NUR 267 Tests 2

Meg-Surg Review

1. Acute Coronary Syndrome
   * Nursing management for a pt with a MI should focus on pain management and ↓ myocardial oxygen demand.
     + Fluid status should be closely monitored
   * Nitroglycerin- produces peripheral vasodilation that will ↓BP; reduces myocardial oxygen consumption and demand.
     + Correct administration- immediate administration, subsequent doses taken 5 minutes intervals as needed, for a total dose of 3 tablets.
       - Sublingual tablets appear in the bloodstream within 2-3 minutes and is metabolized within 10 minutes.
     + ST elevation indicates injury to the myocardium, which may benefit from nitroglycerin.
     + H/A is a common symptom- can be alleviated with aspirin, Tylenol, Advil
       - Lying flat will increase blood flow to the head and may increase pain and exacerbate other symptoms, such as SOB
   * Infarction of the papillary muscle is a potential complication of an MI causing ineffective closure of the mitral valve during systole.
     + Mitral regurgitation results when the left ventricle contracts and blood flow backward into the left atrium, which is heard at the fifth intercostal space, midclavicular line.
     + The murmur worsens during expiration and in the supine or left-side position.
   * Morphine acts as an analgesic and sedative
     + It reduces myocardial oxygen consumption, BP and HR.
     + Reduces anxiety and dear
     + Can depress respirations- but may lead to hypoxia.
   * Low urine output and confusion are signs of ↓ tissue perfusion.
     + Orthopnea is a sign of left-sided heart failure.
     + Crackles, edema, and weight gain should be monitored closely.
     + With A.Fib there is a loss of atrial kick, but the BP and HR are stable.
   * Thrombolytic drugs are administered within the first 6 hours after onset of an MI to lyse clots and reduce the extent of myocardial damage.
   * PVC’s are characterized by a QRS of longer than 0.10 second and by a wide, notched, or slurred QRS complex.
     + There is no P wave related to the QRS complex and the T wave is usually inverted.
     + Are often the precursor of life-threatening arrhythmias, including ventricular tachycardia and ventricular fibrillation.
     + An occasional PVC is not considered dangerous but if PVC’s occur at a rate > 5-6 per minute in the post-MI client.
     + 6 PVC’s per minute is considered serious and usually calls for ↓ ventricular irritability by administering medications such as lidocaine.
   * Metopropol is indicated in the treatment of hemodynamically stable clients with an acute MI to reduce cardiovascular mortality.
     + Cardiogenic shock causes severe hemodynamic instability and a beta blocker will further depress myocardial contractility.
     + ↓ CO will impair perfusion to the kidneys
   * Dobutamine will improve contractility and ↑ the CO that is depressed in cardiogenic shock.
   * Oliguria occurs during cardiogenic shock because there is reduced blood flow to the kidneys.
     + Typical signs of cardiogenic shock induce low BP, rapid and weak pulse, decreased urine output, and signs of diminished blood flow to the brain, such as confusion and restlessness.
   * MI interferes with or blocks blood circulation to the heart muscle.
     + ↓ Blood supply to the heart muscle causes ischemia, or poor myocardial oxygenation.
     + Diminished blood or lack of oxygen to the cardiac muscle results in ischemic pain or angina.
   * Sinus tachycardia is characterized by normal conduction and a regular rhythm, but with a rate of >100bpm.
   * Furosemide (Lasix) is a loop diuretic that acts to ↑ urine output.
     + Administered IV- diuresis begins about 5 minutes and reaches its peak within 30 minutes
   * Dietary principles in the acute phase of MI includes avoiding large meals
     + Fluids are given according to the client’s needs.
     + Sodium restrictions may be prescribed.
     + Cholesterol restrictions may also be prescribed.
       - Low cholesterol foods-Pasta, tomato sauce, salad, and coffee
       - High cholesterol foods- Hamburgers, milkshakes, liver, and fried foods
   * Atorvastatin is a medication to reduce LDL and decrease risk of CAD.
   * CRP is a marker of inflammation and is elevated in the presence of cardiovascular disease.
   * The thrombolytic agent t-PA administered IV, lyses the clot blocking the coronary artery.
     + Most effective when administered within the first 6 hours after onset of MI
     + Cardiac arrhythmias are commonly observed with administration of t-PA.
     + Hypotension is commonly observed with administration of t-PA
     + A history of cerebral hemorrhage is contraindication to administration of t-PA.
   * ACSL recommends that 2 IV lines be inserted in one or both the antecubital spaces.
   * Crackles are auscultated over fluid-filled alveoli.
     + Bronchospasms and airway narrowing generally are associated with wheezing sounds
   * Detection of myoglobin is on diagnostic tool to determine whether myocardial damage has occurred.
     + Myoglobin is usually detected about 1 hour after a heart attack is experienced and peaks within 4-6 hours after infarction.
   * Cardiac catheterization is done in clients with angina primarily to assess the extent and severity of the coronary artery blockage.
   * Because of contrast medium used in PTCA acts as an osmotic diuretic, the client may experience diuresis with resultant fluid volume deficits after the procedure.
     + Potassium levels must be closely monitored
   * Arteriosclerosis
     + Risk factors
       - Family history
       - Cigarette smoking
       - Hypertension
       - High blood cholesterol level
       - Male
       - DM
       - Obesity
       - Physical inactivity
   * Nifedipine-
     + Should inspect the gums daily to monitor for gingival hyperplasia.
2. **Heart Failure**
   * Captopril- is a ACE inhibitor
     + Side effect- hyperkalemia
   * Coumadin- anticoagulant
     + Treats A.Fib. and ↓left ventricular ejection fraction to prevent thrombus formation and release of emboli into the circulation.
   * Digoxin
     + Cardiac glycoside with positive inotropic activity- causes ↑ strength of myocardial contractions and thereby ↑ output of blood from the left ventricle.
     + toxicity
       - Anorexia, nausea, and vomiting, visual disturbances (blurred vision, halos, seeing yellow spots), abdominal pain,
         * A low potassium level predisposes the client to digoxin toxicity.
   * When the heart begins to fail, the body activates three major compensatory mechanisms
     + Ventricular hypertrophy
     + Renin-angiotensin aldosterone system
     + Sympathetic nervous stimulation
   * Signs of pulmonary edema are identical to those of acute HF.
     + S/SX: usually appear in the respiratory system and include coarse crackles, severe dyspnea, and tachypnea.
     + PRIORITY to assess BP- because people with pulmonary edema typically experience severe hypertension
   * A ↓ CO occurs from a ↓ SV with impaired contractility in systolic heart failure. This impairs peripheral and renal perfusion.
