not receive prenatal care because she newly immigrated to this country and does not have health insurance. She states her eyes and hands have been swollen and that she has been feeling very tired lately. The client is admitted to the high-risk pregnancy unit. Her partner is at her side.

NurseThink® Time

Using the NurseThink® system, complete the priorities. Check your answers designated by in the Hypertensive disorders of pregnancy Priority Exemplar.

Priority Assessments or Cues

1.

2.

3.

Priority Laboratory Tests/Diagnostics

1.

2.

3.

Priority Interventions or Actions

1.

2.

3.

Priority Potential & Actual Complications

1.

2.

3.

Priority Nursing Implications

1.

2.

3.

Priority Medications

1.

2.

3.

Priority Education/Discharge Issues

1.

2.

3.

Pathophysiology/Description

- Hypertension occurs in 5-10% of all pregnancies
  - Gestational hypertension is defined as increased blood pressure without proteinuria after 20 weeks gestation; BP >140/90 mmHg , 2 readings 4 hours apart, generally resolves within 12 weeks postpartum
  - Preeclampsia (pregnancy-induced hypertension—PIH) is hypertension after 20 weeks gestation, may or may not include proteinuria. Clients may have no previous history of hypertension and may occur postpartum. May include thrombocytopenia, liver dysfunction, renal insufficiency, pulmonary edema, and cerebral or visual changes
  - Eclampsia is seizures and/or coma not due to other causes
  - Chronic hypertension is when hypertension exists before pregnancy
  - Superimposed preeclampsia is chronic hypertension with preeclampsia
- Pathophysiology includes changes in placental perfusion, vasospasm, decreased liver and kidney perfusion, cerebral edema, central nervous system irritability
- Major cause of morbidity and mortality by uteroplacental insufficiency and preterm birth
- Risk factors include primipara, < 19 or > 40 years, preeclampsia in previous pregnancy, African American descent, multifetal gestation, maternal infection, preexisting chronic hypertension, renal disorders, diabetes mellitus, obesity, connective tissue disorders/systemic lupus erythematosus, chronic hypertension increases risk of eclampsia, pregnancy onset of snoring
- May be associated with HELLP defined as hemolysis, elevated liver enzymes, low platelets (may occur without blood pressure changes); diagnosed third trimester; often misdiagnosed; high rate of maternal death and poor perinatal outcomes

Priority Assessments or Cues

- Assess blood pressure, compare to baseline values. BP 30 mmHg over systolic or diastolic baseline are diagnostic for preeclampsia
- Ask about symptoms: Headache, epigastric pain, visual changes (scotoma, photophobia, double vision), dizziness

Priority Laboratory Tests/Diagnostics

- 24-hour urine collection for protein most accurate assessment. Value > 300 mg in 24 hours contributes to diagnosis
- Urine dipstick of +1 also noted (may be less reliable)
- Platelets < 100,000/mm^3
- Liver enzymes may be twice normal value
- Serum creatinine > 1.1 mg/dL or doubling of the normal serum creatine, prolonged creatinine clearance

Priority Interventions or Actions

- Prevention for high-risk clients includes low dose aspirin therapy
- All clients: Monitor blood pressure and for seizures
- Maintain a restful and calming environment
- Preeclampsia
  - Monitor fetal and maternal health status—fetal monitoring
  - Assess for growth restriction
  - <37 weeks and a BP <160/110—mother and fetus are monitored and mother kept on bed rest
  - > 37 weeks—vaginal induction/cervical ripening
- Chronic hypertension/gestational hypertension
  - Administer medications to decrease blood pressure (Methyldopa—safest with breastfeeding)
- Eclampsia
  - Observe for warning symptoms-headache, blurred vision, epigastric/right upper quadrant pain, changes in level of consciousness
  - Seizures or convulsions
    - Stay with client/call for help
    - Assess fetal heart tones/heart rate patterns as able
    - Raise and pad side rails
    - Maintain a patent airway-turn and position, prevent aspiration
    - Assess pulse oximetry, oxygen by mask as able/needed
    - Assess blood pressure
    - Monitor and document seizure (tonic/clonic) and other signs
    - Obtain IV access with a large bore needle
    - Administer magnesium sulfate
    - Prepare for delivery as indicated
  - After seizure
    - Assess for hypotension, halted respirations, twitching, amnesia, post-ictal sleep, and potential for falls after sleep
    - Assess for stability
    - Assess fetal heart tones/uterine activity/cervical status
    - Prepare for delivery as indicated

Clinical Hint

Seizure precautions: Nurses often need to implement precautions to keep clients safe during a seizure. Precautions include: Raising side rails, padding side rails, having oxygen and suction at the bedside, ensure loose clothing, seizure record at the bedside.

Priority Potential & Actual Complications

- Severe hypertension
- Eclampsia
- Pulmonary edema
- Fetal demise/decline
- Placental abruption
- Disseminated intravascular coagulation (DIC)
- Stroke

Priority Nursing Implications

- Assist the client in dealing with the stress of pregnancy and high-risk status, may feel guilt over lifestyle issues, negative outcomes, or fear related to outcomes
- Create a non-stimulating/low-stress environment—lower lights, maintain quiet, keep away from high activity on the unit or at home
- Assess for risk of seizures. Maintain seizure precautions including suction and oxygen at bedside, padded side rails, call button available
- Have emergency medication and emergency birth pack available

Priority Medications

- betamethasone
  - Steroid to mature fetal lungs in the event of an emergency or early delivery
  - Given IM every 24 hours times two
  - Works 24 hours after first dose for 7 days
- nifedipine
  - Calcium channel blocker/antihypertensive
  - To decrease blood pressure
  - Avoid with magnesium sulfate
  - May cause a headache, flushing of skin, may slow or interfere with labor
  - Must be delivered slowly
- methyldopa
  - Antihypertensive
  - To decrease blood pressure
  - Watch for CNS sedation
  - May cause drug-induced fever
  - Monitor fetal heart rate
- magnesium sulfate
  - Magnesium supplement/prevent seizures
  - IV piggyback via IV pump
  - IM avoided due to pain or give with anesthetic
  - Assess serum magnesium levels (toxic level will be greater than 4 mEq/L)
  - Assess for magnesium toxicity/serum hypermagnesemia. Signs include absence of patellar deep tendon reflexes, decreased level of consciousness, low urine output, bradypnea, and cardiac dysrhythmias
  - Antidote for hypermagnesemia is calcium gluconate
  - May be given for 24-48 hours postpartum

Priority Education/Discharge Issues

- Home management for hypertension (BP > 150/100) as long as no protein in urine, normal platelets, normal liver enzymes
  - Teach about BP and urine monitoring
  - When to call MD, symptoms to report, and routine appointments
  - Tracking of fetal activity by assessing daily fetal movement count-kick counts
  - Maintain partial bed rest, means to avoid venous thrombosis, and types of gentle exercise
  - Diversional activities, maintaining calm, and stress management
  - Encourage side-lying position
  - Diet should be regular with increased water and fiber, decreased caffeine, decreased sodium, and no tobacco or alcohol
- Provide education about blood pressure management and lifestyle patterns that may contribute to preeclampsia, chronic/gestational/superimposed hypertension, and eclampsia

Go To Clinical Answers

Text designated by are the top answers for the Go To Clinical related to Hypertensive disorders of pregnancy.

Next Gen Clinical Judgment

When studying hypertensive disorders, it often helps for you to pause and create a set of vitals that would be consistent for a given scenario. Try to create a set of vitals for a client struggling with pregnancy-induced hypertension (PIH). Then watch the Concepts at Work: Sexuality video in the online resources. How did you do?
Nursethink.com/NCLEX-RN-book/

Go To Clinical Case 2

A 38-year-old woman enters triage indicating that she is 39 weeks pregnant and has been in labor for several hours. This is her fourth child and, when examined, she is 8 cm dilated and 100% effaced.

While completing the admission interview, the mother exclaims that "I have to push, the baby is coming." When she is transferred to a stretcher the baby is crowning and the baby is delivered rapidly.

Some meconium is noted in the amniotic fluid. The baby is placed on the woman's abdomen and the woman/infant are rushed to the labor/delivery/postpartum room.

The nurse anticipates the newborn's needs based on this precipitous delivery. The baby boy is 7 lb. 12 oz. and is 21 inches long. The child's APGAR is 7 at one minute, 9 at five minutes (acrocyanosis persists). The client's vital signs are 95.2°F—152-48-82/40. The infant's respirations are rapid and shallow, with some crackles and excessive mucus noted. The infant is noted to have tremoring of hands, arms, and legs. The mother plans to breastfeed and is Rh negative. Her husband, who is the father of all her children, is Rh positive. The nurse plans the care of the newborn.

NurseThink® Time

Using the NurseThink® system, complete the priorities. Check your answers designated by in the Newborn care Priority Exemplar.

Priority Assessments or Cues

1.

2.

3.

Priority Laboratory Tests/Diagnostics

1.

2.

3.

Priority Interventions or Actions

1.

2.

3.

Priority Potential & Actual Complications

1.

2.

3.

Priority Nursing Implications

1.

2.

3.

Priority Medications

1.

2.

3.

Priority Education/Discharge Issues

1.

2.

3.

Pathophysiology/Description

- Newborn/neonatal period is initial birth to one month of age
- Care of the newborn includes assessments and assisting with adaptation to extrauterine environment

Priority Assessments or Cues

- Assess for spontaneous respirations and describe cry (lusty, high-pitched, weak)
- Assess APGAR score is a 10 point scale, each of 5 criteria given a 0, 1, or 2—at 1 and 5 minutes (10 minutes if score indicates)
  - Heart rate
  - Respiratory rate and effort
  - Muscle tone
  - Reflex irritability
  - Skin color
- Assess general appearance including respiratory effort and for signs of distress, overt anomalies or trauma, level of alertness
- Assess vital signs(axillary temperature), body weight, length, and head circumference
- Initiate or observe Ballard scale for gestational assessment based on neuromuscular maturity (posture, range of motion, recoil, limberness) and physical maturity (breast, genitalia, palmar wrinkling, lanugo, ear mobility, eye opening)
- Assess periods of reactivity at birth to 30 minutes and 2 to 8 hours after birth (between a period of decreased responsiveness/sleep)
- Initial physical assessment
  - Assess head—sutures, fontanels, molding, masses (caput succedaneum, cephalohematoma), subgaleal hemorrhage
  - Eyes—symmetry, pupils, tracking
  - Ears—symmetry, height compared to eyes
  - Mouth—intactness of soft and hard palates, tongue (connection), ability to suck/gag/swallow
  - Neck—range of motion, midline, torticollis (contraction of one side)
  - Chest—respiratory effort, adaptation to extrauterine environment, patency of nares (newborns breathe mostly through the nose), coughing and sneezing to clear airway, symmetry of thorax/barrel chest, nipples, clavicles for fractures; infant heart sounds
  - Skin—vernix caseosa (cheese-like substance), lanugo (downy hair), milia (small pustules), peeling skin, skin turgor, color (central cyanosis, acrocyanosis, plethoric [deep red color]), lesions, bruising, petechiae, birthmarks Mongolian spots, nevus vasculosus [strawberry mark], nevus flammeus [port-wine stain], telangiectatic nevi [stork bites], forceps or vacuum marks, Harlequin's sign (transient unilateral erythema of newborn, usually benign)
- Assess for jaundice/bilirubin (normal < 5.2 mg/dL)
  - Physiological in 60% of newborns
  - Pathological appears within the first 24 hours and requires treatment, if untreated-leads to kernicterus/ acute encephalopathy
  - Breastfeeding 2-5 days, related to low milk supply, encourage frequent feeding
  - Breastmilk 5-10 days
  - Measured by transcutaneous bilirubinometers/serum levels
  - Treatment with phototherapy beds or lights (values at which treatment is initiated vary)
- Abdomen—assess umbilical cord (3 vessels—2 arteries, one vein), bleeding, cord site for infection, umbilical hernia, symmetry, bowel sounds, distention
- Genital/Anus—assess patency of anus, labia (pseudomenstruation, smegma), penis/scrotum: placement of meatus (hypospadius, epispadius), for hernia, descent of testes, for void of urine in first 24 hours (uric acid crystals may produce a rust colored urine), for meconium (black/ green jelly-like pasty stool)
- Spine—assess tone (hypotonicity/hypertonicity), hair tufts or dimples, neonates should have some head control, movement of all extremities
- Hips—for developmental dysplasia of the hip (no clicks when abducting hips)
- Assess for hypoglycemia—jitteriness, tremors—treat/ prevent with early feeding
- Reflexes
  - Sucking/rooting
  - Swallowing
  - Tonic neck/fencing
  - Palmar/plantar grasp
  - Moro
  - Startle
  - Pull-to-sit response
  - Babinski
  - Stepping/walking
  - Crawling

Priority Laboratory Tests/Diagnostics

- Audiometry screening
- CBC-hemoglobin/hematocrit
- Serum glucose level
- Serum bilirubin/correlate with transcutaneous bilirubinometer
- Arterial blood gases (if warranted)
- Universal newborn screening
  - Varies based on region and state law
  - Many include screening for sickle cell anemia, phenylketonuria, galactosemia, severe combined immunodeficiency—heel sticks
  - Critical congenital heart disease screen-via pulse oximetry
- Culture if infections are suspected

