CSON Need to Know Medications

Cardiovascular Drugs – Antihypertensives

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Ace Inhibitors (-pril) *IM1 *IM2 *IM3 *IM5 *IM7	captopril (Capoten) enalapril (Vasotec) lisinopril (Prinivil, Zestril)	**Used to treat:** • Hypertension • Heart failure _____ **Contraindications:** • Pregnancy • History of angioedema **Use with caution:** • Black patients are at increased risk of angioedema • Ischemic heart disease • Renal dysfunction	**Severe adverse effects:** • Angioedema • Acute renal failure • **BBW**: Fetal toxicity **Most common side effects:** • Dry cough • Hypotension	**Assess/Monitor** • Obtain BP before administering; notify provider if Systolic BP <90 mmHg • Renal/liver function • Serum electrolytes • Signs of angioedema of the face, lips, throat, or intestines **Patient Education** • Change position slowly to prevent orthostatic hypotension
Beta Blockers (-olol) *IM1 *IM2 *IM3 *IM5 *IM6 *IM7	atenolol (Tenormin) metoprolol (Lopressor) propranolol (Inderal) *carvedilol (Coreg)	**Used to treat:** • Hypertension • Heart failure • Angina pectoris • Dysrhythmias • Anxiety • Coarctation of aorta _____ **Contraindications:** • Decompensated heart failure • Severe bradycardia -2nd or 3rd degree heart block • History of angioedema **Use with caution:**	**Severe adverse effects:** • Bradycardia • Heart failure • Hypoglycemia • **BBW: rebound hypotension if stop abruptly** **Most common side effects:** • Bradycardia • Hypotension • Dizziness • Fatigue **Pediatrics:**	**Assess/Monitor** • Obtain BP before administering; notify provider if Systolic BP <90 mmHg • Obtain HR before administering; hold typically if HR <60 beats/min **Patient Education** • Change position slowly to prevent orthostatic hypotension • Monitor blood glucose carefully if diabetic as beta=blockers may mask symptoms of hypoglycemia • Do not discontinue this drug abruptly. D/C may cause rebound hypertension

		• Bradycardia • Diabetes	• Flu-like symptoms • Nausea • Vomiting • Dry mouth • Blurred vision • Depression	
Angiotensin Receptor Blockers (-sartan) *IM1 *IM2 *IM3 *IM7	losartan (Cozaar) olmesartan (Benicar) valsartan (Diovan)	**Used to treat:** • Hypertension • Heart failure • Kidney disease (slows diabetic nephropathy) _____ **Contraindications:** • Pregnancy • Lactation • Bilateral renal stenosis or only one kidney • History of angioedema **Use with caution:** • Other antihypertensives (may cause hypotension) • Lithium (may alter sodium balance leading to lithium toxicity)	**Severe adverse effects:** • Angioedema • **BBW: Pregnancy - toxicity or death of fetus** **Most common side effects:** • Hypotension • Dizziness, lightheadedness	**Assess/Monitor** • Obtain BP before administering; notify provider if Systolic BP <90 mmHg **Patient Education** • Change position slowly to prevent orthostatic hypotension • Often given in combination with hydrochlorothiazide

Cardiovascular Drugs - Antihyperlipidemic

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Statins (-statin) *IM1	atorvastatin (Lipitor) lovastatin (Mevacor)	**Used to treat:** • Hyperlipidemia _____ **Contraindications:**	**Severe adverse effects:** • Rhabdomyolysis • Hepatotoxicity	**Assess/Monitor** • Lipid panel • Liver function

*IM3	rosuvastatin (Crestor) simvastatin (Zocor)	• Acute liver disease • Pregnancy • Breastfeeding **Use with caution:** • Elderly patients • Renal failure • Liver failure	**Most common side effects:** • Diarrhea, abdominal pain, constipation • Muscle or joint pain • Nasopharyngitis	• Serum creatinine kinase • Presence of muscle pain **Patient Education** • Avoid alcohol while taking this medication • Immediately report unexplained muscle pain, tenderness or weakness • Consult provider before starting new medications, due to numerous drug interactions

Cardiovascular Drugs - Diuretics

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Furosemide (-semide) *IM1 *IM2 *IM3 *IM4 *IM5 *IM7	furosemide (Lasix)	**Used to treat:** • Edema associated with heart failure, renal failure, and cirrhosis of the liver _____ **Contraindications:** • Anuria **Use with caution:** • Electrolyte imbalances • Renal failure	**Severe adverse effects:** • Hypotension • Ototoxicity • **BBW: Fluid & electrolyte loss, hypokalemia** **Most common side effects:** • Electrolyte imbalances	**Assess/Monitor** • Obtain BP before administering; notify provider if Systolic BP <90 mmHg • Potassium is quickly depleted – assess for signs of hypokalemia (weakness, fatigue, increased PVCs on cardiac monitor) • Serum potassium, sodium, and magnesium levels • Urine output and kidney function (creatinine, BUN, GFR) • Monitor I&O and daily weight closely (to measure therapeutic fluid loss) **Administration** • Rapid IV infusion can cause ototoxicity **Patient Education**

				• Change position slowly to prevent orthostatic hypotension, especially with elderly • This drug will cause increased urine output • Take before 4:00 PM to avoid nocturia
Thiazides (-thiazide) *IM1 *IM2 *IM3 *IM5 *IM7	hydrochlorothiazide (HCTZ, Microzide) chlorothiazide (Diuril)	**Used to treat:** • Edema • Hypertension _____ **Contraindications:** • Anuria **Use with caution:** • Renal failure • Liver failure • If taking lithium • Sulfa allergy	**Severe adverse effects:** • Electrolyte imbalances • Hepatotoxicity • Renal failure • Pulmonary edema **Most common side effects:** • Photosensitivity • Hyperglycemia • Diarrhea, loss of appetite, nausea, vomiting • Dizziness	**Assess/Monitor** • Obtain BP before administering; notify provider if Systolic BP <90 mmHg • Monitor I&O and daily weight closely (to measure therapeutic fluid loss) • Presence/resolution of edema • Monitor electrolytes **Patient Education** • This drug will cause increased urine output • Take before 4:00 PM to avoid nocturia • Blood glucose may increase
Potassium sparing *IM2 *IM3 ***IM5** *IM7	spironolactone (Aldactone)	**Used to treat:** • Hypertension • Edema associated with renal failure, heart failure or cirrhosis of the liver _____ **Contraindications:** • Severe renal failure • Hyperkalemia **Use with caution:**	**Severe adverse effects:** • Arrhythmias • Hyperkalemia • Steven Johnson Syndrome (SJS) **Most common side effects:** Electrolyte imbalances	**Assess/Monitor** • Obtain BP before administering; notify provider if Systolic BP <90 mmHg • Serum potassium, sodium, and magnesium levels • Urine output and kidney function (creatinine, BUN, GFR) • Monitor I&O and daily weight closely (to measure therapeutic fluid loss) **Administration** • Available in tablets or suspension

		• Diabetes mellitus • Hepatic impairment		**Patient Education** • Change position slowly to prevent orthostatic hypotension, especially with elderly • This drug will cause increased urine output. • Take before 4:00 PM to avoid nocturia • Avoid salt substitute & foods high in potassium

Cardiovascular Drugs – Antiarrhythmic Agents

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Cardiac Glycoside (dig-) *IM1 *IM3 *IM5 *IM7	digoxin (Lanoxin)	**Used to treat:** • Atrial fibrillation • Heart failure • Ventricular rate control _____ **Contraindications:** • Ventricular fibrillation **Use with caution:** • Elderly patients • Renal impairment	**Severe adverse effects:** • Cardiac arrhythmias • Digoxin toxicity **Most common side effects:** • Fatigue • Bradycardia • Anorexia, nausea, vomiting	**Assess/Monitor** • Assess apical pulse for a full minute before giving; hold for HR <60 bpm • Electrolytes • Serum digoxin levels • Renal function • Signs of toxicity (abdominal pain, confusion, weakness, anorexia, nausea and vomiting, bradycardia, visual changes – blurred vision, green/yellow color disturbances) **Patient Education** • Report symptoms of digoxin toxicity • This mediation can increase the risk for falls