     + The impaired perfusion and impaired oxygenation cause the symptoms of activity intolerance.
   * Sitting almost upright in bed with the feet and legs resting on the mattress decrease venous return to the heart, thus reducing myocardial workload.
     + Sitting position allows maximum space for lung expansion.
   * ↑CO is the main goal of therapy for the client with HF or pulmonary edema.
     + Pulmonary edema is an acute medical emergency requiring immediate intervention.
   * Characteristics of A.Fib. include
     + ↑ HR (>100)
     + Irregular rhythm
     + No definite P waves on the ECG
     + Occurs when the SA node no longer functions as the heart’s pacemaker and impulses are initiated at sites within the atria.
   * Canned food, tomato juice-high in sodium3
   * Hypokalemia- is a side effect of loop diuretics
     + Bananas, dried fruit, and oranges-high in potassium.
     + Angel food cake, yellow cake, and peppers – low in potassium
   * A normal apical impulse is found over the apex of the heart and is typically located and auscultated in the left 5th intercostal space.
   * Ankle edema suggests fluid volume overload.
     + Assess RR, lungs sounds, SpO2
   * Heart failure
     + Obtain daily weight
     + Call MD if the pt gains 2 lbs. or more
3. **Valvular Heart disease**
   * A complication of valvuloplasty is emboli resulting in a stroke.
     + Some degree of mitral regurgitation is common after the procedure.
   * Pt’s scheduled for cardiac cath. 🡪 it is important to check for iodine sensitivity, verify written consent, need to be NPO for 6-18 hours before the procedure.
   * Post-op🡪 assess circulatory status , puncture site,
   * Most Pt’s with mitral stenosis have a history of rheumatic fever or bacterial endocarditis.
   * Lidocaine🡪 side effects
     + Dizziness, tinnitus, blurred vision, tremors, numbness, and tingling of extremities, excessive perspiration, hypotension, seizures, and coma.
   * Mitral valve replacement-
     + Management of pain is priority
     + HGB, HCT, should be assessed to evaluate blood loss.
     + ↑ PTT, INR, and ↓ platelet count increases the risk for bleeding.
       - The pt may require blood products depending on the labs.
   * In an immobilized pt, calcium leaves the bone and concentrates in the extracellular fluid. When large amounts of calcium passes through the kidneys, calcium can precipitate and form calculi.
     + Ensure a liberal fluid intake
     + Diet rich in acid should be provided to keep the urine acidic, which increases the solubility of calcium.
   * Most cardiac Pt’s have a median sternotomy incision, which take about 3 months to heal.
     + Avoid heavy lifting, perform muscle reconditioning exercises, and using caution when driving.
     + Activities should be gradually resumed on discharge.
4. Hypertension-
   * + Considered the silent killer for adults.
     + Consistent systolic blood pressure level greater than 140mmhg and a consistent diastolic blood pressure level greater than 90mmhg.
     + Compliance is the most critical element of hypertension therapy.
     + In most cases, pt requires life-long treatment, and their HTN cannot be managed successfully without drug therapy.
     + Stress management is an important component of HTN therapy.
     + Losing weight may be necessary an d will contribute to lower BP
     + Renal disease & renal insufficiency is a complication of HTN
   * Beta blockers🡪 ↓ HR, contractility and afterload, which leads to ↓ in BP
     + The pt may have ↑ in fatigue at first
   * Catapres- central acting adrenergic antagonist.
     + Reduces sympathetic outflow from the central nervous system.
     + Dry mouth, impotence, and sleep disturbances🡪 possible side effects.
   * Orthostatic hypotension
     + Changing positions slowly and avoiding long periods of standing may limit the occurrence of orthostatic hypotension.
     + The nurse should assess the BP in all three positions (lying, sitting, and standing) at all routine visits.
   * Atenolol- beta adrenergic antagonist
     + Management of hypertension
     + Sudden discontinuation of this drug is dangerous b/c it may exacerbate symptoms.
   * Propranolol- beta adrenergic antagonist
     + Reducing heart rate, ↓ myocardial contractility, and slowing conduction
5. Permanent Pacemaker
   * Pacemaker placement
     + Must teach the pt how to take and record his pulse daily.
     + Avoid lifting the operative side arm above should level for 1 week post-insertion.
     + It takes up to 2 months for the incision site to heal and full range of motion to return.
     + Maintaining cardiac conduction stability to prevent arrhythmias is a priority immediately after artificial pacemaker implantation.
   * Transcutaneous pacemaker therapy provides an adequate HR to a pt in an emergency situation.
     + Transcutaneous pacemaker is temporary until a transvenous or permanent pacemaker can be inserted.
     + Defibrillation and a lidocaine infusion are not indicated for the treatment of third degree heart block.
6. Pt requiring CPR
   * Transcutaneous pads should be placed on the client with third degree heart block.
     + Hemodynamic stability and pulse should be check prior to calling a code or initiating CPR.
   * Defibrillation is performed for ventricular fibrillation or ventricular tachycardia with no pulse.
     + The presence of a pulse determines the treatment for ventricular tachycardia.
     + It is also important to assess the HR and LOC
   * Cardioversion may be used to treat hemodynamically unstable tachycardia’s
     + Preparing for Cardioversion
       - Conducting agent is place between the skin and paddles
       - Make sure to call CLEAR
       - Each paddle is placed directly on the conductive pads
       - Applying about 20-25lbs. of pressure on each paddle is recommended
       - Must document the amount of electrical current delivered and the resulting rhythm.
   * Pupillary reaction is the best indication of whether oxygenated blood has been reaching the pt’s brain.
     + Pupils that remain widely dilated and do not react to light probably indicate that serious brain damage has occurred.
   * Amniodarone
     + Treats PVC, ventricular tachycardia [with a pulse], atrial fibrillation, and atrial flutter.
   * During CPR the liver is the organ most easily damaged because of its location [near the xiphoid process]
   * Adult’s sternum must be depressed 1.5-2inches with each compression to ensure adequate heart compressions.
     + If the chest wall is not rising with rescue breaths the head should be repositioned to ensure that the airway is adequately opened.
   * After a pt is without cardiopulmonary function for 4-6 minutes, permanent brain damage is almost certain.
   * The Heimlich maneuver should be administered only to a victim who cannot make any sounds due to airway obstructions.
     + If they can whisper or cough, some air exchange is occurring and 911 should be called
     + The thrusts should be delivered below the xiphoid process but above the umbilicus,
       - To minimize risk of internal injuries.
   * ALWAYS, ALLWAYS check your patient!!