Priority Interventions or Actions

- Results of APGAR if 8-10 (no intervention, supportive care), 4-7 (stimulate the infant, backrub, provide oxygen), 0-3 (full resuscitation)
- Suction mouth and then nares with bulb syringe
- Dry, stimulate, and wrap infant, place cap on head (need to maintain/support thermoregulation—avoid cold stress due to lack of brown fat—infants generate heat via non-shivering thermogenesis)
- Avoid hyperthermia because of neonates' immature sweat gland function
- Initiate skin-to-skin contact or breastfeeding as soon as feasible, if not feasible, place infant in a radiant warmer
- Encourage parental bonding
- Follow agency policy for identification-wrist/ankle bands, foot and hand printing, matching ID bands

Priority Potential & Actual Complications

- Respiratory distress syndrome
- Meconium aspiration syndrome
- Bronchopulmonary dysplasia
- Intraventricular hemorrhage
- Retinopathy of prematurity
- Necrotizing enterocolitis
- Hyperbilirubinemia
- Erythroblastosis fetalis
- Fetal alcohol spectrum disorders
- Addiction/neonatal abstinence syndrome
- Vertical transmission of HIV
- Hypoglycemia
- Transient tachypnea of the newborn

Priority Nursing Implications

- In cases of infant or maternal change in condition, nurses provide support to partners, support persons, and mothers
- Ensure infant safety and identify, protection from abduction
- Gestational age including assess preterm (before 37 weeks), small for gestational age, large for gestational age
- Support early attachment, skin-to-skin (use overbed warmer as needed) contact, and feeding (breast or bottle)
- Support parents' choice related to circumcision

Priority Medications

- phytonadione
  - Vitamin K injection IM vastus lateralis injected in the delivery room
  - Sterile gut of the newborn-bacteria does not produce coagulants
- hepatitis B vaccine
  - Given IM prior to newborn discharge
  - If mother is Hep B antigen positive, administer hepatitis B immune globulin within 12 hours of birth along with immunization. Provide injections in separate thighs
  - Document on immunization record, obtain parental consent
- erythromycin
  - Eye prophylaxis
  - Prevent ophthalmia neonatorum-gonorrhea/chlamydia (not as effective treating chlamydia—treated with oral erythromycin)
  - Allow bonding before ointments
  - Required by law

Priority Education/Discharge Issues

- Teach parents about cord care-check agency protocol for cleaning, antibiotics for infection
- Teach parents how to manage circumcision or care of uncircumcised penis
- Teach parents about preferred method of feeding either formula or breastfeeding
- Teach parents infant care including bathing, dressing, nail care, diaper changes, consoling infant, bonding, infant stimulation
- Discuss maternal and infant return to healthcare providers
- Teach about infant behaviors including consolability, cuddliness, irritability, crying, use of non-nutritive sucking (pacifiers), and cues
- Teach infant safety including car seats, safe sleep ("back-to-sleep," in own bed, without stuffed animals or pads, "tummy time" to prevent plagiocephaly (abnormal head shape), holding and carrying, cardiopulmonary resuscitation and management of airway obstruction
- Teach parents to bathe infant in warm water (test with elbow), dress infant appropriate for weather, and to avoid actions that cause hyper/hypothermia.

Go To Clinical Answers

Text designated by are the top answers for the Go To Clinical related to Newborn care.

Pathophysiology/Description

- Many contraceptive methods are available to clients who choose to prevent or delay childbearing. Cultural, religious, and personal preferences will influence method choice
- Methods are largely described as barrier methods (may be used by women and men) and hormonal methods (largely used by women)
- Contraceptive methods vary in effectiveness, cost, reversibility, effort needed, and use of hormones
- Contraceptive methods require varying levels of capacity for adherence to a schedule, association with sexual activity, participation of sexual partners, ability for discretion, and comfort with body
- Male and female condoms, along with the use of barrier dental dams, are able to prevent exposure to sexually transmitted infections
- Cost may be a factor for some clients
- Hormonal contraceptives may be indicated to treat menstrual irregularities

Priority Assessments or Cues

- Assess blood pressure (hormonal methods are contraindicated/used cautiously with hypertension). Assess blood pressure frequently while on hormonal birth control
- Assess client's weight (some methods contraindicated with obesity)
- Assess desire to prevent pregnancy, level of motivation, and knowledge level
- Assess health status and presence of pre-existing conditions, including thromboembolic disease, history of estrogen feeding cancers, hypertension, cardiac disease, and pregnancy, that contraindicate some hormonal contraceptives
- Assess woman's lifestyle, habits, and risk behaviors, including tobacco smoking and multiple sexual partners
- Assess client's current medications (antibiotics may decrease the effectiveness of oral contraceptives, hormonal methods may interact with anticoagulants)

Priority Laboratory Tests/Diagnostics

- Screen for sexually transmitted infections based on age, symptoms, risk factors, and sexual history

Priority Interventions or Actions

- Many healthcare providers now prescribe oral and injectable contraception without a vaginal examination, but clients are encouraged to have routine screenings, including clinical breast examinations, based on age, health history, and risk factors
- Nursing interventions with contraception focus on teaching about self-administration, side effects, adverse reactions, and when to consult healthcare providers

Priority Potential & Actual Complications

- Clients with a latex allergy may react to latex condoms
- Complications differ based on method (intrauterine devices complications may include ectopic pregnancy, uterine perforation) and implanted contraceptive rods may migrate
- Complications differ based on client health history (oral contraceptives may increase blood glucose levels in clients with type 1 diabetes)
- Non-barrier methods increase the risk for sexually transmitted infections

Priority Nursing Implications

- Nurses need to ensure that contraceptive methods match the client's needs and that the client is able to safely adhere to the method or medication regimen
- Assist client to develop methods for reminders (phone alarm for daily pills, calendar for injection every 3 months, etc.)
- Need to ensure client's knowledge of, comfort level with, and ability to access a birth control method
- Ensure that the method's effectiveness coincides with client's desire to prevent pregnancy and sexually transmitted infections
- Encourage clients using hormonal methods to wear condoms with all sexual activity
- Assess each client for potential birth control sabotage, reproductive coercion, or intimate partner violence

Priority Education/Discharge Issues

- Ensure that clients are aware that they need to use back up contraception during initial period of starting contraception
- Teach clients what to do if a pill or injection is missed (depends upon method) and to use backup method of contraception until birth control levels are re-established
- Teach client to conduct self-breast exams monthly
- Make sure clients are aware of need to have blood pressure assessed and for follow-up
- Instruct client on method-specific recommendations related to cessation of method if they desire to become pregnant (for example, the client is recommended to be off of oral contraceptives for one to two months prior to attempting to become pregnant)

Next Gen Clinical Judgment

Helping clients may be about helping them find resources. Find an app on your phone that you would recommend to a client needing resources related to contraception.

Pathophysiology/Description

- Inability to attain and/or sustain an erection to engage in satisfying sexual activity
- More than 10 million men affected, 50% of men 40-70 years have some level of ED
- Lack of blood flow (vascular impairment) associated with ED
- May be from primary or secondary causations including recreational drug use, alcohol use, smoking, illnesses, or medications (antihypertensives, antilipemics, sedatives, others)
- Causes may also include vascular (hypertension, peripheral vascular disease), endocrine (diabetes, obesity, reduced testosterone level), genitourinary (prostatitis, renal failure, history of a radical prostatectomy), neurological (Parkinson's, stroke, trauma/spinal cord injury, tumors), psychological (depression, stress, fear/anxiety)
- May occur at any age, more prevalent as men age

Priority Assessments or Cues

- Ask client about ability to attain and sustain an erection
- Ask about frequency and onset and may be episodic, may be gradual onset (illness/medications), or may occur suddenly (fear, anxiety, or emotionally related)
- Ask about emotional impact of ED on intimate relationships
- Conduct a thorough medical, sexual, and psychosocial assessment; screening may include erectile function, orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction with sexual experiences
- Assess genitalia for lesions, masses, changes in structure

Priority Laboratory Tests/Diagnostics

- Medical history profile to include serum glucose, lipid profile, complete blood count
- Hormone levels (testosterone, prolactin, luteinizing hormone, thyroid hormone)
- Prostate specific antigen levels
- Non-invasive testing include nocturnal penile tumescence/rigidity testing, penile blood flow/angiography, and ultrasound

Priority Interventions or Actions

- Address causative factors that are modifiable-change medications, manage illnesses, counseling
- Medications are the most common treatment
- Vacuum constriction device (VCD)
- Penile implants
- Intraurethral medication pellets
- Intracavernosal self-injection
- Sexual counseling

Priority Potential & Actual Complications

- Sexual dysfunction
- Impaired relationships
- Mental health issues-stress, depression
- Use of erectogenics with nitrates may cause hemodynamically significant hypotension/bradycardia, cardiopulmonary arrest

Priority Nursing Implications

- Ensure that clients have realistic expectations of treatment—if sensation or function were absent, ejaculation or tactile sensation may not be resumed
- Ensure client safety related to hypotension/dizziness with first doses of medication
- Ask all clients with chest pain about use of erectogenic medications

Priority Medications

- sildenafil/ tadalafil/ vardenafil
  - Relaxes smooth muscle and increases blood flow/ erectogenic
  - Take 30-60 minutes before anticipate intercourse
  - Do not take more than once per day
  - Potentiates hypotension with nitrates—should not be used with nitroglycerin
  - Side effects include headache, flushing, GI upset, and nasal congestion
  - Tadalafil may be safer with clients with cardiac history
  - All erectogenic drugs may cause priapism (sustained erection for 4 hours or more) and require medical attention
  - Alcohol should be avoided—increases hypotension

Priority Education/Discharge Issues

- Safe administration and use of erectogenic medications
- Refer clients for assistance with sexual communication with partners and counseling for clients and partners

Clinical Hint

Reinforce safety precautions—Do not take erectogenic drugs more than once per day, stay with prescribed dose, and do not take with nitrates.

Pathophysiology/Description

- Described as gestation (approximately 280 days) from fertilization to implantation to birth
- Nagele's rule—subtract 3 months and add seven days to the first day of the last menstrual period—add one year-yields date of delivery

Priority Assessments or Cues

- Pregnancy outcomes terminology
  - Gravidity—number of pregnancies (nulligravida-no pregnancies, multigravida-two or more pregnancies)
  - Parity—numbers of births (nullipara, primipara, multipara)
  - GTPAL—gravidity, term births, preterm births, abortions/miscarriages, living children
- Signs of pregnancy
  - Presumptive—amenorrhea, nausea/vomiting, breast changes, urinary frequency, quickening, fatigue, change in color of vaginal mucosa
  - Probable—uterine enlargement, Hegar's sign (softening of uterine segment), Goodell's sign (softening of cervix), Chadwick's sign (violet discoloration of the cervix), Ballottement (rebounding of uterus when fetus is unengaged), Braxton Hicks contractions, positive hCG
  - Positive—fetal heart tones, fetal movements, ultrasound confirmation
- Fundal height
  - From 18-30 weeks, fundal height = gestational age
- Maternal physical changes
  - Increase in circulating blood volume, physiological anemia of pregnancy, retention of sodium/water
  - Nausea and vomiting, constipation
  - Urinary frequency
  - Skin changes—linea nigra (dark line down abdomen), melasma (mask of pregnancy), striae gravidarum (stretch marks), vascular spider nevi, palmar erythema pruritis gravidarum
  - Increased lordosis, relaxed muscle tone, posture changes, carpal tunnel syndrome, tingling of hands and feet, diastasis recti abdominis (separation of abdominal muscles), syncope
  - Emotional changes—ambivalence, acceptance, emotional lability, body image changes, preparing emotionally for motherhood
- Assess the mother's history
  - Chronic or acute illness/disease and current health status (hypertension, diabetes, cardiac disease, asthma, rubella, other infections: STIs and HIV)
  - Assess family history
  - Assess reproductive history
  - Assess history of or risk for intimate partner violence
  - Assess for substance use or abuse/cigarette smoking
  - Assess risk associated with age (< 18 years, > 35 years)
  - Ask about genetic issues
  - Assess nutritional history
  - Assess use of medications, herbal therapies, and complementary/alternative therapies

Priority Laboratory Tests/Diagnostics

- Pregnancy test for human chorionic gonadotropin (hCG)-appears 8-10 days after conception-via blood, urine, or home urine testing (variations in accuracy of home tests)
- Blood type and Rh factor
- Rubella titer
- Hemoglobin/hematocrit/complete blood count
- Pap smear
- Cultures for STIs (gonorrhea, syphilis, HPV, Chlamydia, trichomoniasis, herpes simplex, HIV)
- Sickle cell screening as indicated
- Tuberculosis screening
- Hepatitis B titer
- Urinalysis and urine culture
- Ultrasounds—gestational age, fetal outlines, amniotic fluid volume, multiple fetuses (abdominal or transvaginal)
- Biophysical profile—assess fetal breathing movements, fetal movements, fetal tone, amniotic fluid volume, and fetal heart patterns
- Doppler blood flow analysis—blood flow in fetus, umbilical cord, and placenta
- Percutaneous umbilical blood sampling—needle aspiration of blood guided by ultrasound
- Alpha-fetoprotein screening—assesses for spina bifida and Down syndrome
- Lecithin-sphingomyelin (L/S ratio)—maturity of fetus
- DNA testing—assess for genetic abnormalities
- Chorionic villi sampling—assess for genetic abnormalities via villi in chorion
- Amniocentesis—aspiration of fluid between 15 and 20 weeks
- Kick counts—fetal movement counting and recording
- Fern test—microscopic slide test to ascertain if vaginal leakage is amniotic fluid
- Nitrazine test—assess pH of vaginal secretions—amniotic fluid is 7.0-7.5; vaginal secretions are 4.5-5.5
- Fetal-Fibronectin-cervical swab, assesses risk for preterm labor
- Non-stress test—for fetal well-being, assesses changes in heart rate as related to fetal movement
- Contraction stress test—for fetal well-being, assesses changes in heart rate as related contractions or simulated contractions
- Group B streptococcus—vaginal and rectal cultures at 35-37 weeks gestation