Class III Antidysrhythmic Potassium Channel Blocker *IM7	amiodarone (Cordarone, Pacerone)	**Used to treat:** • Atrial fibrillation • Ventricular rate control • Ventricular tachycardia • Ventricular Fibrillation • Supraventricular Tachycardia _____ **Contraindications:** • 2nd and 3rd degree heart block **Use with caution:** • Elderly patients • Hypotensive patients • Cardiogenic shock • Renal impairment • Patients taking Digoxin • Prolonged QT interval • Combining with a beta blocker can severely limit cardiac output	**Severe adverse effects:** • Sudden death • Life-threatening and recurrent ventricular arrhythmias. • Multiple organ toxicity	**Assess/Monitor** • Give with a 0.2-micron filter rapid IV push • Dilute with D5W • Monitor blood pressure, heart rate and rhythm frequently. • Perform continuous EKG monitoring during initiation and alteration of dosage. • Grapefruit juice can increase the levels and toxicity can result • Do not give with diuretics because it can increase the levels and toxicity can result

Cardiovascular Drugs – Anticoagulants/Antiplatelets

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Oral Anticoagulant (-arin) *IM1 *IM3 *IM7	warfarin (Coumadin)	**Used to treat:** • Prevention of blood clots for patients with atrial fibrillation • Pulmonary embolism • Venous thromboembolism _____	**Severe adverse effects:** • Hemorrhage • GI bleeding **Most common side effects:** • Minor bleeding or prolonged bleeding time	**Assess/Monitor** • Assess for signs of bleeding before administering • Most recent INR (therapeutic range is most often 2-3) • Signs of bleeding (black, tarry, or maroon stool, bruising, hematuria, bleeding gums)

		Contraindications: • Hemorrhage • Recent or potential surgery or other procedure with potential for bleeding **Use with caution:** • Vitamin k deficiency • Diabetes • Elderly patients • Renal impairment		**Administration** • Vitamin K is the reversal agent for warfarin **Patient Education** • Immediately report signs of bleeding • Immediately report any falls, especially if a fall results in hitting the head • Avoid excessive amounts of foods containing Vitamin K (such as leafy greens)
Parenteral Anticoagulant (-arin) *IM2 *IM3 *IM6 *IM7	heparin enoxaparin (Lovenox)	**Used to treat:** • Atrial fibrillation • DIC • Venous thromboembolism prophylaxis or treatment • Venous catheter occlusion • Warfarin bridging (anticoagulation before sending home on PO warfarin) _____ **Contraindications:** • Severe thrombocytopenia • Unctontrolled active bleeding **Use with caution:** • Severe hypertension • History of thrombocytopenia • Hepatic disease • Major surgery	**Severe adverse effects:** • Heparin-induced thrombocytopenia (HIT) • Anemia • Thrombocytopenia • Bleeding • **BBW: Enoxaparin - spinal/epidural hematoma** **Most common side effects:** • Increased liver function labs • Bruising	**Assess/Monitor** • Assess for signs of bleeding before administering • For Heparin – aPTT lab monitoring for titration • Platelet count • Hemoglobin (Hgb) and Hematocrit (Hct) • Liver function **Administration** • Heparin IV or SQ • Enoxaparin- abdominal subQ, avoid umbilicus area • Do not remove air bubble from prefilled enoxaparin syringe • Protamine sulfate is the reversal agent (antidote) **Patient Education** • Rotate injection sites • Report signs of bleeding

				• Monitor labs for low platelet count (thrombocytopenia)
Antiplatelet Drugs (no standard prefix/suffix) *IM1 *IM3 *IM4 *IM5 *IM7	aspirin (multiple brands) clopidogrel (Plavix)	**Used to treat:** • Acute MI • CVA (stroke) • Prevention of thrombus after coronary intervention • Peripheral arterial disease (PAD) **Pediatrics:** • Rheumatic fever • Kawasaki disease _____ **Contraindications:** • active bleeding **Use with caution:** • Patients taking PPIs • Before major surgery	**Severe adverse effects:** • Agranulocytosis (low neutrophil count) • GI Bleeding, GI Ulceration • Intracranial hemorrhage **Most common side effects:** • Rash • Diarrhea • Minor bleeding	**Assess/Monitor** • Assess for signs of bleeding before administering **Patient Education** • Report signs of bleeding • Inform providers of use before procedures that may cause bleeding • Do not take with NSAIDS or aspirin, due to increased risk for bleeding
Thrombolytic (fibrinolytic) Parenteral *IM7	alteplase (tPA): also known as tissue plasminogen activator	**Used to treat:** • Acute ischemic stroke • Acute MI • Acute massive PE _____ **Contraindications:** • Active bleeding • Stroke or head trauma in the past 3 months • Major surgery the last 14 days • Active internal bleeding the within 22 days **Use with caution:** • Early intervention most important	**Severe adverse effects:** • Bleeding • Hemorrhage risk • ICH: most serious concern **Most common side effects:** bleeding	**Assess/Monitor** • Monitor for bleeding: blood in urine or stool, oozing from injection sites, unexpected bruising, & headache • Limit activity: bedrest • Monitor VS and neurological changes **Administration** • Parenteral, almost always IV infusion **Patient Education** • Report any signs of bleeding

		• Must be treated within 2-4 hours of S/S or earlier		• Report worsening of stroke symptoms immediately: headache, new weakness, numbness

Urinary Drugs - Diuretics

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Furosemide (-semide) *IM1 *IM3 *IM5 *IM6 *IM7	furosemide (Lasix)	**Used to treat:** • Edema associated with heart failure, renal failure, and cirrhosis of the liver _____ **Contraindications:** • Anuria **Use with caution:** • Electrolyte imbalances • Renal failure	**Severe adverse effects:** • Hypotension • Ototoxicity • **BBW**: Fluid & electrolyte loss, hypokalemia **Most common side effects:** • Electrolyte imbalances	**Assess/Monitor** • Obtain BP before administering; notify provider if Systolic BP <90 mmHg • Potassium is quickly depleted – assess for signs of hypokalemia (weakness, fatigue, increased PVCs on cardiac monitor) • Serum potassium, sodium, and magnesium levels • Urine output and kidney function (creatinine, BUN, GFR) • Monitor I&O and daily weight closely (to measure therapeutic fluid loss) **Administration** • Rapid IV infusion can cause ototoxicity **Patient Education** • Change position slowly to prevent orthostatic hypotension, especially with elderly • This drug will cause increased urine output
Thiazides (-thiazide) *IM1	hydrochlorothiazide (HCTZ, Microzide) chlorothiazide (Diuril)	**Used to treat:** • Edema • Hypertension _____	**Severe adverse effects:** • Electrolyte imbalances • Hepatotoxicity	**Assess/Monitor** • Obtain BP before administering; notify provider if Systolic BP <90 mmHg

*IM7		**Contraindications:** • Anuria **Use with caution:** • Renal failure • Liver failure • If taking lithium	• Renal failure • Pulmonary edema **Most common side effects:** • Photosensitivity • Hyperglycemia • Diarrhea, loss of appetite, nausea, vomiting • Dizziness	• Monitor I&O and daily weight closely (to measure therapeutic fluid loss) • Presence/resolution of edema • Monitor electrolytes **Patient Education** • This drug will cause increased urine output