Chapter two

1. Peripheral vascular disease
   * An ankle brachial index of 0.65 suggest moderate arterial vascular disease in a pt experiencing intermittent claudication [pg. 357]
     + The ankle-brachial index is based on the ratio of the ankle systolic BP to arm systolic BP.
     + It allows one to quantify the degree of arterial stenosis.
   * The nurse should always check pedal pulse and tibial pulse; ensure adequate perfusion to the lower extremities with a drop in blood pressure.
   * Maintaining skin integrity is important in preventing chronic ulcers and infections.
   * Peripheral blood flow
     + Unidirectional manner, the blood flow involves the differences in pressure between the arterial and venous systems.
     + The force of the contraction of the heart and resistance of vessels influence flow, but it is the pressure differences that control blood flow.
   * Blood pressure is the highest in the aorta as the blood is being ejected out of the left ventricle into the aorta.
   * High serum lipid levels are associated with an ↑ incidence of PVD
   * Claudication
     + The discomfort a person experiences when oxygen demand in the leg muscle is greater than the supply
     + The pain is a result of tissue hypoxia in the working muscle.
     + Symptoms include: aching, cramping, and weakness.
   * As people age, the accumulation of collagen in the intima of the blood vessels result in the vessels becoming stiff and less flexible.
   * ↓ Blood flow is a common characteristic of all PVD.
     + When the demand for oxygen to the working muscle becomes greater than the supply, pain is the outcome.
     + Slow blood flow throughout the circulatory system may suggest pump failure.
   * In PVD, ↓ blood flow can result in ↑ venous pressure.
     + The ↑ in venous pressure results in an increase in capillary hydrostatic pressure, which cause a net filtration of fluid out of the capillaries into the interstitial space, resulting in edema.
   * Reduction of blood flow to specific areas results in ↓ oxygen and nutrients.
     + As a result the skin will appear mottled. Loss of hair and cool, dry skin are other signs
   * When PP are not palpable the nurse should obtain a Doppler ultrasound
   * A ↑ LDL cholesterol concentration has been documented as a risk factor for the development of atherosclerosis.
     + LDL is deposited in the intima of the blood vessels.
   * Coldness in the feet and ankle is consistent with complete arterial obstruction
     + Other expected findings
       - Paralysis and pallor
       - Aching pain
       - Burning sensation
       - Numbness or tingling
   * Anxiety stimulates the SNS, which results in the secretion of epinephrine, angiotensin and serum proteins that cause vasoconstriction in the arteries of the peripheral circulatory system.
   * Activity intolerance r/t decreased blood supply and pain is a common problem with clients experiencing claudication.
   * Priority Post-op care for a PVD pt who has had femoral popliteal bypass graft
     + Peripheral pulses
     + Incision site
     + Urine output
     + Postoperative pain
   * Decreasing venous congestion in the extremities is a desired outcome for clients with heart failure
     + Elevate the legs above the heart to achieve this goal.
   * Gangrene
     + Blackened decomposing tissue that is devoid of circulation.
     + Chronic ischemia and death of the tissue can lead to gangrene in the affected extremity
     + Injury, edema, and decreased circulation lead to infection, gangrene, and tissue death.
     + Atrophy is the shrinking of tissue, and contraction is joint stiffening secondary to disuse.
   * Arteriogram
     + Involves injecting a radiopaque contrast agent directly into the vascular system to visualize the vessel.
       - It usually involves CT scanning.
     + Pt’s may have an immediate or a delayed reaction to the radiopaque dye.
       - Treatment may involve administering oxygen and epinephrine.
   * The pt is a high risk for skin breakdown in the lower extremities r/t the edema and to remaining in one position, which increase capillary pressure.
   * Pt’s with PVD should avoid iodine or OTC medications, heating pads, crossing the legs, and should wear leather shoes.
     + A heating pad can cause injury, and can be difficult to heal because of the decreased blood supply.
     + Crossing the legs can further impede blood flow
   * PVD has bypass surgery
     + Maintaining circulation in the affected extremity after surgery is the focus of care
     + The graft can become occluded, and the client must be assessed frequently to determine whether the graft patency.
       - Preventing infection and relieving pain are important but are secondary to maintaining graft patency.
   * Elastic stockings are used to promote circulation by preventing pooling of blood in the feet and legs.
     + The stockings should be applied in the morning before the pt gets out of bed
     + Should be removed every 8 hours and the pt should elevate the legs for 15 minutes and reapply the stockings.
   * If surgery [artery bypass surgery] is scheduled the nurse should avoid venipuncture in the affected extremity.
     + The goal is to prevent unnecessary trauma and possible infection in the affected arm.
     + Disruptions in skin integrity and even minor skin irritations can cause the surgery to be cancelled.
2. PVD having an amputation
   * Slow steady walking is a recommended activity for clients with PVD because it stimulates the development of collateral circulation.
   * The level of amputation commonly cannot be accurately determined until surgery, when the surgeon can directly assess the adequacy of the circulation of the residual limb.
   * After surgery
     + Leg crossing is contraindicated because it causes adduction of the hips and decreases the flow of blood into the lower extremities.
       - This may result in increased pressure in the graft in the affected leg.
       - To avoid contractures, which can delay rehabilitation, elevation of the surgical limb is contraindicated.
     + The purpose of wrapping the stump is to shape the residual limb to accept prosthesis and bear weight.
       - The compression bandaging should be worn at all times for many weeks after surgery and should be reapplied as needed to keep it free of wrinkles and snug.
       - The dressing should be changed daily to allow for inspection of the stump incision.
       - The stump should not be elevated on pillows because it will contribute to the formation of flexion contractures.
         * Contractures will prevent the pt from wearing a prosthesis and ambulating.
   * Nicotine cause vasospasms and impedes blood flow
   * Diltiazepam is a calcium channel blocker