Priority Interventions or Actions

- Establish healthcare provider visit schedule—every 4 weeks until 32 weeks, every 2 weeks until 36 weeks, every week until delivery
- Nausea and vomiting—most in first trimester, elevated hCG levels, eat dry crackers, small/frequent meals, drinking liquids apart from meals, if unmanageable-hyperemesis gravidarum-treated with IV fluids or total parenteral nutrition (antiemetics with caution)
- Supine hypotension—side sleeping and caution during examination, change positions slowly, ensure safety
- Breast discomfort—wear a supportive bra, wash nipples carefully
- Fatigue/backache—rest periods, regular exercise, yoga, optimal hydration and nutrition
- Heartburn—tailor sitting, upright after meals, small/frequent meals
- Ankle edema—elevate legs, supportive hose, ankle exercises, sleep on side
- Varicose veins—supportive hose, elevate legs, move/exercise often
- Headaches—drink water, change positions slowly, snacks, cool cloth
- Hemorrhoids/constipation—sitz baths, high fiber foods/water, exercise
- Leg cramps—increase calcium intake, regular exercise, dorsiflex foot
- Shortness of breath—rest, sleep with HOB elevated, pace activities
- Pica—eating non-food substances, may result in anemia, nutrition counseling
- Anemia—ensure prenatal vitamins and, if prescribed, iron supplementation, take with vitamin C, nutrition counseling

Priority Potential & Actual Complications

- Hypertensive disorders/gestational hypertension
- Abortion/miscarriage/fetal demise
- Gestational diabetes and DIC
- Infection-TORCH-assess and manage
  - Toxoplasmosis
  - Other infections: HIV, HBV, STIs, Group B strep, pyelonephritis, UTI, tuberculosis
  - Rubella
  - Cytomegalovirus
  - Herpes simplex
- Ectopic pregnancy is implantation outside of uterus
- Hydatidiform mole is peripheral cells of fertilized ovum proliferate, may be benign or malignant-must be vacuum extracted, pregnancy not recommended for one year
- Incompetent cervix is treated with cervical cerclage

Priority Nursing Implications

- Nurses provide a key role in educating, counseling, and offering support to women during pregnancy
- Nurses may provide sexuality counseling. Pregnancy does not limit intercourse but may require position or activity changes, pregnant women may have decreased desire or body image changes that warrant teaching and discussion
- Pregnancy can offer challenges for women who are obese with complications in pregnancy, delivery, post-delivery
- Assess and intervene related to the emotional tasks of pregnancy including transitioning to motherhood/parenthood/fatherhood, changes in family dynamics, and dealing with body image changes
- Attend to needs of non-pregnant partners/co-mothers
- Assess and intervene with extended family adaptation including siblings, grandparents, etc.
- Counsel mothers that the expected weight gain in pregnancy is 25-35 pounds, increase to 300 kcal/day during pregnancy (may be based on pre-pregnancy BMI)

Priority Medications

- Prenatal vitamins
  - High iron may cause constipation
  - High in folic acid (preconceptual and prenatal recommended to prevent neural tube defects)
  - Taken throughout pregnancy and breastfeeding

Priority Education/Discharge Issues

- Provide education about the importance of nutrition and hydration during pregnancy—instruct to avoid high mercury fish (swordfish, tuna), raw or undercooked fish and meat (sushi), cold cuts, soft cheeses, raw eggs, uncooked batter (avoid salmonella, listeria)
- Provide instruction on expected physical and emotional changes of pregnancy, anticipatory guidance for pregnancy, labor, and delivery
- Teach about the prevention of urinary tract infections including fluid intake, frequent emptying of bladder, cranberry juice or capsules, Kegel exercises, hygiene
- Ensure attention to dental health including cleaning, examinations, and treatment, gingival health
- Explore birth plan and potential alternatives with client and family including care givers (physician, midwife, doula) and setting (hospital, birth center, home)
- Encourage exercise as tolerated. Mothers may continue exercises that they were accustomed to until later in pregnancy, not time to start a new exercise regimen; stop exercise if feel shortness of breath, dizzy, numbness, contractions, or vaginal bleeding
- Counsel client on avoidance of alcohol, unprescribed medications, cigarettes, and caffeine

Priority Medications

- Meperidine
  - Less respiratory depression than morphine
  - Rapid onset when administered IV
  - Causes neonatal depression-must be given prior to 1-4 hours from delivery
  - May be used after C-section
  - Have naloxone available
- Fentanyl
  - Fewer neonatal and maternal side effects and less respiratory depression
  - Short half-life, quick action and more frequent dosing
- Nalbuphine
  - Opioid agonist-antagonist
  - Less respiratory side effects for mother and fetus, causes sedation
  - Not with those addicted to opioids—stimulates withdrawal in mother and fetus
  - High ceiling medication (higher doses do not increase effect)
- Naloxone
  - Opioid antagonist
  - Administer if birth proceeds rapidly to address impact of narcotics
  - Pain will return with reversal of opioid
  - May delay breastfeeding
- Oxytocin
  - Encourage contraction/tone of uterus
  - 10-40 units/1000 lactated ringers or normal saline solution

Priority Education/Discharge Issues

- Assess parents and teach about baby care including feeding, bathing, diaper care, care of umbilicus, circumcision (if done), assessing for jaundice, and follow-up to pediatrician
- Postpartum use of copper intrauterine devices, progestin implants, and progestin-only birth control pills are optimal for first contraception when breastfeeding. Many sources recommend avoiding estrogen methods for 3-6 weeks postpartum in nursing mothers to ensure breast milk supply
- Provide mother with instructions on self-care including avoiding constipation, hygiene, sitz baths, resuming sexual activity, contraception, follow-up, nutrition, pain relief, and hydration
- Assess and refer for postpartum "blues"
- Assist with transition to parenting for co-mother, father/co-parent, grandparents, and siblings

Next Gen Clinical Judgment

Supine hypotension occurs when a pregnant woman lies on her back, causing pallor, dizziness, breathlessness, nausea, faintness, sweating, cool, clammy skin, and tachycardia. It is caused by uterine pressure on vena cava and aorta. The nurse quickly turns the client on her left side.

1. What would the client's vital signs be during the episode?
2. What would the client's vital signs be if the issue was resolved after turning the client?

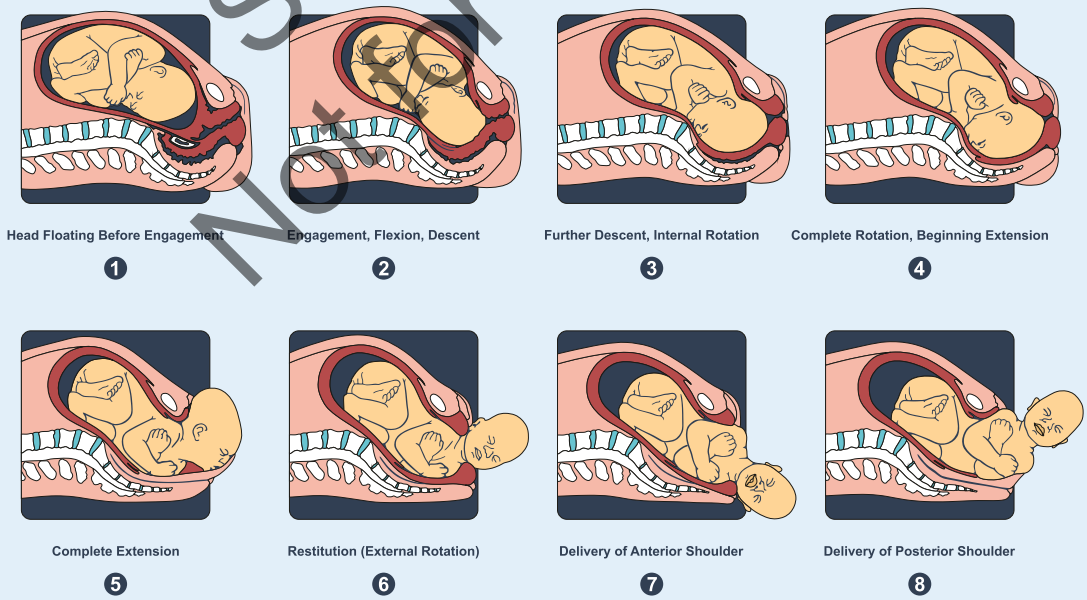

Image 5-1: When studying the stages of labor, make sure you fully understand all terms involved. What terms in this image are unfamiliar to you?

Pathophysiology/Description

- Dysfunctional, long, difficult, or abnormal labor
- Lack of progress of dilation, descent, and/or expulsion
  - 8-11% of labors, it is most common indication for C-section
- Related to alterations in function or parts of the birth process

1. Powers-ineffective contractions, pushing, or bearing down
   - Maternal fatigue or dehydration
   - Epidural or early analgesia
   - Overstimulation of uterus, uterine dysfunction, hypotonic (short, irregular, weak) or hypertonic (painful, frequent, and uncoordinated) uterine contractions
2. Passage-pelvis/soft tissue obstruction
   - Cephalopelvic disproportion
   - Fetopelvic dystocia
3. Passenger
   - Size, presentation
   - Multiparity
4. Position
   - Maternal body position during labor
   - Restriction of normal activity
5. Psychological
   - Negative past experiences and fear inhibit progress in labor
   - Childbirth preparation and support may allow childbirth to progress more quickly

- Risk factors include obesity, short stature, previous dystocia, malpresentation, malposition, advanced maternal age, infertility

Priority Assessments or Cues

- Assess vital signs for maternal tachycardia, monitor maternal temperature
- Assess fetal heart tones for fetal tachycardia and response to contractions and progress of labor
- Assess cervical effacement and dilation
- Assess contraction patterns
- Determine Bishop score which is maternal readiness for labor/induction, (dilation of cervix, effacement of cervix, consistency of cervix, position of cervix, and station of presenting part—each of 5 parameters are scored 0-3, 6 or more is readiness for labor induction)
- Assess fetal position and presentation—palpate using Leopold's maneuvers
- Assess intactness of amniotic membranes
- Assess for risk for dystocia throughout labor
- Assess maternal pain level and effectiveness of management strategies

Priority Laboratory Tests/Diagnostics

- Ultrasound
- Non-stress tests to ensure fetal well-being

Priority Interventions or Actions

- Encourage maternal rest between contractions to ensure energy to deal with labor, provide comfort measures, back rubs, position changes, and encourage ambulation and frequent voiding
- Assist mother in learning breathing and relaxation strategies
- Pain relief may allow client to deal with contractions and allow labor to progress
- Administer prophylactic antibiotics as prescribed
- Administer fluids as prescribed, assess intake and output
- Monitor color of amniotic fluid
- Assess for prolapse of cord after membranes break or are ruptured
- Internal or external version to turn a fetus in breech or shoulder presentation
- Cervical ripening
  - Chemical agents
  - Physical and mechanical methods-balloon catheter, hydroscopic dilators, amniotic membrane sweeping
  - Other methods-intercourse, nipple stimulation, walking
- Amniotomy—rupture of membranes
- Episiotomy—incision of posterior vagina/perineum
- Forceps assisted birth or vacuum assisted birth
- Cesarean birth with spinal, epidural, or general anesthesia

Priority Potential & Actual Complications

- Maternal dehydration and infection
- Fetal hypoxia, injury, asphyxia, or demise
- Post-vaginal delivery complications: infection, hemorrhage
- C-section complications include anesthesia reactions, hemorrhage, bowel/bladder injury, aspiration pneumonia, drug reaction, air embolism, amniotic embolism, urinary tract infections, wound hematoma/infection, dehiscence, bowel dysfunction, venous thrombosis. For the neonate, tachypnea, asphyxia, injuries, prematurity
- Complications associated with procedures (forceps, etc.)