Respiratory System Drugs - Bronchodilators

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Short Acting Beta Agonist (SABAs) - (-terol) *IM1 *IM3 *IM5 *IM7	albuterol (Proventil, Ventolin) levalbuterol (Xopenex)	**Used to treat:** • Asthma • COPD (Chronic Obstructive Pulmonary Disease) _____ **Contraindications:** • Hypersensitivity • Tachycardia **Use with caution:** • Cardiovascular disorders • Hyperthyroidism	**Severe adverse effects:** • Paradoxical bronchospasm **Most common side effects:** • Tachycardia • Nervousness • Restlessness • Palpitations	**Assess/Monitor** • Respiratory rate • Breath sounds • Accessory Muscle Use • Pulse, BP • Amount, color, and character of sputum **Administration** • Give bronchodilator inhalers before corticosteroid inhalers (dilation will allow better distribution of steroid med) • SABAs are rescue inhalers appropriate for acute bronchodilation **Patient Education**

				• Report to provider if needed to increase the frequency for symptom relief • Teach proper inhaler technique

Respiratory System Drugs - Inhaled Corticosteroids (decrease inflammation)

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Inhaled corticosteroids (-sone, -nide) *IM1 *IM3 *IM5 *IM7	budesonide (Pulmicort inhaler) fluticasone (Flovent inhaler, Flonase nasal spray) Beclomethasone (QVAR inhaler) *Methylprednisone (Solu-Medrol, Prednisone)	**Used to treat:** • Asthma • COPD (Chronic Obstructive Pulmonary Disease) _____ **Contraindications:** • Acute asthma episodes **Use with caution:** • Hypertension • Diabetes mellitus • Hepatic insufficiency • Renal insufficiency • pregnancy	**Severe adverse effects:** • Osteoporosis • Glaucoma **Most common side effects:** • Oral candidiasis (thrush) • Throat/nasal irritation • hoarseness	**Assess/Monitor** • Respiratory rate • Breath sounds • Accessory Muscle Use **Administration** • Give bronchodilator inhalers before corticosteroid inhalers (dilation will allow better distribution of steroid med) • Not a rescue inhaler – will not treat acute bronchospasm **Patient Education** • Rinse mouth with water after oral inhalation to prevent oral thrush • May cause increased glucose levels

Upper Gastrointestinal System Drugs – Antiulcer, Anti - GERD

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Proton Pump Inhibitors (-prazole)	omeprazole (Prilosec) pantoprazole (Protonix)	**Used to treat:** • Acid reflux • Duodenal ulcers • Erosive esophagitis	**Severe adverse effects:** • Hypomagnesemia • Osteoporosis • Fracture risk	**Assess/Monitor** • Resolution of acid reflux symptoms • Serum magnesium level

*IM1 *IM2 *IM3 *IM5 *IM6 *IM7	esomeprazole (Nexium) lansoprazole (Prevacid)	• Gastric ulcers _____ **Contraindications:** • Hypersensitivity **Use with caution:** • Elderly patients (risk of fracture/osteoporosis) • Vitamin B12 deficiency	• Clostridium difficile **Most common side effects:** • Abdominal pain • Constipation • Diarrhea • nausea	• Serum vitamin B12 (can cause deficiency) **Administration** • Take 30 min prior to meals for best effect **Patient Education** • Taking for longer than a year can increase risk of adverse effects

Upper Gastrointestinal System Drugs – Antiemetics (anti-nausea)

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Antiemetic (-setron) *IM1 *IM3 *IM5 *IM6 *IM7	ondansetron (Zofran)	**Used to treat:** • Nausea/vomiting _____ **Contraindications:** • Hypersensitivity **Use with caution:** • Prolonged QT syndrome	**Severe adverse effects:** • Prolonged QT interval • Serotonin syndrome **Most common side effects:** • Headache • Constipation • Diarrhea • Fatigue	**Assess/Monitor** • Bowel sounds • Monitor for prolonged QT • Resolution of nausea **Patient Education** • Do not crush, split, or chew orally disintegrating ondansetron
Stool Softener *IM6 *IM7	Docusate (Colace)	**Used to:** • Prevent straining during bowels after surgeries or delivery _____ **Contraindications:**	**Most common side effects:** • Stomach cramps • Abdominal pain • Diarrhea • Bloating/gas	**Assess/Monitor** • Bowel sounds **Patient Education** • Available over the counter in capsule, liquid and enema forms

		• Symptoms of appendicitis, fecal impaction or gut blockage **Use with caution:** • Don't take for more than a week • Excessive or prolonged use can lead to electrolyte imbalances		

Central Nervous System Drugs – Antiepileptics

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Antiepileptic (gaba) *IM1 *IM4 *IM5 *IM6 *IM7 *Also used for fibromyalgia pain and diabetic neuropathy	gabapentin (Neurontin)	**Used to treat:** • Seizures • Neuropathic pain • Post-acute withdrawal syndrome (Alcohol) _____ **Contraindications:** • Use in patients with history of drug dependency **Use with caution:** • Do not stop abruptly, slowly decrease under provider guidance	**Severe adverse effects:** • Respiratory depression • Emotional lability, restlessness, agitation • Suicidal ideation **Most common side effects:** • Ataxia • Drowsiness • Dizziness	**Assess/Monitor** • Presence, reduction of seizure activity • Pain reduction • Drowsiness **Patient Education** • Do not discontinue abruptly • Avoid alcohol • Avoid driving or use of heavy machinery

Central Nervous System Drugs – Anxiolytics (Antianxiety)

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Benzodiazepines (-lam, -pam) *IM1 *IM4 *IM6 *IM7	alprazolam (Xanax) clonazepam (Klonopin) diazepam (Valium) lorazepam (Ativan)	**Used to treat:** • Anxiety • Premedication for procedures • Status epilepticus: lorazepam _____ **Contraindications:** • Acute narrow-angle glaucoma • Sleep apnea • Respiratory depression **Use with caution:** • Patients receiving other CNS depressants • Older adults • Liver or kidney disease • Substance abuse disorder	**Severe adverse effects:** • CNS depression • **BBW: risk w/opioids, abuse, addiction, dependence, withdrawal** **Most common side effects:** • Lethargy • Drowsiness • Dizziness	**Assess/Monitor** • Level of consciousness, sedation • Presence or resolution of anxiety • If used for seizure, resolution of seizure • Respiratory status **Administration** • Give lowest ordered dose that is effective **Patient Education** • Potential for abuse/misuse • Requires frequent reevaluation by prescriber • Avoid alcohol and other CNS depressants
Atypical anxiolytics *IM6	buspirone (Buspar)	**Used to treat:** • Generalized anxiety disorder **Contraindications:** • Avoid MAOIs (increased risk of serotonin syndrome, hypertensive crisis) • Sleep apnea • Respiratory depression **Use with caution:** • Patients receiving other CNS depressants • Older adults • Liver or kidney disease • Substance abuse disorder	**Severe adverse effects:** • **Serotonin syndrome** **Most common side effects:** • Dizziness • Headache • Nausea	**Assess:** • Baseline anxiety symptoms **Monitor:** • CNS side effects **Patient Education** • Takes several weeks to take effect • Not a rescue medication for acute anxiety

Selective Serotonin Reuptake Inhibitors (SSRIs) (-pram, -tine, -line) *IM1 *IM5 *IM6	escitalopram (Lexapro) citalopram (Celexa) fluoxetine (Prozac) sertraline (Zoloft)	**Used to treat:** • Major depressive disorder • Panic disorders • PTSD _____ **Contraindications:** • MAOIs **Use with caution:** • Seizure disorders	**Severe adverse effects:** • **BBW: suicidal thoughts in pediatric and young adults** • Worsening of depression symptoms • Serotonin syndrome **Most common side effects:** • Constipation • Drowsiness • Headache • Insomnia Decreased libido	**Assess/Monitor** • Mood, suicidal ideation • Serum sodium levels • Weight gain **Patient Education** • May take several weeks for therapeutic effects to be noticeable • Alcohol use in not recommended • Do not stop abruptly