     + The primary use is to promote vasodilation and prevent spasms of the artery
       - As a result of the vasodilation oxygen and nutrients can reach the muscle and tissue
   * Trental
     + Used for intermentant claudication
     + Therapeutic effect is to increase blood flow
     + Can potentiate the effect of theophylline and increase the risk of theophylline toxicity
       - The nurse should monitor those levels
     + Can interact with heparin
       - Monitor PTT if pt is on heparin
     + Angina is an adverse reaction
       - should rest until pain subsides
       - doctors should be called (priority)
3. clients with Buerger’s disease
   * thromboangitis obliterans
     + Non-atherosclerotic inflammatory vasoocclusive disorder
     + Bc of the inflammation, a common complication is thrombus formation and potential occlusion of the vessel
       - Embolus is a potential risk if a thrombus has developed
     + Inflammation of the immediate small arteries and vein is involved in the disease process
   * Zyban
     + A non-nicotine medication
     + Used to promote smoking cessation
   * Characterized by inflammation and fibrosis of arteries, veins, and nerves
   * WBC infiltrate the area and become fibrotic which results in occlusion of the vessel
     + s/sx
       - slowly developing claudication, cyanosis, coldness, and pain at rest
4. vasospasctic disorder
   * Raynaud’s phenomenon
     + Routine follow up to monitor symptoms and to assess for the development of connective tissue or autoimmune disease associated with Raynaud’s
     + Form of intermittent arteriolar vasoconstriction that results in coldness, pain, pallor of the finger tips toes and the tip of the nose, Rebound circulation with redness and pain
     + Reserpine
       - Adverse reaction is orthostatic hypotension
     + Pt should prevent vasoconstriction by covering affect parts when in cold environments
       - The nurse can teach the client to rewarm exposed extremities by using warm water or placing them next to the body(such as under the armpits)
     + More common in women
     + Initially the vasoconstriction affect produces pallor, or a whitish color, followed cyanosis and finally turn red
     + Decreased perfusion from vasospasm induces color change in the extremity
     + Extreme changes in temperature can precipitate a vasospastic episode and should be avoided
       - Wear gloves when handling foods and ice
       - The client should emerge the involved extremity into warm water during an episode to promote vasodilation and relaxation of the small arteries that are in spasm
       - Living in cold climates too
       - Should wear loose warm clothing
       - Vibrate equipment and typing can contribute to vasospasms
     + Calcium channel blockers are first line drugs when other therapies are ineffective
     + Cardizem reduces finger numbness
       - Also used to treat A. Fib
     + Sympathectomy is schedule only after all other treatments fail
5. Thrombophlebitis and embolism formation
   * Acute arterial occlusion is a sudden interruption of blood flow
   * Acute pain, loss of sensory and motor function and a pale mottled numb extremities are the most and observable changes that indicate a life threatening interruption of tissue perfusion
   * Venous stasis can increase pain
     + Proper positioning helps promote venous drainage, decrease swelling and decreases pain
     + Fluids are encouraged
     + Massage is discouraged
   * Embolus
     + Inspect extremity for color, temp changes
       - Tissue perfusion
     + Performing active ROM to help with blood flow
     + DVT
       - commonly associated with venous stasis
       - Thrombolytic agents used in pt with hx of thrombus formation, CVA, and chronic Fib
       - Check urine for bright red blood and dark smoky color
       - Daily walking
       - Performing foot and leg exercises
       - Prevention best treatment
       - Avoid surface bumps??
     + High risk with pt on BEDREST
     + Increase the risk for pulmonary embolus
   * Inflammation of a vein
   * Symptoms 🡪 pain, swelling, deep muscle tenderness
   * 3 factors that contribute to the formation of venous thrombus and thrombophlebitis
     + Prolonged pressure, Hypercoagulability of the blood, Venous stasis
       - Turn pt q 1-2 hour
       - Passive/active ROM
       - Use TED hose
       - Early ambulation
       - Adequate fluid intake
       - Anticoagulant
         * Garlic and ginger increase bleeding time and should be avoided
   * Risk factors
     + Surgery, obesity, birth control,
   * Varicose veins
     + s/sx
       - tortuous descended vein (where blood has pulled)
       - to prevent pulling, the client should not stand in one place for long periods of time
       - should wear supportive stockings
       - prevention is KEY
   * emergency embolectomy
     + post—op
       - monitor pulses
       - inspect dressing
       - regulate IV infusion
       - administer pain med
       - draw blood for lab
6. Aneurysm
   * sharp midsternal pain could indicate leakage or rupture
     + IV should be inserted for immediate volume replacement
   * assess VS, LOC and pain
   * Contact physician
   * Thoracoabdominal aneurysm
     + Complication is spinal cord in jury
     + Assess LOC below the site of aneurysm repair
   * Goal is to prevent rupture
     + Place in semi-fowlers
     + Quite environment
     + Systolic BP is maintained at the lowest level the pt can tolerate
   * When ready for surgery place in recumbent position to promote circulation
   * Cardiac tamponade
     + Life threatening complication of dissecting thoracic aneurysm
   * Sudden painful tearing sensation is typically associated with the sudden release of blood and the client may experience cardiac arrest
   * After repair
     + Potential for an alteration in renal perfusion manifested by a decreased urine output
   * Morphine
     + Complication is a paralytic ileus
7. Stasis ulcers
   * Underlying patho
     + Result of inadequate oxygen and other nutrients to the tissue bc of edema and decreased circulation
   * Increase oxygen and improve tissue integrity
   * The result of chronic venous stasis is swelling and superficial varicose veins
   * Diuretics will decrease the swelling and thus improving capillary circulation
8. Peripheral arterial occlusive disease
   * ABI test
   * Revascularization procedure for arteriosclerosis
     + Keeping the involved extremity at or below the body horizontal plane will facilitate tissue perfusion and prevent tissue damage
   * Avoid placing the extremity on a hard surface such as a hard mattress to prevent pressure ulcers
   * Handle the involved extremity gently to prevent friction or pressure
   * Weak or absent femoral pulses are symptomatic of aortic iliac disease