Priority Nursing Implications

- Continually monitor mother's comfort, fetal heart tones, and mother's vital signs in response to procedures
- For mothers who are Rh negative, prepare to administer Rho (D) immune globulin

Priority Education/Discharge Issues

- Assist client and family/partners to review and debrief birth process, although it may not have replicated the birth plan
- Ensure that client gets the rest needed to heal and provide mothering, feeding, and affection to infant

Pathophysiology/Description

- Detachment of all or part of the placenta from the uterus after implantation
- Occurs between 20 weeks gestation and birth
- High level of morbidity and mortality
- Accounts for 1/3 of antepartum bleeding
- Risk factors include maternal hypertension (chronic or pregnancy-related), multiparity, cocaine use (vascular constriction), abdominal trauma/motor vehicle accident/domestic violence, cigarette smoking, history of abruptio or premature rupture of membranes with previous pregnancies

Priority Assessments or Cues

- Assess for risk factors
- Categorized on grade:
  - Grade 1 (10-20% abruption)—minimal bleeding, dark red blood, without tenderness, upper uterine placement
  - Grade 2 (20-50% abruption)—absent to moderate bleeding, dark red blood, increased uterine tone/rigidity without relaxation, pain, mild shock, potential DIC, may impact fetal heart tones
  - Grade 3 (>50% abruption)—absent to moderate bleeding, dark red blood, sudden, significant shock, board-like abdomen, agonizing pain, impacts fetal heart tones, may lead to fetal demise
- Assess maternal vital signs and fetal heart tones
- Assess fundal height

Priority Laboratory Tests/Diagnostics

- Abdominal and transvaginal ultrasound
- Coagulation studies
- Fetal non-stress test—assess heart rate patterns in response to fetal movement, uterine contractions, or stimulation
- Biophysical profile—real-time ultrasound assessing amniotic fluid volume, fetal movements, fetal heart tones, fetal breathing movements, and fetal muscle tone
- Type and cross match as needed prior to transfusion
- Kleihauer-Betke test—to detect fetal blood in maternal circulation

Priority Interventions or Actions

- From 20-34 weeks gestation, if there are normal fetal heart tones
  - Client is hospitalized and large-bore intravenous access and a urinary catheter placed to check urine output. Oxygen applied as needed. If there is mild bleeding bedrest is recommended. With no bleeding, bedrest with bathroom privileges is indicated
- > 34 weeks gestation
  - Client is hospitalized and managed as above.
  - Betamethasone is administered to mature the fetal lungs
- Large volume bleeding-above, plus:
  - Mom and fetus may be in jeopardy
  - Position Trendelenburg to decrease pressure on placenta or lateral if client hypovolemic
  - Birth-vaginal preferred, C-sections are not done with coagulopathy
- All cases: External fetal monitoring, assess for bleeding, monitor coagulation studies

Priority Potential & Actual Complications

- Fetal loss/demise
- Shock
- Couvelair uterus-decreased contractility
- Disseminated intravascular coagulation (DIC)
- Transplacental hemorrhage
- Renal failure
- Rh sensitization
- Intrauterine growth retardation
- Preterm birth

Priority Nursing Implications

- Nurse provide support and care in the event of fetal demise
- Provide emotional support to deal with stress of critically ill mother and/or fetus
- Provide pain management and replacement fluids

Priority Medications

- betamethasone
  - Enhance fetal lung maturity
  - Steroid

Priority Education/Discharge Issues

- Educate family as status of mother and fetus changes
- Provide support of client and infant if preterm
- Support family with an ill neonate and premature infant—neonatal intensive care unit and routines

Next Gen Clinical Judgment

Compare and contrast can help you save a lot of time studying. List 2 similarities and 2 differences in placental abruption and placenta previa.

Placenta previa

Pathophysiology/Description

- Placenta is implanted lower than optimal in the uterus—completely or partially/marginally covers the cervix
- Bleeding occurs with dilatation and effacement of the cervix
- Occurs in second and third trimester
- Risk factors include history of C-section, suction curettage, and previous placenta previa; advanced maternal age, multiparity, smoking, and living in a high altitude

Priority Assessments or Cues

- Ask about risk factors
- Assess vaginal bleeding—bright red with placenta previa
- Assess pain—bleeding with placenta previa is usually painless
- Assess abdomen—soft, relaxed and non-tender, fundal height may be greater than expected, often with breech/transverse/oblique lies
- Assess fetal heart tones—usually normal unless major deterioration
- Assess urine output

Priority Laboratory Tests/Diagnostics

- Transabdominal ultrasound (check for placental placement—if low than transvaginal)
- Transvaginal ultrasound—done with select cases, avoid uterine stimulation
- Blood studies—Hemoglobin/hematocrit, platelets, coagulation studies, type and screen/crossmatch
- Kleihauer-Betke test to detect fetal blood in maternal circulation

Priority Interventions or Actions

- Closely monitor vital signs and assess for a rapid hemorrhage
- Large bore intravenous access-prepare for fluids and blood products
- Position side-lying, bed rest
- Refrain from unneeded vaginal exams
- < 34 weeks-betamethasone to mature fetal lungs
- Without bleeding and < 36 weeks without labor, implement expectant management including limited activity, pelvic rest, assess for bleeding, nonstress test, biophysical profile-twice/week—if no bleeding for 48 hours/stable-may discharge to home with restrictions
- > 36 weeks and no major bleeding—active management including birth. If previa is within 2 cm of cervix, a C-section is indicated; > 2cm away, a vaginal birth is recommended

Priority Potential & Actual Complications

- Hemorrhage (bleeding may also occur postpartum)
- Abnormal placental attachment
- Hysterectomy
- C-section (with concurrent potential side effects)
- Fetal death secondary to preterm birth
- Fetal abnormalities/intrauterine growth retardation

Priority Nursing Implications

- Emotional support for potential stress associated with high-risk pregnancy
- Assess for degree of bleeding by estimating milliliters of blood loss of spots or stains

Priority Medications

- magnesium sulfate
  - Have available for tocolysis (relax uterus)
  - To prevent preterm delivery
  - Assess serum magnesium levels (4-7 mEq/L)
  - Assess for magnesium toxicity/serum hypermagnesemia. Signs include absence of patellar deep tendon reflexes, decreased level of consciousness, low urine output, bradypnea, and cardiac dysrhythmias
  - Antidote for hypermagnesemia is calcium gluconate
- beclomethasone
  - Steroids administered to mature fetal lungs
  - Given if risk of delivery prior to 34 weeks
- ferrous sulfate
  - Increase iron stores in the event of bleeding
  - May cause constipation and gastric upset

Priority Education/Discharge Issues

- If discharged, home care includes activities restrictions and client must have access to a phone, must be within 20 minutes of the hospital, must have access to transportation, and must have friends/family to assist in care. Clients are told to proceed to the hospital in the event of any vaginal bleeding
- Ensure that mothers understand precautions of pelvic rest-no exams, no sexual intercourse, limited transvaginal ultrasounds
- Counsel client about ways to keep busy and diversional activities—activity restrictions may be very boring and raise anxiety levels

Pathophysiology/Description

- Also known as *condylomata acuminata* or genital warts; common viral STI
- Estimate 50% of sexually active women will contract HPV
- Transmitted via sexual contact
- Highest rate in women 20-24 years of age
- HPV has 40 serotypes that are STIs
- May be more common in pregnant women, lesions may enlarge during pregnancy—may affect urination, defecation, mobility and fetal descent

Priority Assessments or Cues

- Ask client about itching, vaginal discharge, dyspareunia, pruritis, post-coital bleeding, or "bumps" on the labia (or urethra or scrotum in men)
- Assess for lesions around posterior part of the vaginal introitus, around the buttocks, vulva, vagina, anus, and cervix (lesions are 2-3 mm in diameter, 10-15 mm in height)—lesions occur singly or in clusters (cauliflower-like mass)
- Cervical lesions—flat topped papules 1-4 cm in diameter
- Lesions are brown to black and are painless but uncomfortable
- Lesions may resolve spontaneously without treatment but warts or cancer may develop later

Priority Laboratory Tests/Diagnostics

- Although viral screening is available, diagnosis is generally done based on history and physical examination
- Papanicolaou (Pap) test to rule out cervical cancer
- HPV-DNA in woman over 30 years
- Histologic evaluation of a biopsy of HPV
- If pregnant, cultures done weekly from 35 weeks until delivery

Priority Interventions or Actions

- No curative therapy exists
- Requires multiple treatments (see medications below)
- Cryotherapy, laser, electrocautery, cytoxic agents or surgical removal of lesions during pregnancy

Priority Potential & Actual Complications

- 2 types of HPV responsible for cervical cancers
- May impede a vaginal delivery and require a C-section
- Neonatal contraction of HPV
- Children may sustain epithelial tumors on the larynx

Priority Nursing Implications

- Because lesions may exist on the labia/vagina and anus, gloves should be changed to avoid cross-contamination
- Lesion care includes bathing with oatmeal solution, blow with cool hair dryer, keep the area clean and dry, cotton underwear/loose-fitting clothing
- Clients need to assume a healthy lifestyle, including rest, diet, and hydration to maximize immune function

Priority Medications

- imiquimod
  - Not during pregnancy
  - Immune response modifier
- trichloroacetic acid (TCA) and bichloroacetic acid (BCA)
  - Applied to warts
  - Use petroleum jelly to protect surrounding skin
  - May be painful upon application
- podofilox liquid gel
  - Apply to affected area BID x 3 days weekly x 3 to 4 weeks
  - Not for use in pregnancy/breastfeeding

Priority Education/Discharge Issues

- Teaching about transmission and the importance of prevention are critical since there is no cure
- HPV vaccines are recommended for 11 and 12-year-old girls and boys—protects against some HPV – three doses over 6 months
- Clients may be taught about barrier methods (male/female condoms) and the benefits of limiting numbers of sexual partners to prevent disease transmission
- Avoid sexual contact until lesions healed

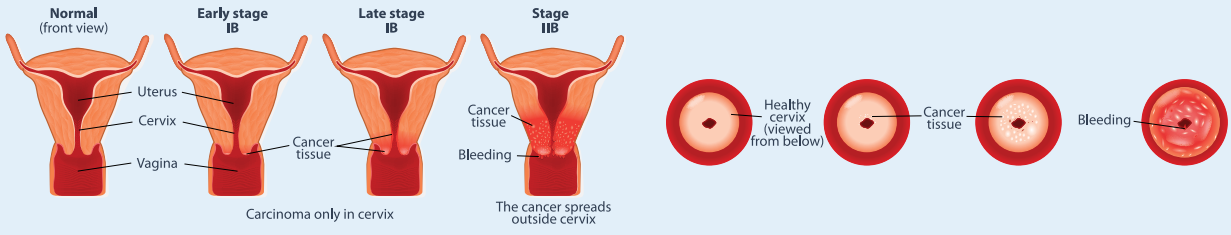

Image 5-2: As you study the stages of cervical cancer, how would you describe it to a patient with no medical or healthcare background?

1. **A 39-week pregnant client has been admitted to labor and delivery with a potential placenta previa. As the nurse prepares for the examination which nursing action in the client's exam is omitted?**
   1. Conducting the vaginal exam.
   2. Using Leopold's maneuvers.
   3. Placing the client on her side.
   4. Placing the client in a high Fowler's position.

2. **A nurse has just administered 2 mg of butorphanol intravenously to a laboring client. Which assessment changes should the nurse recognize as the most significant?**
   1. A neonatal respiratory rate of 40 breaths per minute after birth.
   2. Maternal nausea and vomiting.
   3. Maternal drowsiness.
   4. A decrease in the fetal heart rate's fluctuation from baseline.

3. **During the second day postpartum, a client states that she keeps crying for no apparent reason. What is the best response by the nurse?**
   1. "You are just tired from having a baby."
   2. "I am sure it will be better tomorrow."
   3. "This is called the postpartum or baby blues and it is very common."
   4. "You are showing signs of postpartum depression."

4. **Magnesium sulfate is being administered intravenously to a client for pregnancy-induced hypertension. Which assessment finding should the nurse identify as a complication of this treatment?**
   1. Deep tendon reflex of +2.
   2. Urine output of 70 mL/hour.
   3. Blood pressure of 148/94 mmHg.
   4. Respiratory rate of 10 bpm.

5. **A 14-week pregnant primigravida client reports that she is extremely nauseous. What is the best nursing response?**
   1. "You should try to avoid eating between meals."
   2. "This is reassuring that the pregnancy is developing."
   3. "You should try to eat a diet high in fat."
   4. "You should try to eat something bland every 2 -3 hours."

6. **A laboring client is being prepared for an emergency cesarean section. The nurse should immediately report which client data?**
   1. The client's membranes ruptured 2 hours ago.
   2. The client's platelets are 200,000/mcl.
   3. The client reported having a meal 4 hours ago.
   4. The client is RH negative.

7. **Which statement made by a client with human papillomavirus (HPV) should the nurse correct?**
   1. "There is a vaccination available for some strains of this virus."
   2. "There are not always symptoms associated with HPV."
   3. "I can only shed the virus when I have lesions present."
   4. "HPV can be transferred to an infant during delivery."

8. **A client delivered a baby 2 months ago. The significant other calls into the office to report that his wife is angry, confused, and having conversations with herself. What is the appropriate response that the nurse should make?**
   1. "Please take your wife to the emergency room for evaluation.".
   2. "Please bring your wife to the office for medication."
   3. "Your wife will require outpatient care."
   4. "Your wife will require behavioral therapy."

9. **An infant is breastfeeding for the first time. Which nursing statement will reduce the client's risk for skin breakdown?**
   1. "You should wear waterproof pads inside your bra."
   2. "You should insert your finger into the baby's mouth before removing the baby from your breast.".
   3. "You should breastfeed every four hours."
   4. "You should only breastfeed from one breast at each feeding and begin feeding with the opposite breast at the next feeding."

10. **A nurse is preparing to administer Rho (D) immune globulin to a client who delivered a baby yesterday. The nurse recognizes that the treatment is indicated by which client data?**
    1. The indirect Coombs test is negative.
    2. The mother is RH positive.
    3. The infant is RH negative.
    4. The indirect Coombs test is positive.