Central Nervous System Drugs – Antidepressants

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Selective Serotonin Reuptake Inhibitors (SSRIs) (-pram, -tine, -line) *IM1 *IM5 *IM6	escitalopram (Lexapro) citalopram (Celexa) fluoxetine (Prozac) sertraline (Zoloft)	**Used to treat:** • Major depressive disorder • Panic disorders • PTSD _____ **Contraindications:** • MAOI use (within 14 days) **Use with caution:** • Seizure disorders	**Severe adverse effects:** • **BBW: increased risk of suicidal thoughts/behavior in children, adolescents, and young adults** • Worsening of depression symptoms • Serotonin syndrome **Most common side effects:**	**Assess/Monitor** • Mood, suicidal ideation • Serum sodium levels • Weight gain **Patient Education** • May take several weeks for therapeutic effects to be noticeable • Alcohol use in not recommended • Do not stop abruptly

			• Constipation • Drowsiness • Headache • Insomnia • Decreased libido	

Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs)
(-ine)
*IM6
	venlafaxine (Effexor)
	duloxetine (Cymbalta)
		Used to treat:
		• Major depressive disorder (MDD)
		• Generalized anxiety disorder (GAD)
		• Social anxiety disorder (social phobia)
		• Panic disorder
		• Chronic pain (duloxetine: fibromyalgia, neuropathy, musculoskeletal pain)
		_____
		Contraindications:
		• MAOI use (within 14 days)
		• Narrow-angle glaucoma
		• Severe liver disease
		
		Use with caution:
		• Hypertension, heart disease
		• Seizures, bipolar disorder
		• Alcohol use (liver toxicity risk with duloxetine)
		• Renal impairment
			Severe adverse effects:
			• **BBW: increased risk of suicidal thoughts/behavior in children, adolescents, and young adults**
			• Serotonin syndrome
			• Severe liver injury (duloxetine)
			• High blood pressure (venlafaxine)
			
			Most common side effects:
			• Nausea
			• Drowsiness or insomnia
			• Dry mouth
			• Constipation
			• Sweating
			• Sexual side effects
				Assess/Monitor
				• Mood, suicidal ideation
				• Blood pressure and heart rate
				• Liver function (duloxetine)
				• Signs of serotonin syndrome
				
				Patient Education
				• May take several weeks for full effect
				• Do not discontinue suddenly
				• Report:
				  ○ New mood changes
				  ○ Chest pain
				  ○ Liver problems (jaundice, dark urine)
				• Limit alcohol use

Tricyclic Antidepressants	amitriptyline (Elavil) nortriptyline (Pamelor) Imipramine (Tofranil)	**Used to treat:** • Major depressive disorder (MDD)	**Severe adverse effects:** • **BBW: increased risk of suicidal**	**Assess/Monitor** • Baseline ECG in at-risk patients • Mood, suicidal ideation

(TCAs) (-yline) (-pramine) *IM6		• Sometimes insomnia • Also used for diabetic neuropathy _____ **Contraindications:** • Recent MI, severe heart disease • MAOI use (within 14 days) • Seizure disorders (increased risk) **Use with caution:** • Elderly (fall risk, confusion) • Glaucoma, urinary retention, BPH (anticholinergic effects) • Liver disease	**thoughts/behavior in children, adolescents, and young adults** • **Lethal in overdose** • Seizures • Serotonin syndrome **Most common side effects:** • Sedation • Dry mouth • Constipation • Blurred vision • Urinary retention • Weight gain	• Vital signs (orthostatic BP) • Anticholinergic side effects **Patient Education** • May take weeks to see improvement • Do not stop suddenly • Change position slowly to prevent dizziness/falls • Avoid alcohol and other sedatives • Report chest pain, irregular heartbeat, severe confusion
Monoamine Oxidase Inhibitors (MAOIs) (-ine) *IM6	phenelzine (Nardil) tranylcypromine (Parnate)	**Used to treat:** • Major depressive disorder (MDD) • Atypical depression • Some anxiety disorders _____ **Contraindications:** • Use with SSRIs, SNRIs, TCAs, or other serotonergic drugs (risk of serotonin syndrome) • Use with sympathomimetics (decongestants, stimulants)	**Severe adverse effects:** • **Hypertensive crisis with tyramine-containing foods** • Serotonin syndrome if combined with serotonergic meds • Suicidal thoughts (BBW) • Severe liver toxicity (rare)	**Assess/Monitor** • Monitor blood pressure (esp. for hypertension crisis) • Monitor mood, suicidal ideation • Assess diet and medication interactions carefully • Liver function if long-term use **Patient Education** • Strict **dietary restrictions**: avoid aged cheeses, cured meats, soy,

		• Severe liver disease **Use with caution:** • Elderly patients • Seizure disorders • Hypertension • Diabetes (can affect blood sugar control)	**Most common side effects:** • Dizziness • Drowsiness • Headache • Insomnia • Orthostatic hypotension • Weight gain	red wine, draft beer, certain beans (high tyramine foods) • Avoid OTC cold meds, stimulants, or other antidepressants • Rise slowly to prevent dizziness/falls • Do not stop suddenly • Report severe headache, chest pain, or palpitations immediately
Atypical Antidepressants *IM6	bupropion (Wellbutrin, Zyban) mirtazapine (Remeron) trazodone (Desyrel)	**Used to treat** • Major depressive disorder • Bupropion: smoking cessation, seasonal affective disorder • Mirtazapine: depression with insomnia or poor appetite (helps with sleep and weight gain) • Trazodone: depression, but more often used at low dose for insomnia **Contraindications** • Bupropion: seizure disorder, eating disorders • Recent MAOI use **Use with caution** • Elderly (sedation, fall risk)	**Severe adverse effects** • Suicidal thoughts (boxed warning) • Seizures (bupropion, dose-related) • Serotonin syndrome (if combined with serotonergic drugs) • Trazodone: rare priapism (painful erection) • Agranulocytosis (rare, mirtazapine) **Most common side effects** • Bupropion: insomnia,	**Assess / Monitor** • Mood, suicidal ideation • Sleep patterns, appetite, weight • Blood pressure (orthostatic changes) • For bupropion: seizure history • For trazodone: cardiac history, QT interval if at higher doses **Patient Education** • May take several weeks to work • Do not stop suddenly • Take mirtazapine or trazodone at bedtime (sedating) • Avoid alcohol and other sedatives • Report seizures, prolonged/painful erection, or signs of infection (sore throat, fever) • With bupropion: take in the morning to avoid insomnia

		• Liver or kidney disease • Cardiac disease (trazodone: arrhythmias, QT prolongation)	headache, dry mouth, weight loss • Mirtazapine: sedation, weight gain, increased appetite, dry mouth • Trazodone: sedation, dizziness, orthostatic hypotension	

Central Nervous System Drugs – Antipsychotics

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
First-generation (typical) antipsychotics *IM6 *IM7	haloperidol (Haldol) chlorpromazine (Thorazine)	**Used to treat** • Schizophrenia, other psychotic disorders • Acute agitation, delirium • Nausea/vomiting (chlorpromazine) • Tourette's (haloperidol) **Contraindications** • Severe CNS depression, coma • Parkinson's disease (worsens symptoms)	**Severe adverse effects** • Extrapyramidal symptoms (EPS): acute dystonia, parkinsonism, akathisia • **Tardive dyskinesia** (long-term, potentially irreversible) • Neuroleptic malignant syndrome (rare, life-threatening:	**Assess / Monitor** • Monitor mental status and therapeutic response • Watch for EPS (AIMS scale for tardive dyskinesia) • Monitor vitals, especially temperature and BP • ECG if cardiac risk • Monitor for signs of neuroleptic malignant syndrome **Patient Education** • Do not stop suddenly