Chapter 3

1. The client with red blood cell disorder
   * Bone marrow aspiration (needle)
     + Informed consent
     + Position in side lying with affected side up
     + Clean skin with antiseptic solution (beta dine) before numbing and then collects the specimen
     + Ice to biopsy site
   * Iron deficiency anemia
     + Taking oral iron meds
       - n/v are adverse affects
         * ginger will decrease the nausea
       - take on empty stomach
       - stool softeners not used in IDA instead prevent constipation by eating a high fiber diet
     + eggs high in iron also organ and muscle meat, shellfish, shrimp, and tuna, and rich whole grains, fortified cereals and bread, legumes, nuts, dried fruit🡪 apricot, raisins, and dates., beans, oatmeal and sweet potatoes
     + dark green leafy vegetables (broccoli and Brussels sprouts) and citrus fruits are good sources of vitamin C
     + coffee and tea decreases absorption of iron
     + cooking in iron cookware especially acid based foods such as tomatoes adds iron to the diet
     + To assess the pt’s activity intolerance get the pt to tell the nurse what they could do six months ago and what they can do now.
   * diseases transferred via blood transfusion
     + Epstein Barr
     + HIV
     + CMV (cytomegalo virus)
   * Good sources of vitamin B12
     + Meats and dairy products
   * Normal range for folic acid – 1.8-9 mg/ml
   * Normal range for vitamin B12 – 200-900 pg/ml
   * Drugs such as methotrexate, oral contraceptive, anti-seizure drugs and alcohol affect the absorption of folic acid
   * Pernicious anemia
     + Lack of intrinsic factor which results from atrophy of the stomach wall
     + Without the intrinsic factor, vitamin B12 cannot be absorbed in the small intestine
     + Vitamin B12 combines with the intrinsic factor in the stomach and is then carried to the ileum where it is absorbed into the blood stream
     + Must be administered by a deep IM root. Preferred sites are the ventral gluteal and dorsal gluteal.
       - Laying the pt on the stomach with toes pointed inward promotes comfort with ventral gluteal.
     + S/SX🡪 numbness and tingling r/t loss of intrinsic factor and cognitive problems and depression.
     + Urinary B12 Levels🡪Measured after the injection of radioactive vitamin B12
       - 24-48 hour urine specimen is collected after administration of an oral dose of radioactively tagged B12 and injection of non-radioactive B12
       - If it is healthy it is excess is excreted in the urine.
       - If intrinsic factor is missing it is excreted in the feces.
       - Do not take laxatives before test
       - NPO 8-12 hours before test.
     + Water soluble vitamin
   * G6PD deficiency anemia
     + X-linked recessive
     + African Americans
     + Self limited as soon as the causative agents withheld
       - Sulfa drugs
       - ASA
       - Thiazide diuretics
       - Vitamin K
   * Aplastic anemia
     + Pt are severely immunocompromised and at risk for infection and possible death related to bone marrow suppression and pancytopenia
       - Strict aseptic technique
       - Reverse isolation
     + Pt is at risk for bruising and bleeding tendencies
     + Assessment for potential of bleedings take priority but I&O is also important
   * Hemolytic anemia
     + RBC destruction precipitated by medication such as cephalosporin’s sulfa drugs, rifanpin methyldopa, procainamide, quinidine, and thiazides.
   * Purpura
     + Characterized by hemorrhages in the skin, mucous membranes, internal organs, and other tissue.
     + Numerous petechiae result in a reddish, bruised appearance
   * Administering pack red blood cells
     + Stay with pt for 15 minutes
     + Receiving two units
       - Two qualified people such as two RN or MD and RN to compare the name on ID and blood bag
       - One unit should infuse in four hours are less to avoid the risk of septicemia.
       - VS assessed before blood transfusion begins and after first 15 minutes
         * Then every 1 hour until complete
     + Reactions
       - Stop the transfusion
       - Keep IV open with NS infusing
       - Notify doctor and blood bank
       - Collect blood and urine samples to send to the lab
   * Sickle cell anemia
     + Pt needs to drink plenty of fluids when outside in hot weather to avoid becoming dehydrated
     + Avoid high altitudes such as mountains, where oxygen levels are low and may precipitate a crisis.
     + Pregnancy increases the risk of a crisis
     + Can fly on commercial airlines
   * Epigen
     + Stimulate the production of the RBC and causes HCT to rise
     + Elevation of HCT causes the BP to increase🡪monitor BP
     + Administered to decrease the need of a blood transfusion
     + Should be administered through the IV line without any other medication to avoid a reaction.
     + Monitor HCT levels for a rise of 4 points in two weeks🡪not good
     + Can cause dizziness and H/A secondary to HTN
   * Macrocytic anemia
     + Can result from a deficiency in vitamin B12 or vitamin C
       - Assess for peripheral neuropathy
       - Instruct the client in self care activities for their diminished sensation to heat and pain.
         * Using a heating pad at a lower heat setting
         * Making frequent checks to prevent against heat trauma.
2. Platelet Disorders
   * Protamin sulfate
     + a dose of 0.5mg reverses a 100 unit dose of heparin in 20 minutes
     + should be IV push slowly
     + adverse effects
       - hypotension
       - dyspnea
       - bradycardia
       - anaphylaxis
   * Heparin
     + Cephalosporin’s and PCN potentiate the effects
     + Two nurses should check the dose because a dose error can cause hemorrhage
   * Platelet counts
     + Platelet count of 30,000-50,000 will be susceptible to bruising with minor trauma.
       - Pad areas that the pt might hit may help prevent minor trauma
     + Platelet count of 15,000-30,000 may result in spontaneous petechiae and bruising especially on the extremities.
       - May focus 🡪 Assess for new spontaneous petechiae.
       - When the count is lower than 20,000 the pt is at risk for spontaneous bleeding from the mucous membranes [oral, nasal, ear, and rectal] and intracranial bleeding.
         * Severe H/A occurs with intracranial bleed
     + When the platelet count is less the 150,000 prolonged bleeding can occur with trauma, injury or straining [such as the valsalva maneuver]
     + Semi-fowlers position [but should change positions to promote circulation
     + Bag containing PLT needs to be gently rotated to prevent clumping
   * Idiopathic thrombocytopenia purpura
     + Hallmark signs
       - Recent viral infection in a female pt between the ages of 20-30 with a history of SLE and an insidious onset of diffused petechiae.
       - It is important to ask if the pt recent menses has been lengthened or heavier.
     + Treated with steroids
       - Prednisone
         * n/v, peptic ulcers are GI adverse effects of the prednisone so take with food
         * weight gain, retention of sodium and fluids with hypertension, cushinoid features, low serum albumin level, suppressed inflammatory processes with masked symptoms, and osteoporosis
         * diet high in protein, potassium, calcium and vitamin D is recommended
         * best exercises for females walking weight lifting
   * Thrombocytopenia
     + Nurse should asses for cerebral bleeding by checking VS and performing neuro checks
   * Bufferin
     + Contains ASA, anti –coagulant
     + Ice pack on area promotes vasoconstriction
     + Luke warm water promotes vasodilation
   * Bradycardia & decreased PaCO2 is a late symptom of hemorrhage
   * Splenectomy
     + Deep breathing
     + High risk for hypovolemia and hemorrhage
     + Dressing should be checked often if drainage noted circle it to determine how fast bleeding is occurring
     + NG placed to decrease abdominal distention
     + Prone to infection
   * DIC
     + Later signs
       - Severe shortness of breath, hypotension, pallor, petechiae, hematoma, orthopnea, hematuria, vision changes, and joint pain
       - Does not respond to Coumadin
       - Administer heparin
       - Replace depleted blood products
       - Internal bleeding
         * Causes dilation and distention as the blood collects in the peritoneal cavity
         * Tachycardia and hypertensive
3. WBC disorders
   * Increase fluids to prevent dehydration with a elevated temp
   * Enlarge spleen 🡪 avoid contact sports due to an increase risk for injury
   * Leukemia
     + Manage and prevent infection
     + Maintain skin integrity
     + Prevent bleeding, monitor for bleeding
     + Flowers, herbs, and plants should be avoided
     + Needs to get out of bed to increase activity and improve tidal volume
     + Acute myeloid leukemia (AML)
       - Bleeding and infection are major complications
     + Chronic Myeloid Leukemia (CML)
       - Confusion and SOB
     + Acute lymphatic leukemia
       - Peak at 4 years of age
       - Uncommon after 15 y/o
       - Risk for infection
       - Place in private room
     + Chronic Lymphatic Leukemia
       - Unintentional weight loss, fever, night sweats, enlarged painful lymph nodes, spleen and liver
     + Mucositis
       - Rinse mouth with saline or baking soda solutions – effective and moisten the mouth
       - Brush after each meal
   * Neutropenia
     + Risk for infections
       - Bacterial of the respiratory and GI tract
     + Most common source of infection is their own nonpathogenic normal flora
     + May need to wear a AEPA filter mask
   * Bone marrow aspirations
     + Hold pressure of the aspiration site for 5 to 10 minutes
     + Recheck every 10 to 15 for bleeding
   * Combination chemo therapy is multiple drugs
4. Lymphoma
   * Hodgkin’s disease
     + Signs
       - Painless enlarges cervical lymph nodes, tachycardia, weight loss, weakness, and fatigue, night sweats
       - Hepatomegaly is a late stage manifestation
     + Sterile technique with lymph node biopsy
     + A definite diagnosis is made if Reed Sternberg cells are found in the biopsy
     + Herpes zoster are common in clients
     + Mild anemia is common
     + B symptoms
       - A temp > 100.4, perfuse night sweat, unintentional weight loss
       - More common in advanced stages
5. Shock
   * Priority intervention is correcting and maintaining adequate tissue perfusion
   * Hypovolemic shock
     + s/sx
       - systolic BP less than 90
       - narrowing pulse pressure
       - tachycardia
       - Tachypnea
       - Cool, clammy skin
       - Decrease urine output
       - Mental status changes such as irritability and anxiety
   * Dopamine
     + Slightly increase the HR and improves contractility to increase CO and improve tissue perfusion
     + Continuous BP checks
   * Septic shock
     + Warm, flushed skin, fever with restlessness and confusion, decreased BP with Tachypnea and tachycardia, and increased or normal urinary output, and N/V/D
     + ARDS is a complication of