11. **A laboring client has been prescribed Nitrous Oxide for pain management during labor. To ensure that the client will not overdose, what action will the nurse make?**
    1. Instruct the client to self-administer the medication.
    2. Instruct the client to inhale every 30 minutes.
    3. Assess if the client is experiencing nausea.
    4. Ensure that the medication antidote is available.

12. **When should a nurse instruct a client in the second stage of labor to start pushing?**
    1. Once the infant's head is below the ischial spines.
    2. When the client feels the urge to push.
    3. When early decelerations are seen on the fetal monitor.
    4. When late decelerations are seen on the fetal monitor.

13. **A pregnant client is asking a nurse about how she should wear her seatbelt while in the car. Which should be the nurse's response?**
    1. "You should wear the lower lap belt across the middle of your abdomen and the upper shoulder belt above the top of your pregnant belly."
    2. "You should not wear the seatbelt because it can harm the baby if an accident occurs."
    3. "You should wear the lower lap belt below your belly and push the shoulder belt across your abdomen."
    4. "You should wear the lower belt below your belly and push the upper shoulder belt above your belly."

14. **A nurse is caring for a client with Chlamydia Trachomatis. Which statement is true about this infection?**
    1. It is the most commonly reported sexually transmitted infection in American women.
    2. It is more common in men than in women.
    3. The infection causes a thick white discharge.
    4. It is most common in women over 30 years of age.

15. **A nurse observes a client sitting and watching a visitor hold her baby. The client states that her son "looks just like his daddy". Which bonding behavior should the nurse document?**
    1. Mutuality.
    2. Claiming.
    3. En-Face position.
    4. Rhythm.

16. **A nurse documents assessment changes that occur in the integumentary system with pregnancy. Select all the pregnancy related integumentary changes below: Select all that apply.**
    1. Diastasis Recti.
    2. Striae Gravidarum.
    3. Linea Nigra.
    4. Lordosis.
    5. Melasma.

17. **A nurse is caring for a client in the fourth stage of labor. Which nursing interventions are appropriate for a client who is experiencing postpartum hemorrhage? Select all that apply.**
    1. Weigh the client's pads.
    2. Administer a uterotonic drug.
    3. Massage the client's fundus.
    4. Discontinue the client's indwelling urinary catheter.
    5. Express any clots in the uterus.

18. **Which nursing interventions for a non-breastfeeding postpartum client will hinder the milk production? Select all that apply.**
    1. The client is wearing a tight-fitting bra.
    2. The client is using warm compresses on her breasts.
    3. The client is wearing a loose-fitting bra.
    4. The client is using ice or cold compresses to her breasts.
    5. The client massages her breasts in the shower.

19. **Which nursing interventions are appropriate for a client with syphilis? Select all that apply.**
    1. Educate the client that this infection cannot be cured.
    2. Educate the client that there is a cure for syphilis at any stage.
    3. Assessment for a maculopapular rash on the palms, trunk or soles.
    4. Assess the client for adenopathy.
    5. Educate the client that this infection is caused by a fungus.

20. **A client is admitted to labor and delivery and experiences a gush of fluid coming from her vagina. In which order should the nurse implement these interventions? Rank order the responses.**
    1. Assess the color of the fluid.
    2. Assess the fluid with nitrazine paper.
    3. Assess the fetal heart rate.
    4. Document the assessment findings.
    5. Place the client on bedrest.

21. **Using the client chart exhibit below, determine which client information is accurate.**

    Today's date — 4/10
    Client — J. M.
    D.O.B — 2/28/1995
    G — 4 T-2 P-0 A-2 L-2
    Estimated date of delivery — 6/1
    Rubella titer 1:8

    1. The client may need a plan for childcare at home while she is in the hospital.
    2. The client will need a Rubella vaccination after the delivery.
    3. The client will need education on basic infant care.
    4. The client's baby is due in February.

22. **A prescription for nalbuphine hydrochloride 10 mg IV every 3 hours for pain has been ordered for a laboring client. The medication is available in 20 mg/mL vials. How many mL(s) should the nurse administer each dose?**

    _____

23. A prescription for methylergonovine 0.2 mg IM has been ordered for a client in stage three of labor who is hemorrhaging. Using the chart exhibit below, determine why this medication is contraindicated.

> Client — J.L.
> DOB — 4/2/1990
> Allergies — Penicillin
> G-5- T-4 P-0 A-0 L-4
> Vitals — T-98.6°F P-128 R-22 B/P-155/95
> Medications—Methyldopa 250 mg orally every 8 hours

1. The medication is contraindicated due to the multigravidity of the client.
2. The medication is contraindicated due to the client's drug allergy.
3. The medication is contraindicated due to the client's blood pressure.
4. The medication is contraindicated due to the client's heart rate.

24. A client delivers quickly, and a preheated infant warmer is not ready. The infant is placed on the cool surface. The nurse recognizes that the infant will lose heat by which mechanism?

1. Convection.
2. Conduction.
3. Evaporation.
4. Radiation.

25. A nurse is implementing a non-stress test on a 37-week pregnant client. She observes a baseline fetal heart rate of 140-145 bpm. The heart rate raises to 160 bpm for 3 different 20 second periods over 30 minutes. What is the next nursing action?

1. Administer a vibro-acoustic stimulation to the maternal abdomen.
2. Offer the client some juice to drink.
3. Instruct the client that you will have to continue to monitor her.
4. Remove the client from the fetal monitor.

26. A male client with a history of diabetes asks the nurse if his diabetes can affect his ability to get an erection. The correct nursing response is?

1. "Yes, diabetes can increase the risk of erectile dysfunction."
2. "No, there is no correlation between diabetes and erectile dysfunction."
3. "Diabetes can affect erectile dysfunction if you are taking insulin."
4. "Most causes of erectile dysfunction are not related to physical causes."

27. The fetal monitor of a laboring client shows that the fetal heart rate decreases after the peak of a contraction and does not recover until after the contraction is over. The nurse interprets this pattern as what type of fetal deceleration?

1. Early fetal deceleration.
2. Variable fetal deceleration.
3. Prolonged fetal deceleration.
4. Late fetal deceleration.

28. Which client would be appropriate to assign to a maternity nurse who has been pulled to the medical-surgical unit?

1. A client post-appendectomy.
2. A client after a cesarean section on a ventilator.
3. A postoperative client with chest tubes.
4. A client post-stroke receiving tissue plasminogen activator.

29. The nurse is counseling a client who is asking about sildenafil. The client wants to know how this works. What is the best response by the nurse?

1. Sildenafil helps to increase the production of male hormones.
2. The medication protects against sexually transmitted infections.
3. This medication prevents unintended pregnancy.
4. Sildenafil increases blood flow and sustains an erection.

30. A nurse is discussing body changes during menopause with a group of women. One woman asks why sexual intercourse is painful in menopause. Which is the best response by the nurse?

1. "The woman's testosterone levels drop making the vaginal tissue dry and irritated."
2. "Sexual intercourse happens less during this age which leads to painful penetration."
3. "Many women believe intercourse is more painful but these is no physiological reason for this."
4. "The vaginal tissue loses it elasticity and becomes dry making penetration painful.".

NurseThink® Quiz Answers

1. **A 39-week pregnant client has been admitted to labor and delivery with a potential placenta previa. As the nurse prepares for the examination which nursing action in the client's exam is omitted?**
   1. Conducting the vaginal exam.
   2. Using Leopold's maneuvers. *This is an external test and would not complicate the diagnosis.*
   3. Placing the client on her side. *Positioning would not complicate the diagnosis.*
   4. Placing the client in a high Fowler's position. *Positioning would not complicate the diagnosis.*

   Rationale: A placenta previa occurs when the placenta is covering or near the cervical opening. No internal vaginal exams should be made until further assessment is completed. Performing Leopold's maneuvers or client position will not complicate this diagnosis.

   THIN Thinking: Identify Risk to Safety – *Avoiding vaginal exams will decrease the risk for damage to the placenta and prevent it from dislodging from the uterine wall. Understanding the placenta covers the cervical opening in placenta previa helps the nurse understand the risk for bleeding if placenta becomes dislodged.* **NCLEX®:** Reduction of Risk **QSEN:** Safety

2. **A nurse has just administered 2 mg of butorphanol intravenously to a laboring client. Which assessment changes should the nurse recognize as the most significant?**
   1. A neonatal respiratory rate of 40 breaths per minute after birth. *This is a normal rate.*
   2. Maternal nausea and vomiting. *This is a manageable side effect.*
   3. Maternal drowsiness. *This is a manageable side effect.*
   4. A decrease in the fetal heart rate's fluctuation from baseline.

   Rationale: A decrease in fetal variability, maternal nausea and vomiting, and drowsiness may occur after the administration of a narcotic. The decrease in fetal variability is the most significant side effect. A neonatal respiratory rate of 40 is normal.

   THIN Thinking: Top Three – *Looking at ABC's, Circulation is the priority concern for the infant. Decrease in fetal heart rate fluctuation indicates poor perfusion.* **NCLEX®:** Safety and Infection Control **QSEN:** Safety

3. **During the second day postpartum, a client states that she keeps crying for no apparent reason. What is the best response by the nurse?**
   1. "You are just tired from having a baby." *Does not educate client on cause of crying.*
   2. "I am sure it will be better tomorrow." *False reassurance.*
   3. "This is called the postpartum or baby blues and it is very common."
   4. "You are showing signs of postpartum depression." *Depression is different than "blues" and needs to be diagnosed by a mental health specialist.*

   Rationale: The postpartum or baby blues are experienced by 50-80% of women. These women experience emotional lability and often cry very easily.

   THIN Thinking: Nursing Process – *Implementing education based on assessment data helps clients understand why they have vacillating emotions during this period. Postpartum depression is common and needs to be discussed with clients to help promote healthy interventions during postpartum depression.* **NCLEX®:** Psychosocial Integrity **QSEN:** Evidence-based Practice

4. **Magnesium sulfate is being administered intravenously to a client for pregnancy-induced hypertension. Which assessment finding should the nurse identify as a complication of this treatment?**
   1. Deep tendon reflex of +2. *This is an expected finding.*
   2. Urine output of 70 mL/hour. *This is normal.*
   3. Blood pressure of 148/94 mmHg. *This is elevated but would not be caused by the magnesium sulfate.*
   4. Respiratory rate of 10 bpm.

   Rationale: Magnesium Sulfate toxicity can cause a depressed respiratory rate and respiratory arrest. Respirations of 10 bpm are below the normal rate of 12 bpm.

   THIN Thinking: Identify Risk to Safety – *Respiratory rate of 10 bpm indicates inadequate oxygenation due to respiratory depression as a side effect of magnesium sulfate. Early identification of adverse side effects will improve client outcomes and decrease risk for injury.* **NCLEX®:** Pharmacological and Parenteral Therapies **QSEN:** Safety

5. **A 14-week pregnant primigravida client reports that she is extremely nauseous. What is the best nursing response?**
   1. "You should try to avoid eating between meals." *Frequent small meals is best.*
   2. "This is reassuring that the pregnancy is developing." *Nausea is unrelated to how the pregnancy is developing.*
   3. "You should try to eat a diet high in fat." *High-fat diet will not affect nausea.*
   4. "You should try to eat something bland every 2 -3 hours."

Rationale: Small, frequent and bland meals will reduce nausea. A diet high in fat and avoiding snacks will not affect nausea. Although nausea is a side effect of the hormone Human Chorionic Gonadotropin from the developing pregnancy, this does not address the client's need.

THIN Thinking: Help Quick – *Eating bland food in small amounts more frequently will help decrease nausea. High-fat diet or not eating will not resolve the problem and may increase the duration of nausea.* **NCLEX®:** Basic Care and Comfort **QSEN:** Evidence-based Practice

6. **A laboring client is being prepared for an emergency cesarean section. The nurse should immediately report which client data?**
   1. The client's membranes ruptured 2 hours ago. *This does not cause a complication for surgery.*
   2. The client's platelets are 200,000/mcl. *This is a normal value.*
   3. The client reported having a meal 4 hours ago.
   4. The client is RH negative. *This does not cause a complication for surgery.*

   Rationale: The client is at risk for aspiration if general anesthesia is utilized. The health care provider should be notified. The rupture of membranes, platelet level, and RH status do not need to be reported immediately.

   THIN Thinking: Identify Risk to Safety – *Clients should not eat before surgery because of risk for aspiration related to general anesthesia. Identifying that the client ate 4 hours ago will allow proper interventions to be implemented.* **NCLEX®:** Reduction of Risk Potential **QSEN:** Safety

7. **Which statement made by a client with human papillomavirus (HPV) should the nurse correct?**
   1. "There is a vaccination available for some strains of this virus." *Vaccine is available.*
   2. "There are not always symptoms associated with HPV." *HPV does not always have symptoms.*
   3. "I can only shed the virus when I have lesions present."
   4. "HPV can be transferred to an infant during delivery." *HPV can be transmitted to an infant during delivery.*

   Rationale: The HPV virus can be shed even when there are not lesions present. The other options are all correct.