		• Known hypersensitivity • Caution with QT prolongation history **Use with caution** • Elderly (↑ fall risk, black box for mortality in dementia) • Liver disease • Seizure disorders • Cardiac disease (QT prolongation, arrhythmias)	fever, rigidity, autonomic instability) • QT prolongation, arrhythmias • Increased mortality in elderly with dementia-related psychosis (boxed warning) **Most common side effects** • Sedation • Orthostatic hypotension • Anticholinergic effects (dry mouth, constipation, blurred vision, urinary retention) • Weight gain	• Report muscle stiffness, tremors, fever, or involuntary movements immediately • Rise slowly to avoid dizziness/falls • Avoid alcohol and sedatives • May cause drowsiness—use caution with driving or machinery
Second-generation (atypical) antipsychotics (–apine) (–idone) *IM5 *IM6	risperidone (Risperdal) paliperidone (Invega) olanzapine (Zyprexa) quetiapine (Seroquel) clozapine (Clozaril)	**Used to treat** • Schizophrenia, schizoaffective disorder • Bipolar disorder (mania, depression, maintenance) • Adjunct for major depressive disorder (aripiprazole, quetiapine)	**Severe adverse effects** • Suicidal ideation • Metabolic syndrome: weight gain, diabetes, dyslipidemia • Extrapyramidal symptoms (rare)	**Assess / Monitor** • Monitor weight, waist circumference, BMI • Monitor fasting glucose, lipids (metabolic effects) • Monitor BP and HR • Monitor for EPS/tardive dyskinesia (AIMS scale)

	aripiprazole (Abilify)	• Clozapine: treatment-resistant schizophrenia, reduces suicide risk **Contraindications** • **BBW: Increased mortality in elderly** • Dementia-related psychosis • Severe CNS depression, coma **Use with caution** • Diabetes, obesity, high cholesterol (metabolic syndrome risk) • Seizure disorders • Cardiac disease (QT prolongation, arrhythmias) • Liver impairment • **Clozapine: agranulocytosis**	• Tardive dyskinesia (rare) • Clozapine: **agranulocytosis** **Most common side effects** • Sedation, drowsiness • Weight gain, increased appetite • Orthostatic hypotension, dizziness • Anticholinergic effects (esp. clozapine, olanzapine) • Hyperprolactinemia (risperidone, paliperidone)	• For clozapine: frequent CBC with differential (ANC monitoring per REMS) • Assess mental status, suicidal ideation **Patient Education** May take several weeks for full effect • Rise slowly to prevent dizziness/falls • Maintain healthy diet and exercise to limit weight gain • Do not stop suddenly • Report fever, sore throat, chest pain, or abnormal movements immediately • Clozapine: must keep regular blood tests to continue medication

Central Nervous System Drugs – Mood stabilizers

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Lithium *IM6 *IM7	lithium (Lithobid, Eskalith)	**Used to treat** • Bipolar disorder **Contraindications** • Severe kidney disease • Hyponatremia, dehydration • Pregnancy (esp. 1st trimester – teratogenic, Ebstein's anomaly) • Concurrent use with diuretics, ACE inhibitors, or NSAIDs (can increase lithium levels) **Use with caution** • Elderly (narrow therapeutic index) • Thyroid disease • Cardiac disease • Dehydration risk (sweating, vomiting, diarrhea)	**Severe adverse effects** • Lithium toxicity (levels >1.5 mEq/L): tremor, ataxia, confusion, seizures, coma • Renal impairment • Hypothyroidism • Arrhythmias • Teratogenic effects **Most common side effects** • Fine tremor • GI upset (nausea, diarrhea) • Polyuria, polydipsia (increased urination, thirst) • Weight gain	**Assess / Monitor** • Serum lithium levels (narrow therapeutic range • Renal function (BUN, creatinine) • Thyroid function (TSH, T4) • Electrolytes, hydration status • Monitor for signs of toxicity **Patient Education** • Take at the same time daily • Maintain consistent fluid and salt intake • Stay hydrated, especially with exercise or heat • Do not stop suddenly • Report vomiting, diarrhea, unsteady gait, confusion, or coarse tremor immediately • Routine blood tests are required

			• Fatigue	
Anticonvulsants *IM4 *IM6	valproic acid (Depakote) carbamazepine (Tegretol) lamotrigine (Lamictal)	**Used to treat** • Bipolar disorder • Seizure disorders • Lamotrigine: especially for bipolar depression / maintenance **Contraindications** • Liver disease (valproic acid, carbamazepine) • Pregnancy (teratogenic risk; esp. valproic acid) • Hypersensitivity to drug • Bone marrow disorders (carbamazepine) **Use with caution** • Elderly (sedation, fall risk) • Renal impairment • Drug interactions (CYP enzyme inducers/inhibitors, e.g., carbamazepine) • History of rash/allergy (lamotrigine: risk of Stevens-Johnson Syndrome)	**Severe adverse effects** • Hepatotoxicity (valproic acid, carbamazepine) • Pancytopenia / agranulocytosis (carbamazepine) • Serious rash / Stevens-Johnson Syndrome (lamotrigine) • Suicidal thoughts (boxed warning) • Pancreatitis (rare, valproic acid) **Most common side effects** • GI upset (nausea, vomiting) • Drowsiness / sedation • Tremor • Weight gain (valproic acid)	**Assess / Monitor** • Baseline and periodic LFTs (liver function tests) • CBC (carbamazepine: WBC, platelets) • Therapeutic drug levels (valproic acid, carbamazepine) • Skin for rash (lamotrigine) • Mental status, mood, suicidal ideation **Patient Education** • Take at the same time daily • Do not stop suddenly • Report rash, fever, sore throat, unusual bruising, yellowing of skin/eyes • Avoid alcohol • Routine blood tests are required

			• Rash (lamotrigine) • Dizziness / ataxia	

Endocrine System Drugs – Pancreas

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Antidiabetic *IM2 *IM3 *IM5 *IM7	**Rapid Acting:** *Insulin Lispro* *Admelog*	**Used to treat:** • Hyperglycemia (T1DM or T2DM) • Hyperkalemia _____ **Contraindications:** • Hypoglycemia **Use with caution:** • Stress, illness or infection may alter insulin requirements • High Alert Medication	**Severe adverse effects:** • Hypoglycemia (BG < 70mg/dL) **Most common side effects:** • Hypoglycemia • Lipodystrophy • Allergic reaction (rare)	**Assess/Monitor** • Monitor for S/S hypoglycemia • Monitor BG a minimum of every 6 hrs Commonly AC & HS • A1C test every 3-6 months **Administration:** • SubQ, IV routes or Insulin pumps • Use only insulin syringes **Patient Education** • S/S of hypoglycemia • Prompt treatment of hypoglycemia • Eat within 15 min of administration *Onset: 15-30 min.* *Peak: 30-90 min.* *Duration: 3-5 hrs*
Antidiabetic *IM2 *IM3 *IM5 *IM7	**Short Acting:** *Regular Insulin* *Humulin R* *Novolin R*	**Used to treat:** • Hyperglycemia (T1DM or T2DM) • Hyperkalemia _____ **Contraindications:** • Hypoglycemia **Use with caution:**	**Severe adverse effects:** • Hypoglycemia (BG < 70mg/dL) **Most common side effects:** • Hypoglycemia • Lipodystrophy	**Assess/Monitor** • Monitor for S/S hypoglycemia • Monitor BG a minimum of every 6 hrs. Commonly AC & HS • A1C test every 3-6 months • Monitor for hypokalemia **Administration:** • SubQ or IV routes