Chapter 4

1. Upper resp tract infection
   * Antihistamines
     + Can cause drowsiness
   * Intranasal inhaler
     + Important to close one nostril
     + Should shave before use
     + Should blow the nose before instilling the nose drops
   * Chronic sinusitis
     + Take hot showers in the morning and evening to promote drainage
   * Rhinitis
     + Determine triggers
   * Sudafed
     + Adverse affects
       - Restlessness, dizzy, anxiety, insomnia, weakness, tachycardia, HTN, palpitations
2. Nasal surgery
   * Epitaxis
     + Nose bleed
     + Lean forward not back in sitting position
     + Firm pressure to soft portion of the nose for 10 min
     + Don’t swallow
     + Bc of nasal packing blood may run down the throat
     + Accumulation of blood in the stomach can cause n/v
   * Avoid valsalva maneuvers
   * Avoid aspirin 2 weeks before surgery
   * Post op
     + Ineffective bleeding patterns rt nasal packing
     + Applying cool compresses decreases swelling and pain
     + After removing nasal packing pt should apply water soluble jelly to the nares to lubricate and promote comfort
3. Cancer of the larynx
   * Laryngectomy
     + Freq suctioning to maintain patency
       - Do not suction for longer than 10 sec
       - Sterile cath each time
     + Elevate the HOB 30- 40 degrees bc if decreases swelling and facilitates breathing
     + Discharge instructions
       - Bedside humidifier is recommended
       - High fluid intake
   * Hoarseness for longer than 2 weeks is a sign of laryngeal cancer
     + Assess for lump in the neck of throat, persistent sore throat, cough, ear ache, pain, and difficulty swallowing
   * Priority pt
     + 85 w bacterial pneumonia, temp of 102.2, SOB
     + 60 w chest tube 2 days post op, wanting pain meds
     + 56 w emphysema schedule for med, in no distress
     + 35 w suspected TB complaining of a cough
4. Pneumonia
   * Elevated HOB
   * Cough and deep breath
   * Risk factors
     + Elderly
     + Smoking
     + URTI
     + Malnutrition
     + Immunosuppression
     + Chronic illness
   * Priority assessment 🡪 breath sounds and cap refill
   * Sputum specimen before antibiotics
   * Aminoglycoside
     + Increase the risk of acute tubular necrosis
       - Monitor Creatinine
   * Chest pain in pneumonia is generally caused by friction between the plural layers
   * Pain is more severe more inspiration than on expiration
   * Splinting of chest will decrease discomfort of coughing
   * Aspirin is administered
   * Colase is a stool softener (mild constipation)
   * Risk for dehydration bc of diaphoresis
5. TB
   * s/sx
     + Anorexia and weight loss, fatigue, low grade fever, night sweats
   * Streptomycin
     + Can cause hearing loss & vertigo, tinnitus, ataxia
   * Airborne, droplet
   * Combination drug therapy
   * PPD
   * Mantoux test
     + Adm intradermal
     + Positive = exposed
   * INH
     + Interferes with birth control
   * TB can be controlled but never complete cured
   * Rifapin
     + Hepatotoxic drug
     + Cause urine to turn orange
6. COPD
   * Pursed lip breathing
     + Promotes CO2 elimination
   * Co2 retention
     + High CO2 causes flushing, drowsy and lethargic
   * High risk for resp infection
   * Will use a low flow oxygen supplement 1-2 liters
   * Cigarette smoking is the primary cause
   * Right sided heart failure is a complication
   * Diet
     + High cal
     + High protein
   * Theophylline
     + Bronchodilator
7. Asthma
   * Meter dose inhaler
     + MDI
     + Deep breath and then hold breath for 10 sec
     + Shake before use
     + Tilt head slightly back
     + Wait 1 – 2 min between puffs
     + Rinse mouth
   * Acute attack
     + Diminished or absent breath sounds indicating lack of air and impending resp failure
   * Albuterol
   * Corticosteroids
     + Can lead to oral thrush
8. Lung cancer
   * Assess bilateral breath sounds for a pneumothorax (complication of central line insertion)
     + Central line 🡪 chest x-ray to check placement
   * Lobectomy
     + Malnutrition is a complication post op
     + Assess pain management
   * Epidermoid cancer
     + Involves the larger bronchi
     + Associated w Heavy smoking
   * Crackling sensation on the skin surface is subQ emphysema
     + Not unusual when you take a chest tube out
     + If it progresses can be serious esp if the neck is involved
       - trach may be needed
   * chest surgery 🡪 raise affected arm over head
   * there should never be constant bubbling in the water sealed bottle
     + normally the bubbling is intermittent
     + notify doc
     + removal of chest tube
       - a petroleum gauze is placed over the wound and covered with dry sterile dressing
9. chest trauma
   * Tension pneumothorax
     + Unilateral, diminished, or absent breath sounds
     + Tracheal deviation is an inconsistent and late finding
   * May lead to resp failure
   * Pneumothorax
     + Collapse lung
     + s/sx
       - sudden sharp chest pain, Tachypnea, tachycardia, anxiety and restlessness
     + chest tube inserted to reinflate lung
10. ARDS
    * Prone position
    * Can cause renal failure & SUPERinfection
    * Major risk factor
      + Hypovolemic shock
    * Hallmark sign of early ARDS
      + Refractory hypoxemia
    * PaCO2 🡪 35-45
    * pH 🡪 7.35-7.45
    * PaO2 🡪 80-100
    * ET intubation & mechanical ventilation are required
      + Checking placement of ET tube
        - Assess bilateral breath sounds
    * Risk factors
      + Septic shock and GI aspiration

Chapter 5

1. Disorders of oral cavity
   * Fractured mandible
     + Jaw will be wired
     + Should always have wire cutters and suction equipment at bed side in case of resp distressed or they begin to cough or vomit
     + Priority 🡪 AIRWAY
     + Placed on the side with the head slightly elevated
   * Stomatitis
     + Inflammation of the mouth
     + Significant discomfort with impacts the ability to eat or drink
     + Eat soft bland foods
     + Avoid temp extremes
   * Ineffective endocarditis
     + Hx of mitro valve prolapse – dentist prophylactic antibiotics
   * Paroitis
     + Inflammation of the parotid
     + s/sx 🡪 lack of saliva, pain near the ear
     + usually in cases of dehydration combined with poor oral hygiene and the pt being NPO for a long time
   * peptic ulcer disease
     + the nurses sees these in order by priority
       - PUD pt with sudden onset of stomach pain (indicative of perforated ulcer)
       - Pt requesting pain meds after repair of fractured jaw
       - Pt with suspected gastric cancer who is NPO
       - Pt awaiting surgery for hiatal hernia repair
     + Black tarry stools 🡪 warning sign of bleeding
     + Odor of the stool is VERY offensive
     + Zantac
       - Reduce gastric acid secretions
       - Take at bedtime
     + Prilosec
       - Helps ulcers heal quickly in four to 6 weeks
     + Carafate
       - Protects the ulcer surface against acid, bile, and pepsin
     + Antacids
       - Reduce acid concentration and help reduce symptoms
       - Cause constipation – increase fiber
       - Most effective if taken 1 to 3 hours after meals and at bedtime
     + Eat small frequently meals through the day
     + After awaking during the night the pt should eat a small snack and return to bed keep the HOB elevated
   * GI endoscopy
     + Sudden spike in temperature following may indicate perforation of the GI tract
       - Other signs
         * Sudden onset of the pain, ridged board like abdomen, developing signs of shock
       - Medical emergency bc peritonitis develops quickly
   * Gastric ulcer
     + Signs 🡪 vomiting and weight loss, blood in stools, complaints of burning epigastric pain
     + Gastroscopy
       - Complication is perforation, aspiration
       - Sore throat is common
       - Usually sedated
   * Duodenal ulcers
     + Complain of pain that occurs during the night and is relieved by eating
2. Cancer of the stomach
   * + Gastrectomy
       - 12-24 hours after gastric drainage is normally brown
       - N/V or abdominal distention indicates that gas and secretions are accumulating indicated that the drainage system is not working properly
       - Placed in low-fowlers post op
       - Post op
         * Eat small frequent meals
     + Gastric resection
       - Food moves rapidly from the remaining stomach into the intestines
       - Dumping syndrome can occur
         * Reduce risk 🡪 carbohydrates are restricted, lying down for 30 min after a meal is encouraged to slow the movement off food bolus; fluids are restricted
         * Symptoms usually disappear by 6 to 12 months after surgery
         * Diet high in protein and fat, low in carbs
3. GERD
   * Do not lie down for about 2 hours after eating to prevent reflux
   * Avoid caffeinated beverages and milk
   * Instruct to follow high protein low fat diet
   * Upper GI series
     + Involves administering a barium which must be promptly eliminated from the body bc it may harden and cause obstruction
     + Take laxatives to stimulate BM
   * Eating substances that decrease lower esophageal sphincter pressure causes heartburn
   * Fatty foods, chocolate, peppermint, and alcohol should be avoided
   * Can develop pulmonary symptoms such as coughing wheezing and dyspnea
   * Can cause painful or difficult swallowing
   * Urecholine
     + Cholinergic drug
     + Increase LES pressure and facilitate gastric emptying
     + Adverse effects
       - Urgency, diarrhea, abdominal cramping, hypotension, and increase salivation
   * Refluxes worsens when the stomach is over distended with food
     + Important to eat small frequent meals
     + Fluid intake should be decreased during meals to decrease abdominal distention
   * Hiatal hernia
     + Heartburn is the most common symptoms
     + Dysphasia and regurgitation of stomach contents
     + Obesity contributes to the development
     + Other causes 🡪 straining, frequent heaving lifting, and pressure
     + Avoid the recumbent position immediately after meals
     + Avoid bedtime snacks, high fat foods, and carb beverages
     + Reglan
       - Increases esophageal sphincter tone
       - Facilitates gastric ending which reduces the incidence of reflux
       - Can cause sedation
     + Tagamet
       - Decreases the quantity of gastric secretions
       - Used to prevent or treat esophagitis and heart burn
   * Bending especially after eating can cause reflux