   THIN Thinking: Nursing Process – *Education is needed that HPV can be transmitted despite the absence of lesions. Educating the client about the spread of HPV will help the client understand the need to use protection to decrease the spread of the virus.* **NCLEX®:** Health Promotion and Maintenance **QSEN:** Evidence-based Practice

8. **A client delivered a baby 2 months ago. The significant other calls into the office to report that his wife is angry, confused, and having conversations with herself. What is the appropriate response that the nurse should make?**
   1. "Please take your wife to the emergency room for evaluation."
   2. "Please bring your wife to the office for medication." *Client requires hospitalization.*
   3. "Your wife will require outpatient care." *Client requires hospitalization.*
   4. "Your wife will require behavioral therapy." *Client requires hospitalization.*

   Rationale: The symptoms are consistent with postpartum psychosis. The client is at risk to harm herself or others and needs immediate supervision and hospitalization.

   THIN Thinking: Identify Risk to Safety – *Knowing the symptoms of postpartum psychosis will allow for early identification and treatment to prevent injury to self or others. Educating family members what adverse signs to be aware of is also important in implementing early interventions.* **NCLEX®:** Psychosocial Integrity **QSEN:** Safety

9. **An infant is breastfeeding for the first time. Which nursing statement will reduce the client's risk for skin breakdown?**
   1. "You should wear waterproof pads inside your bra." *Retains moisture which can cause skin breakdown.*
   2. "You should insert your finger into the baby's mouth before removing the baby from your breast."
   3. "You should breastfeed every four hours." *Should breast feed every 2-3 hours.*
   4. "You should only breastfeed from one breast at each feeding and begin feeding with the opposite breast at the next feeding." *Both breasts should be nursed at each feeding.*

   Rationale: Before removing a baby from her breast, the mother should break the seal by inserting her finger into the baby's mouth. Failure to do this technique will cause skin trauma. Waterproof pads will harbor moisture and cause skin breakdown. Breastfeeding should be done every 2 to 3 hours and each feeding should include both breasts.

   THIN Thinking: Nursing Process – *Education will promote healthy habits to prevent skin break down which will decrease risk for further complications.* **NCLEX®:** Basic Care and Comfort **QSEN:** Evidence-based Practice

10. A nurse is preparing to administer Rho (D) immune globulin to a client who delivered a baby yesterday. The nurse recognizes that the treatment is indicated by which client data?

1. The indirect Coombs test is negative.
2. The mother is RH positive. *Only needed if mom is Rh negative.*
3. The infant is RH negative. *Only needed if infant is Rh positive.*
4. The indirect Coombs test is positive. *Only needed if test is negative.*

Rationale: Rho (D) immune globulin is indicated when the mom is RH negative, the infant is Rh positive, and the indirect Coombs test is negative.

THIN Thinking: Nursing Process – *Collecting information from assessments and understanding Rh labs values will help the nurse identify a negative Coombs test as warranting administration of the Rho (D) immune globulin.* **NCLEX®:** Pharmacological and Parenteral Therapies **QSEN:** Evidence-based Practice

11. A laboring client has been prescribed Nitrous Oxide for pain management during labor. To ensure that the client will not overdose, what action will the nurse make?

1. Instruct the client to self-administer the medication.
2. Instruct the client to inhale every 30 minutes. *Would not provide sufficient pain management.*
3. Assess if the client is experiencing nausea. *Not related to over dosing.*
4. Ensure that the medication antidote is available. *No antidote.*

Rationale: Nitrous Oxide is administered by inhaling the gas and an Oxygen mix through a mask. Self-administration makes it nearly impossible for the client to overdose.

THIN Thinking: Identify Risk to Safety – *Through self-administration of nitrous oxide, the risk for overdose decreases significantly. Self-administration allows the client to use the nitrous during contractions or intense times of pain.* **NCLEX®:** Pharmacology **QSEN:** Safety

12. When should a nurse instruct a client in the second stage of labor to start pushing?

1. Once the infant's head is below the ischial spines. *This is not an indication.*
2. When the client feels the urge to push.
3. When early decelerations are seen on the fetal monitor. *Decelerations do not impact timing to push.*
4. When late decelerations are seen on the fetal monitor. *Decelerations do not impact timing to push.*

Rationale: A client in the second stage of labor should begin pushing when she feels the Ferguson reflex or the urge to push. The infant's station or decelerations are not an indication for the client to push.

THIN Thinking: Nursing Process – *Proper education during labor ensures the highest-quality care possible for the mother and baby.* **NCLEX®:** Health Promotion **QSEN:** Evidence-based Practice

13. A pregnant client is asking a nurse about how she should wear her seatbelt while in the car. Which should be the nurse's response?

1. "You should wear the lower lap belt across the middle of your abdomen and the upper shoulder belt above the top of your pregnant belly." *This positioning could cause injury.*
2. "You should not wear the seatbelt because it can harm the baby if an accident occurs." *Seatbelts are important for safety.*
3. "You should wear the lower lap belt below your belly and push the shoulder belt across your abdomen." *This positioning would not provide good protection.*
4. "You should wear the lower belt below your belly and push the upper shoulder belt above your belly."

Rationale: During pregnancy the mother should wear her seatbelt. The lower lap belt should be placed below her abdomen and across the pelvic bones. The upper shoulder belt should be worn above the gravid uterus.

THIN Thinking: Identify Risk to Safety – *Educating on proper belt placement will help the mother safely protect herself and the baby during car rides.* **NCLEX-RN®** Safety and Infection Control **QSEN:** Safety

14. A nurse is caring for a client with Chlamydia Trachomatis. Which statement is true about this infection?

1. It is the most commonly reported sexually transmitted infection in American women.
2. It is more common in men than in women. *More common in women.*
3. The infection causes a thick white discharge. *Not a common symptom.*
4. It is most common in women over 30 years of age. *Most common in women ages 15-24.*

Rationale: Chlamydia Trachomatis is the most commonly reported sexually transmitted infection in American women. The infection is more common in sexually active women ages 15 to 24. The infection can cause a purulent discharge but is often asymptomatic.

CHAPTER

6

Circulation

Perfusion / Clotting

This chapter addresses conditions that impair or damage circulation, including perfusion and clotting disorders. The human body relies on the cardiovascular system to circulate blood through the body to provide oxygen and nutrients to the tissues and take away waste products.

Next Gen Clinical Judgment

Priority focused assessments are an essential part of nursing practice and clinical judgment. Recognizing cues quickly and responding accordingly are central to nursing care. Find a mirror and note three assessment findings that indicate you have effective central perfusion (e.g. brain, heart, and renal). The observe two of your limbs for effective peripheral perfusion. Now try this out with a friend. Remembering these basics of perfusion can help with many exam questions.

Nurses play a significant role in assessing for changes in circulation and perfusion, anticipating changes in clotting and circulation, and providing interventions to enhance or restore circulation.

Priority Exemplars:

- Shock
- Heart failure
- Cardiomyopathy
- Coronary artery disease
- Myocardial infarction/Acute coronary syndrome
- Peripheral artery disease
- Buerger's/Raynaud's
- Hypertension
- Stroke
- Valvular heart disease
- Venous thromboembolism
- Pulmonary embolism
- Disseminated intravascular coagulation (DIC)

Go To Clinical Case 1

A client is admitted to the post-anesthesia care unit (PACU) following a posterior spinal fusion. The client sustained a 2300 mL estimated blood loss, with 1000 mL blood product replaced in the operating room. The client has stable vital signs and is on a mechanical ventilator when arriving. The client has a large back incision and is prescribed to remain on his back (in supine position) for eight hours post-surgery.

He has a urinary catheter in place (no urine output noted since the surgery), 2 peripheral intravenous lines, and an arterial line in place. He has clear breath sounds, good aeration to all lobes, and his pulse oximeter reads a pulse of 86 beats/minute and a saturation of 94%.

The client is pale and is nasally intubated. The client's admission BP was 118/76 mmHg. His baseline BP in the electronic health record is 130/80 mmHg.

The nurse is conducting an assessment and notes that the arterial line wave is dampened and the client's blood pressure is now 96/82.

Additional vital signs include temperature of 99.6°F and a pulse of 110 beats per minute. Ventilator set at 15 breaths/minute. The client is not breathing spontaneously.

NurseThink® Time

Using the NurseThink® system, complete the priorities. Check your answers designated by in the Shock Priority Exemplar.

Priority Assessments or Cues

1.

2.

3.

Priority Laboratory Tests/Diagnostics

1.

2.

3.

Priority Interventions or Actions

1.

2.

3.

Priority Potential & Actual Complications

1.

2.

3.

Priority Nursing Implications

1.

2.

3.

Priority Medications

1.

2.

3.

Priority Education/Discharge Issues

1.

2.

3.

Pathophysiology/Description

- Shock is decreased perfusion yielding inadequate blood flow to the tissues with decreased oxygen and nutrients, impaired cellular metabolism, and buildup of CO_2
- Stages include compensatory, progressive, and irreversible
- Cardiogenic includes reductions in cardiac output, largely related to left ventricular failure (MI), inability of the heart to fill, dysrhythmias, and structural factors
- Hypovolemic includes decrease in circulating blood flow related to loss of blood or other body fluids, fluid shifts, or internal bleeding (may be absolute or relative)
- Septic/Neurogenic/Anaphylactic are secondary to vasodilation related to infection, spinal cord injury/anesthesia, or hypersensitivity

Priority Assessments or Cues

- Identify early and manage clients at risk to prevent shock
- General shock signs/symptoms
  - Early signs include tachycardia, anxious appearance, confusion, tachypnea, restlessness, impaired end organ perfusion (prolonged capillary refill, weak peripheral pulses, changes in sensation/motor function, skin color and temperature changes), hypoactive bowel sounds
  - Later signs include tachycardia, hypotension, changes in level of consciousness, changes in urine output, narrowing pulse pressure
  - Assess mean arterial pressure (MAP). Calculated=SBP+(2 X DBP)/3. Value of 70 ensures adequate cardiac output and peripheral vascular resistance
- Cardiogenic
  - Crackles in the lung fields, may have chest pain, nausea or vomiting
- Hypovolemic
  - Tachypnea may progress to bradypnea
- Distributive: Septic/Neurogenic/Anaphylactic
  - Septic signs include bradycardia, skin may be warm and flushed
  - Neurogenic signs include dysfunction will correlate with level of insult or injury (bladder dysfunction)
  - Anaphylactic signs include shortness of breath, stridor, wheezing, incontinence, swelling

Priority Laboratory Tests/Diagnostics

- General: Assess CBC, electrolytes, and arterial blood gases
- Hemodynamic monitoring: Arterial pressure, central venous pressure, PA pressure
- Cardiogenic
  - BNP (brain natriuretic protein levels) (< 100 pg/mL—HF unlikely; >400 pg/mL—HF likely; 100-400 pg/mL—use clinical judgment)
  - ECG (dysrhythmias)
  - CXR
  - Echocardiogram
- Hypovolemic
  - Decreased Hgb and Hct
  - Elevated urine specific gravity
- Septic
  - Elevated white blood cell count, glucose, lactate levels
  - Positive blood cultures
  - Elevated urine specific gravity
  - ABC's to rule out pulmonary embolus or disease

Priority Interventions or Actions

- General: Early identification and eliminate cause
  - Provide high flow oxygen and ventilatory support
  - IV access and fluid resuscitation with crystalloids (normal saline and, less commonly, lactated ringers) and colloids (albumin), insert nasogastric tube and urinary catheter-provide bolus of fluids along with maintenance fluids
  - Warm fluids to prevent hypothermia and dysrhythmias
- Hypovolemic
  - Replace blood volume with packed RBCs and clotting factors
- Septic
  - Antibiotics
- Control of dysrhythmias
- Increase cardiac contractility with sympathomimetics and vasodilators
- Early initiation of enteral feedings and monitor client weight

Priority Potential & Actual Complications

- Systemic inflammatory response syndrome (SIRS)
- Multiorgan system failure
- Renal failure
- Dependence on mechanical ventilation
- Neurological changes secondary to anoxia
- May be fatal (high mortality rate)

Priority Nursing Implications

- Be attuned for subtle changes in client's neurological status that may be a result of poor perfusion—early signs may be agitation and restlessness—safety measures with changes in level of consciousness
- Assess I & O and hydration status/perfusion status and assess urine output (0.5 mL/kg/hour)
- Assess bowel sounds and abdominal girth
- Assess nasogastric tube drainage and stools for occult blood—stress ulcer prophylaxis as needed
- Early nasogastric/enteral feedings are associated with improved prognosis
- Assess client's temperature and manage environmental temperature closely
- Provide basic care (bathing, oral hygiene, and turning/positioning) to avoid complications
- Assess allergen in cases of anaphylactic shock

Priority Medications

- dobutamine
  - With cardiogenic/septic shock-increases cardiac output
  - Use a central line to avoid tissue sloughing
  - Monitor vital signs-watch for hypotension
  - Assess for tachyrhythmias
- dopamine
  - Cardiogenic and septic shock
  - Use a central line to avoid tissue sloughing
  - Monitor vital signs-watch for hypotension
  - Assess for changes in peripheral circulation (vasoconstriction)
- epinephrine
  - Cardiogenic, anaphylactic, and septic shock
  - Monitor for tachycardia
  - Assess for changes in respiratory status (dyspnea, chest pain)
  - Assess renal function
- sodium nitroprusside
  - Cardiogenic shock
  - Monitor blood pressure
  - Protect from light, wrap tubing with foil
  - Administer with D_5W
- atropine
  - To treat bradycardia with septic shock
- corticosteroids
  - To reduce inflammation after acute period

Priority Education/Discharge Issues

- Depending upon etiology of shock, instruct client on: Allergies/allergy bracelet, safety and injury prevention, hydration and monitoring of fluids, rest and activity moderation with cardiac disease
- Engage multidisciplinary team to recondition the client after a critical illness
- Engage family and support systems to set goals and motivate client with long-term recovery

Go To Clinical Answers

Text designated by are the top answers for the Go To Clinical related to Shock.