		• Stress, illness or infection may alter insulin requirements • High Alert Medication	• Allergic reaction (rare)	• Use only insulin syringes • Reg Insulin recommended for DKA **Patient Education** • S/S of hypoglycemia • Prompt treatment of hypoglycemia • Eat within 30 min of administration *Onset: 30-60 min.* *Peak: 2-4 hrs.* *Duration: 6-8 hrs*
Antidiabetic *IM2 *IM3 *IM5 *IM7	**Intermediate:** *Humalin N* *Novalin N*	**Used to treat:** • Hyperglycemia (T1DM or T2DM) • Hyperkalemia _____ **Contraindications:** • Hypoglycemia **Use with caution:** • Stress, illness or infection may alter insulin requirements • High Alert Medication	**Severe adverse effects:** • Hypoglycemia (BG < 70mg/dL) **Most common side effects:** • Hypoglycemia • Lipodystrophy • Allergic reaction (rare)	**Assess/Monitor** • Monitor for S/S hypoglycemia • Monitor BG a minimum of every 6 hrs Commonly AC & HS • A1C test every 3-6 months **Administration:** • SubQ route • Use only insulin syringes • Solution has cloudy appearance • Roll vial between hands to mix. Never shake the vial **Patient Education** • S/S of hypoglycemia • Prompt treatment of hypoglycemia • *Onset: 2-4 hrs.* *Peak: 4-12 hrs.* *Duration: 12-18 hrs*
Antidiabetic *IM2 *IM3 *IM5 *IM7	**Long Acting:** *Insulin glargine* *Insulin detemir* *Insulin degludec*	**Used to treat:** • Hyperglycemia (T1DM or T2DM) _____ **Contraindications:** • Hypoglycemia **Use with caution:**	**Severe adverse effects:** • Hypoglycemia (BG < 70mg/dL) **Most common side effects:** • Hypoglycemia • Lipodystrophy	**Assess/Monitor** • Monitor for S/S hypoglycemia • Monitor BG a minimum of every 6 hrs Commonly AC & HS • A1C test every 3-6 months **Administration:** • SubQ route

		• Stress, illness or infection may alter insulin requirements • High Alert Medication	• Allergic reaction (rare)	• Use only insulin syringes • Do NOT mix in same syringe with other insulins **Patient Education** • S/S of hypoglycemia • Prompt treatment of hypoglycemia • *Onset: 1-2 hrs.* *Peak: No Peak* *Duration: 20-24 hrs*
Antidiabetic *IM3 *IM7	Metformin (Glucophage, Glucophage XR)	**Used to Treat:** • Type 2 Diabetes Mellitus Contraindications: • Severe renal impairment (eGFR < 30ml/min) • Metabolic acidosis or diabetic ketoacidosis • Acute or chronic liver disease • Recent or planned radiologic studies with iodinated contrast **Use with Caution:** • Elderly patients (>65 years) • Patients with heart failure or liver disease • During serious infections, dehydration, surgery or pregnancy • Alcohol use	**Severe adverse effects:** • Hypoglycemia (BG < 7mg/dl) • Lactic Acidosis (rare) **Most common side effects:** • GI disturbances: diarrhea, N/V, bloating, flatulence • Metallic taste • Headache, Dizziness • Mild weight loss	**Assess/ Monitor:** • Monitor for S/S hypoglycemia • Monitor Renal function: BUN. Creatinine, eGFR • S/S for lactic acidosis: muscle pain, fatigue, Abd. Pain, difficulty breathing • GI tolerance **Administration:** • Immediate-release tablets, extended-release tablets, oral solution • With meals to reduce GI upset • Starting dose: 500mg PO once or twice daily. Max 2550mg/day (divided doses) **Patient Education:** • Take with food • Do not crush or chew extended release • Report S/S of lactic acidosis • Discuss safe limits of alcohol with provider

				• Inform All providers before any imaging with contrast dye • Maintain regular follow ups and lab test • Discuss pregnancy plans with provider

Endocrine System Drugs – Thyroid

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Thyroid hormone replacement (-thyroxine) *IM1 *IM4 *IM5 *IM6	levothyroxine (Synthroid)	**Used to treat:** • Hypothyroidism • *Juvenile hypothyroidism _____ **Contraindications:** • Hyperthyroidism **Use with caution:** • Cardiovascular disease • Adrenal insufficiency • Diabetes • Pernicious anemia	**Severe adverse effects:** • Hyperthyroidism (rare – if overdosed) **Most common side effects:** • Palpitations • Diarrhea • Anxiety	**Assess/Monitor** • Periodic checks of pule and BP • Thyroid function tests (T3-T4-TSH) **Administration:** • Take on empty stomach 1 hr. before breakfast • Do not give within 4 hours of taking antacids, iron, or calcium supplements **Patient Education** • Do not discontinue abruptly • Symptom improvement may not be noticeable for several weeks

Endocrine System Drugs – Thyroid

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Thionamides	Propylthiouracil (PTU) Methimazole (Tapazole)	**Used to treat:** • Hyperthyroidism • Thyrotoxicosis _____ **Contraindications:**	**Severe adverse effects:** • Hypothyroidism (rare – if overdosed) • Agranulocytosis	**Assess/Monitor** • S/S of infection • Thyroid function tests (T3-T4-TSH) • Liver function tests • CBC

		• Hypothyroidism • Pregnancy (Methimazole) **Use with caution:** • Bone marrow suppression	• Hepatotoxicity • Pancreatitis **Most common side effects:** • Skin reactions • Nausea • Drowsiness	**Patient Education** • Do not discontinue abruptly • Symptom improvement may not be noticeable for several weeks

Endocrine System Drugs – Thyroid

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Radio pharmaceuticals *IM7	radioactive iodine (I-131)	**Used to treat:** • Hyperthyroidism • Thyroid Cancer _____ **Contraindications:** • Pregnancy • Lactation **Use with caution:** • Concurrent use of other antithyroid medications	**Severe adverse effects:** • Hypothyroidism • Radiation sickness • Bone marrow depression **Most common side effects:** • Dryness and irritation of mouth and throat • Parotitis	**Assess/Monitor** • S/S of radiation sickness (hematemesis, epistaxis, intense N/V) • CBC • S/S of hypothyroidism **Patient Education** • Private toilet facilities • Launder towels, linens, and clothes separately • Avoid being around pregnant women or young children • Do not prepare food for others

Endocrine System Drugs – Glucocorticoids

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Corticosteroids (-sone, -solone)	prednisone (Deltasone, Solumedrol)	**Used to treat:** • Allergic reactions • Adrenal insufficiency	**Severe adverse effects:** • Hyperglycemia	**Assess/Monitor** • Blood glucose levels • Serum Potassium levels

*IM1 *IM2 *IM4 *IM5 *IM7	hydrocortisone (Cortef) methylprednisolone (Solu-Medrol)	• Dermatologic conditions • Rheumatic conditions • Inflammatory processes or diseases _____ **Contraindications:** • Serious infection **Use with caution:** • Hypertension • Diabetes mellitus • Hepatic insufficiency • Renal insufficiency • Pregnancy • Untreated Infection	• Fluid and electrolyte imbalances • Adrenal insufficiency • Cushing's Syndrome (long term use) **Most common side effects:** • Depression • Hypertension • GI disturbances • Bruising	• WBC • Signs of adrenal insufficiency (hypotension, weight loss, weakness, nausea/vomiting, confusion, peripheral edema) **Administration:** • Give PO with meals to avoid GI irritation • For treatment of adrenal insufficiency: Given in divided doses with 2/3 in the morning and 1/3 in the afternoon **Patient Education** • Do not discontinue abruptly • For treatment of adrenal insufficiency: stress dosing education

Endocrine System Drugs – Pituitary

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Antidiuretic Hormone *IM4 *IM7	vasopressin	**Used to treat:** Diabetes insipidus Vasodilatory shock Septic shock _____ **Contraindications:** Hypersensitivity to vasopressin **Use with caution:** • May cause extravasation or tissue necrosis; ensure proper IV catheter placement prior to and during infusion	**Severe adverse effects:** • Lowered cardiac output • Hyponatremia • Renal insufficiency • Water intoxication **Most common side effects:** • Increased blood pressure	**Assess/Monitor** • Serum Sodium levels • Signs of water intoxication (headache, drowsiness, confusion) • Dilute urine **Administration:** • For treatment of diabetes insipidus: fluid restriction per MD **Patient Education** • Weigh daily at same time on same scale, report weight gain of 1kg or greater in 24 hrs • S/S of hyponatremia