Chapter 6

1. Cancer of the colon
   * Annual fecal testing for occult blood should begin at age 50
   * Digital rectal exams in men beginning at 50 to screen for prostate cancer
   * Hx of inflammatory bowel disease is a risk factor
   * Colorectal cancer
     + s/sx
       - asymptomatic
       - vary according to location 🡪fatigue, weight loss, iron deficiency anemia
   * abdominal peritoneal resection with a colostomy
     + assist with warm sitz bath to clean incision
     + side lysing position to promote comfort
     + dark red to purple stoma would indicate inadequate blood supply
     + the colostomy would not typically begin functioning for 2-4 days after surgery
     + mild edema and a slight oozing of blood is normal in the early post op
     + karaya and stomahesive are both effective agents for protecting the skin around a colostomy
       - keeps the skin healthy and prevents irritation
     + drink 2-3 L of fluid per day
2. hemorrhoids
   * associated with prolonged sitting or standing, portal hypertension, chronic constipation, prolonged increased intra-abdominal pressure (Prego), and a strain of vag delivery
   * hemrrhoidectomy
     + prone or side lying
     + adequate cleaning of the anal area is difficult but essential
       - sitz baths assist
3. inflammatory bowel disease
   * long term sulfasalazine therapy
     + pt may develop folic acid deficiency
     + can cause dizziness
     + adequate fluid intake prevents crystalluria and stone formation
     + gives urine a orange yellow color
   * ulcerative colitis
     + stressful and emotional events can exacerbate
     + primary symptoms is diarrhea
       - excessive diarrhea causes significant depletion of the body stores of sodium, potassium and fluid
     + treated with steroids
     + food will be withheld with severe symptoms to rest the bowel – pt placed on TPN
       - weight daily
       - monitor IV fluid rate hourly
       - monitor VS
     + diet
       - well balanced high protein, high calorie, low residual (high residual foods – whole wheat grain, nuts, raw fruits and vegetables)
   * crohn’s disease
     + can cause hypoalbumnemia
     + priority goal – promote bowel rest
       - decrease activity encouraging rest
       - NPO
4. Intestinal obstruction
   * s/sx in small intestine
     + projectile vomiting, rapid developing dehydration, increased bowel sounds (high pitched and tinkling)
   * intestinal decompression is accomplished with a cantor, Harris, or miller-Abbott tube
     + remove fluid, gas which relieves the pressure
   * nasoenteric tube
     + After placement, place pt in right side lying
     + Weighted with mercury
     + Attached to suction
     + Obstruction of tube can lead to peritonitis
5. Ileostomy
   * Can be worn for 4-7 days unless the pouch leaks
     + If leakage, promptly change to avoid skin irritation
   * Neomycin
     + Decreases intestinal bacteria thereby decrease the potential for peritonitis and wound infection
   * High priority outcome for ileostomy surgery is F&E balance
   * Irritating to the skin bc of high concentration of digestive enzymes
   * NO NUTS
   * Drains stool at frequent intervals
     + A decrease in drainage and pain could mean obstruction
     + Other symptoms of obstruction would be vomiting and watery discharge with no stool
6. TPN
   * If infection is suspected obtain a specimen
   * Solution is usually a hypertonic dextrose solution
   * Goal -🡪 meat clients nutritional need
   * During administration should be monitored for hyperglycemia
   * Complications
     + Central line
       - Infection, air embolus
       - Sterile technique
       - Covered with a air occlusive dressing
     + Leakage or cath puncture
     + Take VS every 2 to 4 hours
     + Glycosuria is to expected during the first few days until the pancreases adjusts
     + Gradual weight gain is expected
     + Too rapid infusion can lead to circulatory overload
7. Diverticular disease
   * Diet 🡪 high fiber
     + Increase fluid intake – minimum of 2000 ml day
   * Elevated WBC is normal
   * Barium enemas and colonoscopy are contraindicated
     + Can lead to perforation or peritonitis
   * Should refrain from any activities such as lifting, straining, or coughing – increase intra-abdominal pressure and precipitate an attack
   * NOT CURABLE
   * Treated with bulk laxatives like Metamucil
8. Appendicitis
   * Appendectomy
     + Post op
       - Clean gently
     + Pre op
       - NPO
     + Noting the clients first BM after surgery is important
     + Drains inserted post op when an abscess was present
   * Pain at McBurney’s point🡪 lies between the umbilicus and right iliac crest
   * Complications
     + Perforation, peritonitis and abscess formation
9. Inguinal hernia
   * Strangulated hernia
     + symptoms
       - severe abdominal pain
     + without immediate interventions – necrosis and gangrene may develop
       - surgery is required
   * inguinal herniorrhaphy
     + post op
       - ice bag to scrotum will decrease pain and edema
     + complications
       - inability to void
10. dehiscence
    * cover with sterile dressing moistened with saline