Type	Result	Goals of Medical Treatment
Cardiogenic	↓ Contractility	Medications to improve left ventricular function and improve perfusion
Hypovolemic	↓ Preload	Isotonic fluids for hydration; Blood if hemorrhaging; stop bleeding
Anaphylactic	↓ Afterload from histamine release	Medications to decrease further histamine release and support constricting airway
Septic	Systemic inflammatory response leads to vasodilation	Decrease toxins, treat infection while maintaining perfusion to vital organs
Neurogenic	Disruption of autonomic pathways from spinal cord injury that leads to vasodilation	Medications to counteract the loss sympathetic tone while improving perfusion to the body

Pathophysiology/Description

- Inadequate pumping/filling of the heart, insufficient blood to meet the oxygen needs of tissues. Impaired cardiac output from changes in preload, afterload, contractility, and heart rate
- Related to untreated hypertension/hypertension of long duration, coronary artery disease, myopathies and history of myocardial infarction, also age and health of the ventricles
- Increased incidence/increased life expectancy and improved survival rates of cardiac disease; equally in men and women, higher in African Americans
- Related to advanced age, obesity, high serum cholesterol, and tobacco use
- Described as systolic, diastolic, or mixed failure or left and right failure
  - Left-sided failure results in fluid in lung tissue/pleural circulation
  - Right-sided failure results in fluid in the periphery/ systemic circulation

Priority Assessments or Cues

- Vital signs. Watch for increased respiratory rate (to increase oxygenation), increased heart rate (compensate for decreased cardiac output-blocked with clients on beta-blockers), monitor for hypotension (increased tissue perfusion or medication side effects) and hypertension (anxiety/history)
- Increased respiratory effort, cough (may be first sign), later-productive cough of blood-tinged sputum; breath sounds-decreased sounds, crackles, wheezes, rhonchi
- Edema may be dependent/peripheral, ascites, pulmonary edema/pleural effusion, pitting edema (1 kg. weight/1 liter fluid), assess perfusion in edematous extremities
- Variables from history including sleeps on several pillows or in a reclining chair (orthopnea; may experience paroxysmal nocturnal dyspnea), shortness of breath with exertion (dyspnea), levels of fatigue, history of nocturia, chest pain, or rapid fluid weight gain
- Appearance such as anxiety, paleness, cyanosis, confusion, restlessness

Priority Laboratory Tests/Diagnostics

- BNP (brain natriuretic protein levels) (< 100 pg/mL—HF unlikely; >400 pg/mL—HF likely; 100-400 pg/mL—use clinical judgment) NT-proBNP-< 300 ng/mL-HF unlikely
- Chest X-ray/arterial blood gases in acute phase
- ECG may show hypertrophy
- Cardiac ultrasound/cardiac catheterization
- Endomyocardial biopsy
- Ejection fraction studies

Priority Interventions or Actions

- Oxygen, support ventilation as needed, elevate head of bed to relieve dyspnea
- Monitor vital signs, ECG, oxygen saturation, urine output, daily or more frequent weights
- Cardiac rehabilitation, rest
- Cardiotonic/inotropic drugs
- Diuretics to reduce edema
- Fluid restrictions (based on hydration status)
- Low sodium diet
- Support and counseling for depression and anxiety

Priority Potential & Actual Complications

- Respiratory Distress secondary to pleural effusion
- Cardiac dysrhythmias
- Cardiogenic shock
- Skin breakdown with edema
- Left ventricular thrombus
- Hepatomegaly
- Renal failure
- Cardiopulmonary failure

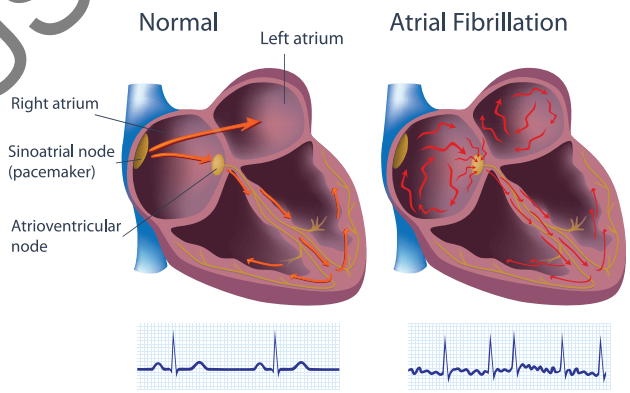

Image 6-1: Atrial fibrillation is often a part of heart failure. Describe the differences in the electrocardiogram with atrial fibrillation. List assessment findings you would expect if your client's ECG revealed atrial fibrillation.

Priority Nursing Implications

- Assess client for over- and dehydration, provide fluid restrictions if prescribed
- If on potassium-wasting diuretics, assess potassium levels, monitor serum electrolytes
- Comfort interventions and skin care with edema, elevate legs to relieve edema, use of compression stockings
- Provide information on a low-sodium, adequate potassium diet
- Provide a calm environment, reduce anxiety
- Prevention-management of hypertension and other coronary artery diseases

Priority Medications

- digoxin
  - Slow heart rate and strengthen contractility
  - Apical pulse for one minute prior to administration-hold for low heart rate (< 60 bpm for adults, <100 bpm for infants, as prescribed by healthcare provider for children)
  - Assess for signs of digoxin toxicity
- furosemide
  - Diuretic-reduce fluid volume
  - Assess output-diuresis
  - Serum potassium levels
  - Potassium chloride supplements or K+ rich foods
- milrinone
  - Phosphodiesterase inhibitor (PDE inhibitor)
  - Positive inotrope and vasodilator
  - Assess for ventricular dysrhythmias and hypotension
- lisinopril
  - Ace-inhibitor
  - Assess for cough
  - Assess for angioedema
- vasodilators
  - Nitroglycerine-decrease venous return and decrease preload and afterload, increase myocardial oxygen supply in acute heart failure
  - Watch for orthostatic hypotension
- potassium chloride
  - Potassium supplement
- In acute phases:
  - Provide morphine
  - Sedation and vasodilation

Priority Education/Discharge Issues

- Teach client to watch for FACES including fatigue, limitation of activity, cough and congestion, edema, and shortness of breath and based on client understanding, teach about disease and bodily changes
- Oxygen at home including portable devices, compressor, indications for use, assessing oxygen saturation
- Provide education about safe use of oxygen therapy
- Maintain weight within normal range for the individual and based on cultural insights
- Eat a potassium rich food each day including banana, orange juice in absence of potassium supplement
- Teach client to avoid high-sodium food sources including processed meats, canned foods, baked goods, snacks—teach about non-sodium flavor enhancers
- Rest and pace activities
- Daily weights on same scale with similar clothing/home blood pressure monitoring
- Reinforce collaborative plan to include smoking cessation, limiting alcohol, mild exercise, low sodium diet, moderate caffeine, and reduced saturated fats in foods
- Check with healthcare provider when considering over-the-counter medications and herbal preparations
- Educate on fall prevention and accessing emergency assistance

Clinical Hint

Congenital heart diseases are common causes of heart failure in infants and children related to abnormalities in structure and function (whether by shunting or obstructing blood flow or some combination of the two). Many are repaired or closed in surgery while using cardiopulmonary bypass or with cardiac catheterization.

Go To Clinical Answers

Text designated by are the top answers for the Go To Clinical related to Heart failure.

Pathophysiology/Description

- High blood pressure associated with genetic, physiological, and lifestyle factors
- May be primary or secondary
- Related to water and sodium retention, altered renin-angiotensin-aldosterone mechanism, stress and increased sympathetic nervous system activity, insulin resistance and hyperinsulinemia, and endothelium dysfunction

Priority Assessments or Cues

- Assess blood pressure in both arms and note differences, assess for orthostatic changes in blood pressure and may be diagnosed after two or more readings
- Use the correct size cuff, allow one minute between readings, and ensure that the arm is at the level of the heart for assessments
- Although associated with few symptoms, ask client about headaches, epistaxis, fatigue, angina, dizziness, anxiety, visual disturbances, or dyspnea
- Determine client's age and ethnicity, ask about family history, stress, and related medical history (diabetes, hypercholesterolemia)
- Determine weight and BMI (Body mass index)
- Discuss lifestyle including cigarette smoking, sodium intake, alcohol intake, level of activity and exercise, sedentary habits, and usual diet

Priority Laboratory Tests/Diagnostics

- Routine urinalysis, BUN and creatinine/creatinine clearance
- Basic metabolic panel/CBC
- Lipid profile
- ECG

Priority Interventions or Actions

- Weight reduction, low sodium diet, DASH diet (high in fruits and vegetables, low-fat meats and milk products, few sweets and added sugars)
- Smoking cessation and reduction in alcohol and caffeine intake
- Physical activity and stress management
- Antihypertensive medications

Priority Potential & Actual Complications

- Coronary artery disease, left ventricular hypertrophy, and heart failure
- Cerebrovascular disease and CVA (stroke)
- Peripheral vascular disease, nephrosclerosis, and retinal damage
- Hypertensive crisis

Priority Nursing Implications

- Assist with major lifestyle changes
- Reinforce need for treatment despite absence of symptoms

Priority Medications

- hydrochlorothiazide
  - Diuretics
  - Potassium-wasting-take potassium in diet or supplement
  - Orthostatic hypotension
- atenolol
  - Beta Blockers (end in -OL)
  - Monitor pulse and blood pressure
  - Contraindicated with asthma or COPD-bronchoconstriction
- lisinopril
  - ACE inhibitors (end in -pril)
  - Dry, hacking cough-benign side effect
  - NSAIDS and ASA may reduce effectiveness
  - Not with K sparing diuretics
- nifedipine, verapamil
  - Calcium channel blockers
  - Assess for headache, edema, and hypotension

Priority Education/Discharge Issues

- Watch for orthostatic hypotension and risk for falls
- Monitoring of blood pressure with phone apps, home monitoring
- Life-long treatment, adherence to medication regimen, and life style changes
- Explore use of fish oils and Omega-3 fatty acids
- Contact HCP before using OTC medications

Current Hypertension Guidelines in the Adult		
	SYSTOLIC	DIASTOLIC
Normal		
Elevated		
Stage 1		
Stage 2		
Crisis		

Table 6-1: Search the internet (www.heart.org) and complete this table.

Pathophysiology/Description

- Also called brain attack (conveys message of medical emergency), causes brain cell necrosis/infarction
- Effects and prognosis depends upon location and extent of brain damage
- Increasing incidence with aging population
- Risk factors
  - Non-modifiable include age, gender, race/ethnicity, and family history/heredity
  - Modifiable include hypertension, heart disease, diabetes, hypercholesterolemia, smoking, alcohol abuse, cocaine, abdominal obesity, physical activity, high estrogen/progestin oral contraceptives, sickle cell disease, dysrhythmias (atrial fibrillation)
- Types:
  - Ischemic stroke
    - Thrombotic occlusion of a vessel-related to hypertension and diabetes, often preceded by a TIA (transient ischemic attack)
    - Embolic in which thrombus from heart or elsewhere travels to cerebral vessel and lodges, rapid progression
  - Hemorrhagic is bleeding into the brain tissues, intracerebral, subarachnoid, cerebral aneurysm—related to hypertension, poor prognosis

Priority Assessments or Cues

- Assess vital signs and neurological status by checking pupils (dilation), blood pressure
- Assess for motor changes contralateral to site of brain cell death, visual changes, weakness, hemiparesis, numbness, loss of sensation, facial drooping, tinnitus, vertigo, darkened or blurred vision, diplopia, ptosis, dysphagia, dysarthria, ataxia, aphasia, headache ("the worst of my life"), nausea/vomiting, loss of bowel/bladder function, change in level of consciousness/cognitive abilities/changes in affect/memory limitations, spatial/perceptual alterations (homonymous hemianopsia)
- Assess for transient ischemic attacks (TIA) which are short-term changes in neurological function without brain infarction (1/3 TIA victims have a stroke, 1/3 have additional TIAs, 1/3 have no further effects)

Priority Laboratory Tests/Diagnostics

- CT Scan or MRI (serial CT scans for progress)
- CT angiography or MR angiography/Intraarterial digital subtraction angiography
- Cardiac, carotid angiography
- Transcranial doppler, lumbar puncture (avoid with increased intracranial pressure [ICP])

Priority Interventions or Actions

- Prevention such as lifestyle changes and routine antiplatelet therapy
- Acute management with oxygenation and ventilation, stabilize blood pressure, balance hydration: Maintain perfusion without increasing ICP (maintain normal ICP), assess sodium and glucose levels
- Ischemic treated with fibrinolytic treatment. Must have BP < or equal to 180/105; surgery: Carotid endarterectomy, transluminal angioplasty, stenting, mechanical embolus removal
- Hemorrhagic stroke is managed by controlling hypertension and surgical evacuation of hemorrhage
- Rehabilitation includes the transdisciplinary team-physical/occupational/speech therapy for swallow therapy and speech therapy