		• Caution with CV disease; may lower cardiac output	• Nausea/vomiting /diarrhea/abdominal cramps	
***Human Growth Hormone** *IM5	**somatropin systemic** (Pro) **Brand names:** Nutropin, Serostim, Saizen, Zorbtive, Genotropin, Norditropin, Humatrope, Nutropin AQ, Omnitrope, Norditropin FlexPro, Zomacton	Pediatrics: • Growth hormone deficiency (GHD) • Idiopathic short stature • Turner syndrome • Chronic kidney disease • Prader-Willi syndrome • Small for Gestational Age (SGA) • Noonan syndrome	**Most common side effects**: • Joint and muscle pain • Increased blood sugar levels • Headaches	**Assess/Monitor** • Baseline status-weight and height • Thyroid function • Glucose tolerance • GH levels **Administration:** • IM or SQ • Monitor patients response for dose adjustments **Patient Education** • Storage, preparation and storage techniques

Women's Health Drugs

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Estrogen (estr-) *IM1 *IM6	estradiol (Estrace)	**Used to treat:** • Breast cancer • Postmenopausal osteoporosis • Menopausal symptoms • Contraception _____ **Contraindications:** • History of DVT or PE, stroke, or MI **Use with caution:** • Do not use prior to puberty	**Severe adverse effects:** • **BBW: Endometrial cancer, CV disease, DVT, Breast Cancer** **Most common side effects:** • Edema • Nausea • Hypertension	**Assess/Monitor** • Unexpected vaginal bleeding • Serum triglycerides • Signs/symptoms of DVT • Resolution of menopausal symptoms **Patient Education** • Not appropriate for use during pregnancy or breast feeding • Ensure adequate calcium and vitamin D intake to prevent osteoporosis

		• Stop 4-6 weeks prior to surgery to decrease risk of DVT with prolonged immobilization		
Aromatase Inhibitors: *IM6	letrozole (Femara)	**Used to:** • Decreases amount of estrogen produced in the body • Induce ovulation in women with fertility issues _____ **Contraindications:** • Already pregnant women • Women in premenopausal status • Known hypersensitivity to letrozole or its ingredients	**Most common side effects:** • Hot flashes • Headache • Fatigue • Nausea • Breast tenderness	**Assess/Monitor** • Follicle growth • Hormone levels- progesterone and luteinizing hormone • ovulation **Patient Education** • Notify doctor if period is more than a week late as it could mean you did not ovulate • Seek immediate attention if symptoms of significant bloating or weight gain more than 2 lbs./day occurs as it may indicate ovarian hyperstimulation • Lower risk of multiple pregnancies compared to clomiphene • May be more effective in promoting ovulation in women with PCOS than Clomiphene
Selective estrogen Receptor Modulator Inhibitors: (SERM) *IM6	clomiphene citrate (Clomid)	**Used to:** • Decrease amount of estrogen produced in the body • Induce ovulation in women with fertility issues _____ **Contraindications:** • Already pregnant women • Liver disease • Ovarian cysts	**Most common side effects:** • Hot flashes • Headache • Fatigue • Nausea • Breast tenderness • Mood swings & irritability	**Assess/Monitor** • Follicle growth • Hormone levels- progesterone and luteinizing hormone • Pregnancy test • Liver function • Lipid panel • Ovarian enlargement • Visual disturbance- should be stopped immediately **Patient Education**

		• Uncontrolled endocrine disorders • Known hypersensitivity to clomiphene **Use with caution:** • Increased risk of multiple births • Can lead to ovarian hyperstimulation syndrome	• Abnormal vaginal bleeding or spotting • Abdominal bloating	• Time intercourse to track ovulation • Treatment is limited to 3-6 cycles due to potential risk of ovarian cancer with long-term use • Avoid driving or operating machinery until patient knows how drug will affect them • Limit alcohol and stop smoking to improve success rate • Seek immediate attention if symptoms of significant bloating or weight gain more than 2 lbs./day occurs as it may indicate ovarian hyperstimulation • Lower risk of multiple pregnancies compared to clomiphene • May be more effective in promoting ovulation in women with PCOS when in combination with Metformin
Biguanides *IM6 *IM7	metformin (Glucophage, Fortamet, Riomet)	**Used to:** • Help control blood sugar reducing glucose production, intestinal glucose absorption and increasing insulin sensitivity • Prescribed off labor for conditions such as polycystic ovarian syndrome (PCOS) • When used in conjuction with clomiphen citrate can be effective in inducing ovulation _____ **Contraindications:**	**Most common side effects:** • Loss of appetite • Metallic taste in mouth • Headache • Diarrhea • Nausea • • Mood swings & irritability	**Assess/Monitor** • Follicle growth • Hormone levels- progesterone and luteinizing hormone • Pregnancy test • Liver function • Lipid panel • Ovarian enlargement • Visual disturbance- should be stopped immediately **Patient Education** • Time intercourse to track ovulation • Treatment is limited to 3-6 cycles due to potential risk of ovarian cancer with long-term use

		• Excessive alcohol intake • Kidney or Liver disease • Metabolic acidosis • Known hypersensitivity to metformin **Use with caution:** • Increased risk of multiple births • Can lead to ovarian hyperstimulation syndrome	• Abnormal vaginal bleeding or spotting • Abdominal bloating	• Avoid driving or operating machinery until patient knows how drug will affect them • Limit alcohol and stop smoking to improve success rate • Seek immediate attention if symptoms of significant bloating or weight gain more than 2 lbs./day occurs as it may indicate ovarian hyperstimulation • Lower risk of multiple pregnancies compared to clomiphene • May be more effective in promoting ovulation in women with PCOS when in combination with Metformin

Obstetrics

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Prostaglandin Synthesis Inhibitors: *IM6	indomethacin sodium; naproxen sodium; Fenoprofen	**Used to:** • Depresses synthesis of prostaglandins • Effective in delaying delivery 48+ hours. • Used in pregnancies less than 32 weeks _____ **Contraindications:** • Generally used short term due to fetal side effects	**Maternal effects:** • Nausea, heartburn • GI upset • pulmonary edema • blurred vision • headache • nausea • postpartum hemorrhage **Fetal effects:**	**Assess/Monitor** • Unexpected vaginal bleeding • Serum triglycerides • Signs/symptoms of DVT • Resolution of menopausal symptoms **Patient Education** • It should not be used for longer than 48 hours!

				• Constriction of ductus arteriosus • pulmonary hypertension oligohydramnios, intra-ventricular hemorrhage, hyper-bilirubinemia, NEC	**Assess/Monitor** • Monitor FHR and uterine contractions • Treat nausea and heartburn • Monitor for manifestations of pulmonary edema • Monitor for postpartum hemorrhage
Anti-hypertensive *IM4 *IM7 *IM6	nifedipine ; nicardipine (Procardia, Adalat)	• **Used to:** • Block calcium availability for muscle contraction • Effective in delaying delivery 48-72 hours • *CVA: cerebral vasospasm _____ **Contraindications:** • Caution should be used in patient with renal disease and hypotension • Should NOT be administered concurrent with magnesium sulfate • Do NOT use with terbutaline	**Maternal effects:** • Flushing, headache, dizziness, nausea, transient hypotension, pulmonary edema **Fetal effects:** • May decrease utero-placental blood flow	**Assess/Monitor** • Fetal Heart Rate • Uterine contractions • Maternal blood pressure and Heart rate **Patient Education** • Hold for blood pressure <90/50 or heart rate >120	
Beta-2 adrenergic agonist	terbutaline (Brethine)	• **Used to:** • Suppress uterine activity	**Maternal effects:** • Cardiac or cardio-	**Assess/Monitor:** • Maternal/Fetal Heart Rate • Uterine contractions	