Chapter 7

1. Cholecystitis
   * Morphine
     + Causes biliary spasm🡪 should not be ordered for Cholecystitis
     + Preferred opioid is Demerol. [can cause seizures]
       - Chapter 7 ?? # 2 and 10 contraindicates each other [pg. 469]
       - Also # 20
     + Dilaudid can also be administered [IV for rapid relief]
   * Bile is created in the liver, stored in the gallbladder, and released in the duodenum giving stool its brown color.
     + A bile duct obstruction can cause pale colored stools.
     + S/SX: RUQ pain, fever, from inflammation or infection, jaundice from elevated serum bilirubin levels, and nausea after fatty meal.
   * Bile Duct exploration
     + A T-Tube is inserted in the common bile duct to maintain patency until edema from the duct exploration subsides.
     + Bile should be gold to dark green and the amount of drainage should be closely monitored to ensure tube patency.
     + The T-Tube should drain approximately 300-500mL in the first 24hr and after 3-4 days the amount should decrease to <200mL in 24hr.
       - If a sudden ↓ in drainage the nurse should check for patency [for obstruction]
   * Cholecystectomy
     + Should follow a low-fat diet
       - Lean meats🡪 beef, lamb, veal, and well-trimmed lean ham and pork [low in fat]
       - The amount of fat allowed in a pt’s diet depends on how the pt can tolerate fat.
     + Post op
       - Liquid diet (immediately) – then resume normal diet as tolerated
     + Right shoulder pain from gas
2. Pancreatitis
   * Elevated amylase & lipase
   * Ranson’s criteria
     + Clinical predictor scale used to assess the severity of acute pancreatitis
   * Alcoholism is a major cause
   * Life threatening shock is a potential complication
   * Greys turner sign – bluish discoloration in the flank area cause retroperitoneal area
     + Need to turn the pt will be on the back
   * Diet – increase carbohydrate
   * Acute necrotizing pancreatitis
     + NPO
     + TPN feedings
     + Fat necrosis occurring with AP can cause hypocalcemia requiring calcium replacement
       - Jerking a muscle twitching, numbness and fingers and lips, irritability
   * Lasix & crash dieting and binge eating can cause
   * Imipenem
     + Indicated in the treat of with necrosis and infection
   * Morphine, Dilaudid are the opioids of choice
     + Morphine can cause spasms of the sphincter of oddi
     + Demerol via what we learned last semester
   * Complications
     + Respiratory problem, pneumonia, atelectasis, plural effusion
   * Symptoms
     + Abdominal pain
       - Position side lying or semi-fowlers
     + Daily weights obtained
   * Porpantheline
     + Anticholenergic , and spasmodic
     + Decreases vagal stimulation and pancreatic secretions
     + Assess bowel sounds – absent could mean paralytic ileus (contraindicated with a paralytic ileus)
   * Chronic pancreatitis
     + Destruction of pancreatic tissue
     + Requires pancreatic enzyme replacement
       - If enzymes are adequate the stool will be relatively normal
       - Increase in odor or fat content would indicate the need for dosage adjustment
     + Can develop DM
3. Viral hepatitis
   * Tylenol – toxic to liver
   * Hep B
     + Sexual transmitted
     + STD
     + Interferon
       - Causes flu like adverse affects
         * HA, nausea, fever, fatigue
   * Hep A/E
     + Poor sanitary conditions
   * BOWEL TO VOWEL
     + A & E 🡪 thru the feces
     + B C D 🡪 blood, saliva, bodily fluids
   * Excessive bilirubin
     + Turn skin a sclera yellow
     + Urine dark and frothy
   * Fatigue & malaise are common complaints
   * Treatment
     + Bedrest with bathroom privileges
   * Prothrombin time may be prolonged
     + Decrease absorption of vitamin K
   * Diet
     + Low fat
     + High protein
     + High carb
4. Cirrhosis
   * Hepatic encephalopathy
     + Caused by an increased ammonia level
     + Protein is restricted in an effort to decrease ammonia
   * Asterixis
     + Flapping tremor
     + Symptom of increased ammonia levels
   * Lactolose to reduced ammonia
     + Causes you have BM to get rid of ammonia levels
     + Not administered with antacids
   * High Ammonia levels can cause the hepatic encephalopathy and coma
     + Monitor LOC
   * Hypocalcemia
     + Precipitating factor
   * Portal hypertension and hypoalbunemia
     + Result of cirrhosis
     + Causes a fluid shift into the peritoneal space causing Ascites
   * Constipation leads to increased ammonia levels
   * Early manifestation are suddle
     + Anorexia, N/V, change in bowel pattern
   * Aldactone
     + Treats Ascites
     + Potassium sparing diuretic
     + Monitor for hyperkalemia
       - Abdominal cramping, diarrhea, dizzy, HA, and rash
   * Diet
     + High cal, high carb
   * Ascites
     + Elevate the HOB to expand lungs
     + Can compromise the diaphragm and cause resp problems
     + Greatly increases the risk of skin breakdown
     + Freq reposition – fowlers is the preferred position
     + Hypoalbunemia mechanism underlying Ascites formation
   * Esophageal varicies
     + Drug treatment – octreotide, vasopressin, NITRO, or beta blockers to lower portal hypertension and to decrease the varicies
     + Sengstaken-blakemore
       - Scissors at the bedside in case of a airway obstruction
   * Should avoid constipation and straining to avoid hemorrhage
   * Has bleeding tendencies bc of the livers inability to produce clotting factors
   * Pericentesis
     + Empty bladder
     + High fowlers

Chapter 8

1. Thyrotoxicosis
   * Graves disease is most common
   * Hypermetabolism
   * Tachycardia and fine muscle tremors, weight loss, alogomenorria, decreased libido
   * hypothyroidism
     + bradycardia, decreased energy, lethargy, memory problems, weight gain, course hair, constipation, menorrhagia
   * PTU – med for graves disease
     + Adverse affects
       - Leucopenia, Agranulocytosis
         * Promptly report sore throat and fever
2. Refer to orange book page 441
3. DM
   * Lantus
     + Long acting insulin
     + Do not mix with other insulins
     + Adverse affect
       - Lactic acidosis
         * s/sx – weakness, fatigue, usually muscle pain, dyspnea, stomach discomforts, dizziness, lightheadedness, bradycardia, cardiac arrhythmias
   * check feet
   * kussumauls respirations – type 1
   * prone to hypertension
   * lispron (humalog)
     + starts acting in 10 to 15 min
     + last 4 hours
   * complications
     + renal failure
   * ace inhibitors increase renal blood flow and are affective in decrease diabetic neurophythy
   * steroids can cause hyperglycemia
   * insulin need increase during illness
4. pituitary adenoma
   * pituitary tumors can cause an over secretion of ACTH, GH, or TSH
     + overproduction of ACTH 🡪 cushings
     + overproduction of GH 🡪 giant
     + overproduction of TSH 🡪 hyperthyroidism
     + overproduction of prolactin 🡪 galactorrhea
       - overflow of breast milk
       - men 🡪 decrease libido and impotence
   * transspenoidal hypophysectomy
     + cellaterica is entered from below the sphenoid sinus
     + Removes large invasive pituitary tumors
     + Nursing care
       - Monitor CSF leakage
         * Bedrest with HOB elevated to decrease pressure on graft site
       - Signs of infection
       - Hypoglycemia
     + The dural opening 🡪 repaired with a patch of muscle or fascia taken from the abdomen or thigh
     + DI is complication
       - Vasopressin
5. Addisons disease
   * Decrease in Adrenocortical hormone
   * s/sx
     + fatigue, n/a/v/d, abdominal pain, decreased LOC, weight loss, dry skin, decrease body hair, increase skin pigmentation
   * adrenal crisis
     + hypotension, rapid weak pulse, rapid resp rate, pallor, extreme weakness, hyperthermia
   * each liter of 5% dextrose in NS contains a 170 calories
   * ↑
     + K+
   * ↓
     + BS
     + NA
   * Lifetime steroid replacement
   * Medalert bracelet should be worn
   * Decrease renal perfusion and excretion of waste products which causes increase BUN
   * Cortone
   * Floranef
   * Acetate
     + Adm once a day
   * Steroids can cause GI irritation should take with meals
6. Cushings
   * Classic sign
     + Bruising from increased skin and blood vessel fragility
   * Excessive cortisol secretion
   * Skin become thin and fragile
   * S/SX
     + Weight gain, mood swings, and slow wound healing, moon face, buffalo hump, central obesity, thin musculature, HTN
   * Causes:
     + Tumor
     + Overstimulation of pituitary gland
     + Use of prescription steroid drugs
   * ↑
     + Na
     + BP
   * ↓
     + K+
   * Diet
     + Restrict sodium
     + Supplemental protein intake
     + Potassium rich foods
   * Complication
     + Osteoporosis
   * Bilateral Adrenalectomy
     + Affective splinting for a high incision reduces stress on the incision line decreasing pain and increasing the ability to breath affectively
     + Priority for first 24 hours
       - Prevent adrenal crisis
     + Requires lifelong adrenal hormone replacement
     + If unilateral
       - Pt gradually reestablish a normal secretion pattern
7. Perimenopausal or menopausal syndrome
   * Deficiency of estrogen
   * Menopause occurs from ovarian follicle ceasing to produce estrogens
     + s/sx
       - hot flashes, HA, mood changes with irritability and anxiety
         * estrogen is effective in the control of hot flashes
   * complications of hormone replacement therapy
     + endometrial or uterine cancer
       - s/sx
         * irregular vag bleeding
8. pheochromocytoma
   * release catecholamines
     + both epinephrine and norepinephrine
     + causes hypertension that is resistant to treatment
   * post op
     + maintain normal BP