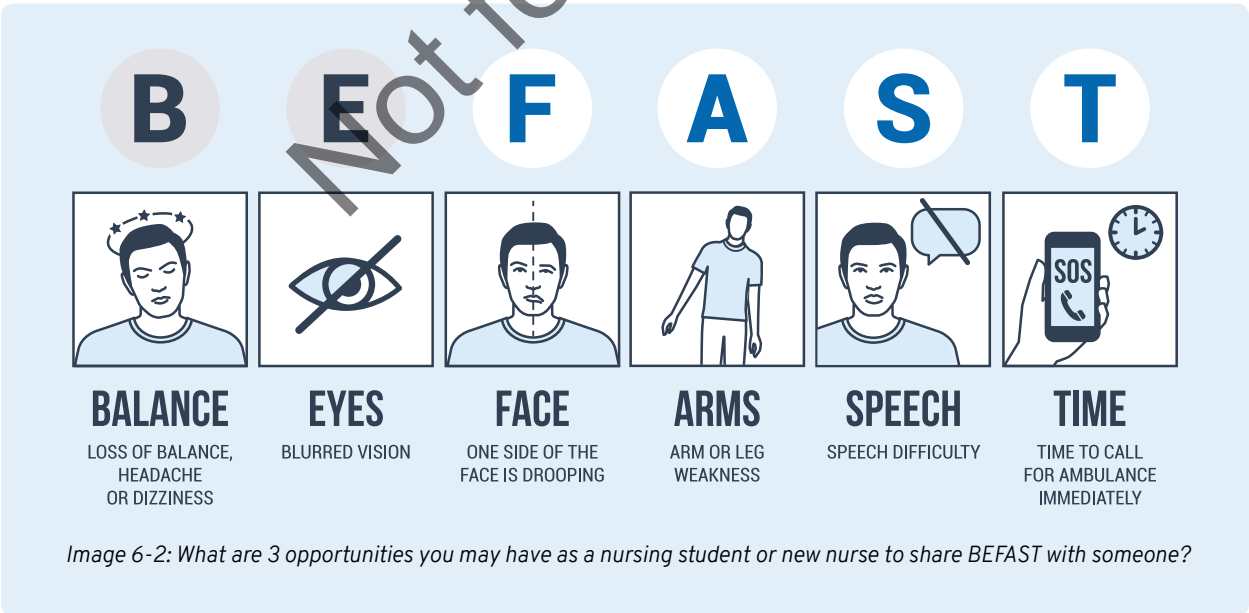

Image 6-2: What are 3 opportunities you may have as a nursing student or new nurse to share BEFAST with someone?

Priority Potential & Actual Complications

- About one-third of stroke victims have permanent disability, about one-fourth require long-term care
- Strokes are the 4th leading cause of death in adults
- Long-term consequences include hemiparesis, inability to walk, aphasia, lack of independence in personal care, and depression
- Other complications related to immobility, disuse, and treatment/lack of treatment (hemorrhage, neurological compromise, cerebral edema, urinary tract infection)

Priority Nursing Implications

- Significant role of nursing is prevention such as assessing and managing modifiable risk factors-healthy diet, smoking cessation, regular exercise, weight control, limitation of alcohol, and routine screening
- Use evidence-based stroke assessment scales
- During acute treatment nurses maintain client safety-seizure precautions, pain management, watch hydration status closely, prevent constipation, aspiration, venous thromboembolism, skin breakdown, and avoid neck and leg flexion to avoid increased ICP
- For clients on ventilator should receive oral care every two hours to prevent VAP (ventilator-associated pneumonia)
- Provide strategies to prevent pneumonia (coughing, deep breathing, turning) and contractures/skin breakdown (positioning, splinting, passive and active ROM exercises)
- Provide support in communication, dealing with visual and functional changes (bowel and bladder retraining), unilateral neglect causes by visual field changes

Priority Medications

- tissue plasminogen activator (tPA)
  - Thrombolytic
  - With ischemic strokes
  - 3-4.5 hours from onset of symptoms
  - Monitor closely for bleeding
  - Administered intravenously or intraarterially
- aspirin
  - Antiplatelet
  - Prevention 81-325 mg/day
  - Monitor for gastric bleeding
- clopidogrel
  - Antiplatelet
  - Hold prior to surgery or dental procedures
- simvastatin
  - Antilipemic
  - Control cholesterol
  - Take at bedtime
  - Watch for rhabdomyolysis
- labetalol
  - Beta-blocker
  - To control blood pressure
  - Given prior to tPA administration

Priority Education/Discharge Issues

- Provide client/family support and education related to changes in function
- Explore strategies to enhance self-esteem -self-care in all activities of daily living, dealing with frustration, fear, and emotional lability
- Provide referrals for rehabilitation-access adapted devices to promote self-care
- Assess community resources and supports for client and family

List 5 symptoms for each followed by priority Nursing Concerns
LEFT-BRAIN STROKE
Symptoms: 1. _____ 2. _____ 3. _____ 4. _____ 5. _____
Priority Nursing Concerns: 1. _____ 2. _____ 3. _____ 4. _____ 5. _____
RIGHT-BRAIN STROKE
Symptoms: 1. _____ 2. _____ 3. _____ 4. _____ 5. _____
Priority Nursing Concerns: 1. _____ 2. _____ 3. _____ 4. _____ 5. _____

Table 6-2: Left-brain and Right-brain stroke

Go To Clinical Cases – Patient Assignments

Chapter 5: Sexuality

Case 1: Hypertensive Disorders of Pregnancy

Case 2: Newborn Care

Chapter 6: Circulation

Case 1: Shock

Case 2: Heart Failure

Chapter 7: Protection

Case 1: Meningitis

Case 2: Pancreatitis

Chapter 8: Homeostasis

Case 1: Overhydration/Fluid Overload

Case 2: Dehydration/Fluid Deficit

Chapter 9: Respiration

Case 1: Chronic Obstructive Pulmonary Disease

Case 2: Cystic Fibrosis

Chapter 10: Regulation

Case 1: Hydrocephalus

Case 2: Blood-borne Cancers

Chapter 11: Nutrition

Case 1: Inflammatory Bowel Disease: Crohn's Disease/Ulcerative Colitis

Case 2: Cleft Lip and Palate

Chapter 12: Hormonal

Case 1: Diabetic Ketoacidosis

Case 2: Diabetes Mellitus Type 2

Chapter 13: Movement

Case 1: Cerebral Palsy

Case 2: Seizures

Chapter 14: Comfort

Case 1: Pressure Ulcers

Case 2: Burns

Chapter 15: Adaptation

Case 1: Eating Disorders

Case 2: Post-traumatic Stress Disorder (PTSD)

Chapter 16: Emotions

Case 1: Anxiety Disorders

Case 2: Schizophrenia

Chapter 17: Cognition

Case 1: Delirium

Case 2: Dementia/Alzheimer's Disease

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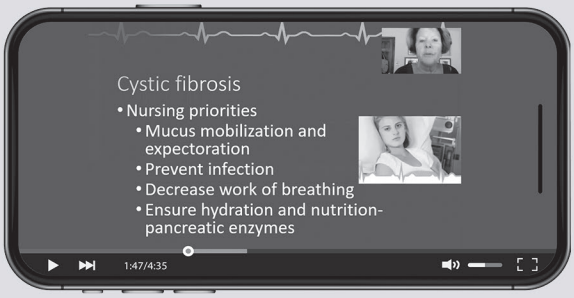

Chapter 1: Save Time Studying

THIN Thinking

Chapter 2: What is NCLEX-RN® all about?

Prioritization Power

Pharmacology Basics

Chapter 3: What can I expect?

Expect to Succeed

Chapter 4: How can I prepare?

Preparation Focus

Chapter 5: Sexuality

Concepts at Work: Sexuality

Pharmacology Focus: Sexuality

Sexuality: Labor and Delivery Primer

Chapter 6: Circulation

Concepts at Work: Circulation

Pharmacology Focus: Circulation

Chapter 7: Protection

Concepts at Work: Protection

Pharmacology Focus: Protection

Chapter 8: Homeostasis

Concepts at Work: Homeostasis

Pharmacology Focus: Homeostasis

Chapter 9: Respiration

Concepts at Work: Respiration

Pharmacology Focus: Respiration

Respiration: Pediatric Primer

Chapter 10: Regulation

Concepts at Work: Regulation

Pharmacology Focus: Regulation

Chapter 11: Nutrition

Concepts at Work: Nutrition

Pharmacology Focus: Nutrition

Chapter 12: Hormonal

Concepts at Work: Glucose Regulation

Concepts at Work: Neuroendocrine Regulation

Pharmacology Focus: Hormonal

Chapter 13: Movement

Concepts at Work: Safety and Immobility

Pharmacology Focus: Movement

Chapter 14 - Comfort

Concepts at Work: Burns

Concepts at Work: Pain and Pressure Ulcers

Pharmacology Focus: Comfort

Chapter 15: Adaptation

Concepts at Work: Adaptation

Concepts at Work: Suicide, Opioids, and Addiction

Chapter 16: Emotion

Concepts at Work: Emotion

Pharmacology Focus: Emotion

Chapter 17: Cognition

Concepts at Work: Pharmacology and Cognition

Chapter 18: Health Promotion

Concepts at Work: Health Promotion Across the Lifespan

Chapter 19: Role of the Nurse for Quality and Safety

Concepts at Work: Leadership

Concepts at Work: Delegation

Chapter 20: Where do I go from here?

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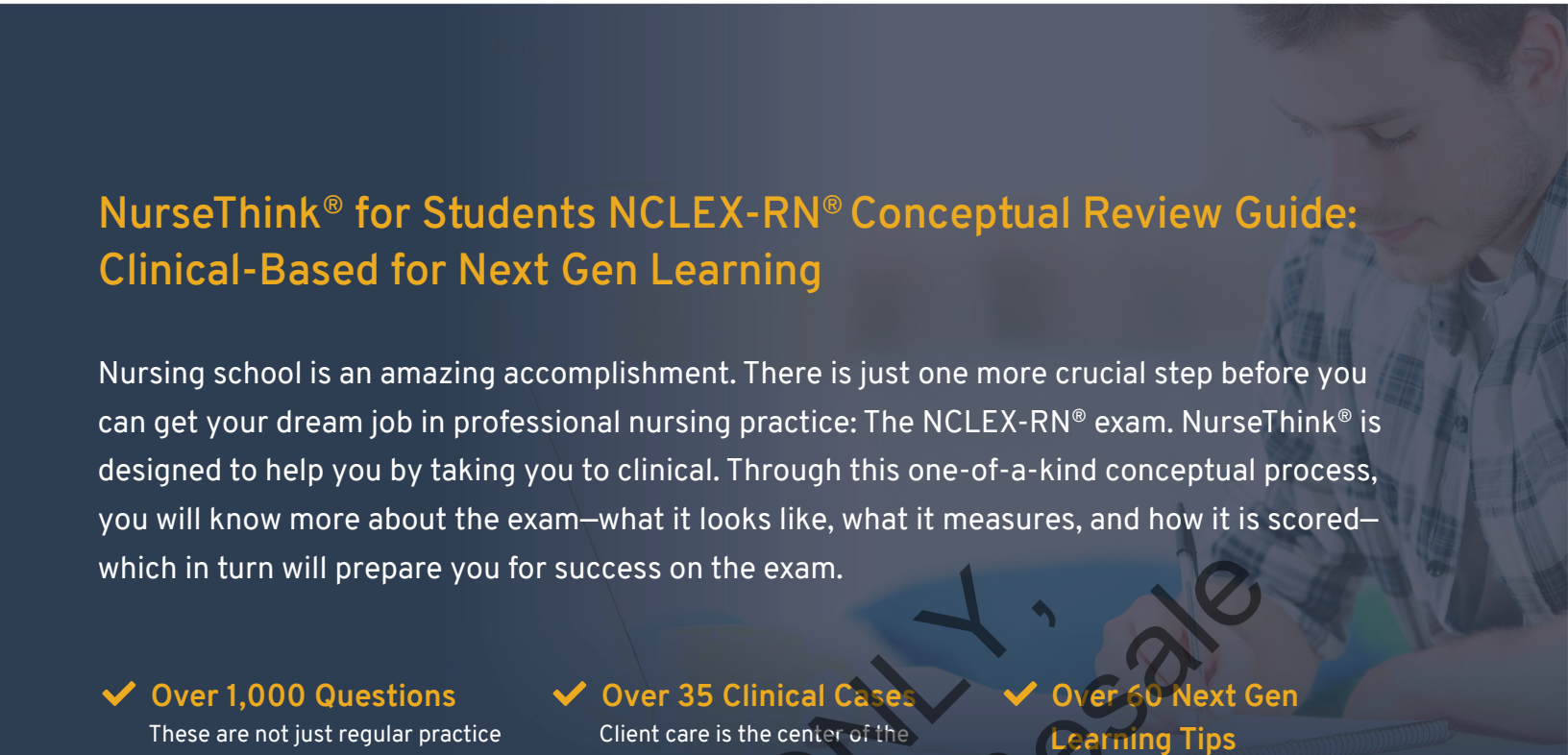

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