*IM6		• Can delay delivery for 3 days _____ **Contraindications:** • Prolonged tocolysis	pulmonary arrhythmias • pulmonary edema • myocardial ischemia • hypotension • tachycardia • Elevation in maternal glucose • Hypokalemia **Fetal Effects:** • Fetal tachycardia • Hyper-insulinemia • hyper-glycemia • Myocardial & septal hypertrophy • Myocardial ischemia	• Intake and Output for overload • Auscultate lungs for pulmonary edema • Blood glucose **Patient Education:** • May hold dose for heart rate >120
Tocolytic *IM6	methylergonovine maleate (Methergine)	Used to: • Treat hemorrhage • Stimulates uterine muscle to increase force, frequency & duration of contractions producing a tetanic contraction of the uterus _____ **Contraindications:** • HYPERTENSION • Cardiac disease	Maternal **Effects:** • Nausea/vomiting • Cramping • Severe Hypertension • Headache • Dysrythmias & Myocardial infarction **Fetal effects:** • NA	**Monitor/Assess:** • Vital signs • Vaginal bleeding • Pain • Shortness of breath • Uterine contractions • Headache **Patient education:** • Increased cramping • Painful cramping

	carboprost tromethamine (Hemabate)	Used to: • Treat hemorrhage • Stimulates uterine muscle contraction _____ **Contraindications:** • ASTHMA • Cardiac disease • Renal disease	Maternal **Effects:** • N/V • Diarrhea • Severe Hypertension • Headache • Pulmonary edema **Fetal effects:** • NA	**Monitor/Assess:** • Vital signs • Vaginal bleeding • Uterine tone **Patient education:** • Painful cramping • Diarrhea commonly experienced
	misoprostol (Cytotec)	Used to: • Treat postpartum hemorrhage • Stimulates uterine muscle contraction _____ **Contraindications:** • Suspected/known ectopic pregnancy • Caution with patients having Inflammatory Bowel Disease as the side effects like diarrhea can worsen their condition	Maternal **Effects:** • N/V • Diarrhea • Severe Hypertension • Headache • Fever • Pulmonary edema **Fetal effects:** • NA	**Monitor/Assess:** • Vital signs • Vaginal bleeding • Uterine tone **Patient education:** • Can be given rectally or orally
	Oxytocin (Pitocin)	Used to: • Treat/prevent a hemorrhage • Stimulates uterine muscle contraction • Induce labor	Maternal **Effects:** • Painful contractions • Uterine rupture • Dysrhythmias • BP changes	**Monitor/Assess:** • Vital signs • Vaginal bleeding • Uterine tone • Electronic Fetal Monitoring closely • Assess lung sounds • Monitor I&O

		• Enhance labor or assist with delivery of placenta • Control bleeding _____ **Contraindications:** • Caution with patients having an already overactive uterus • Severe pre-eclampsia • Cases in which vaginal delivery is considered unsafe due to maternal condition (ex. Herpes, invasive cervical carcinoma)	• Water intoxication/Fluid overload **Fetal effects:** • Fetal distress • Fetal bradycardia	**Patient education:** • Report headache • Report changes in vision; blurred vision
Prostaglandin E-2 (synthetic form) *IM6	Dinoprostone (Cervidil, Prepidil, and Prostin E2)	• Used to: • Stimulates cervical ripening • Stimulate the muscles of uterus to contract • Labor induction _____ **Contraindications:** • Situations where labor induction is risk for the mother of fetus • Known/suspected fetal distress • Cephalopelvic disproportion; head too large to fit through pelvis and prolonged contractions is unsafe	Maternal **Effects:** • N/V • Frequent contractions • Back pain • Fever **Fetal effects:** • Requires continuous fetal monitoring	**Monitor/Assess:** • Vital signs • Uterine activity • Signs of infection • Allergic reaction • Cervical changes **Patient education:** • Insert will be removed at onset of active labor, prior to rupture of membranes or after 12 hours of use

		• Unknown vaginal bleeding • Non-cephalic position • Placenta previa • Active genital herpes		
Neuraxial Anesthetics *IM6	Spinal Block bupivacaine (Marcaine)	• Used to: • Eliminate sensation from nipples to feet • Used in C-Sections _____ **Contraindications:** • Situations where labor induction is risk for the mother of fetus • Known/suspected fetal distress • Cephalopelvic disproportion; head too large to fit through pelvis and prolonged contractions is unsafe • Unknown vaginal bleeding • Non-cephalic position • Placenta previa • Active genital herpes	Maternal **Effects:** • Hypotension • Spinal Headache (leaking CSF) **Fetal effects:** • Fetal bradycardia	**Monitor/Assess:** • Vital signs (Blood pressure) • Uterine activity • Electronic fetal monitoring • Anesthesia complications **Patient education:** • injected near the spinal cord and nerve roots • Report intense dull or throbbing headache that starts in the front or back of your head which may worsen when one coughs, sneezes or strains • Headache pain that increases when you sit or stand and gets better lying down may indicate a “spinal headache” • Blood patch may be needed to treat headache
	Epidural Anesthesia Bupivacaine, ropicacaine (Marcaine) Along with:	• Used to: • Eliminate sensation from umbilicus to thighs • Used in vaginal deliveries to assist with pain management _____	Maternal **Effects:** • Hypotension **Fetal effects:** • Fetal bradycardia	**Monitor/Assess:** • Vital signs (Blood pressure) • Uterine activity • Electronic fetal monitoring • Anesthesia complications **Patient education:** • injected in epidural space L3 and L4

	Opioids such as fentanyl, hydromorphone (Dilaudid)	**Contraindications:** • Severe spinal cord injury • Uncontrolled coagulopathy • Increased intracranial pressure • Spinal stenosis preventing needle placement		• Itching is a common side effect • Temporary changes in blood pressure • Urinary catheter will be placed due to difficulty emptying bladder • Back soreness at injection site
Local anesthetic nerve block *IM6	Pudendal Nerve block Combo of lidocaine or bupivacaine with a steroid (cortisone, kenalog or dexamethasone)	Used to: • local anesthetic to repair episiotomy • Assist in vacuum/forceps-assisted birth _____ **Contraindications:** • Allergy to local anesthetic • Sepsis • Uncontrolled blood clotting disorders	Maternal **Effects:** • Does not relieve labor pains	**Monitor/Assess:** • Site for infection • Temperature **Patient education:** • Importance of pelvic floor relaxation exercises • Use cushion pads to elevate the pelvic floor and reduce pressure on the nerve • Monitor for Signs of infection and report to physician
Opioid (Pain relief) *IM6	meperidine (Demerol)	Used to: • Treat pain _____ **Contraindications:** • Severe respiratory issues • Gastrointestinal obstructions • Paralytic ileus	Maternal **Effects:** • GI upset • Sedation • Dry mouth • Hypotension **Fetal effects:** • prolong use can cause neonatal abstinence syndrome	**Monitor/Assess:** • Fetal heart rate • Maternal Respiratory rate **Patient education:** • Labor must be well established when using >4cm

General anesthetic *IM6	nitrous oxide “laughing gas”	Used to: • Treat pain/pain relief _____ **Contraindications:** • Severe respiratory issues • Asthma • Pneumothorax • Severe heart disease	Maternal **Effects:** • Dizziness • Nausea • Drowsiness • Hazy cognition	**Monitor/Assess:** • Adverse reactions **Patient education:** • inhalation route • Effects of nitrous oxide disappears quickly once the mask is removed • If self-administered, mother controls device allowing her to use only when needed

Men’s Health Drugs – Erectile Dysfunction

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Phosphodiesterase inhibitor (-afil) *IM1 *IM6	sildenafil (Viagra) tadalafil (Cialis)	**Used to treat:** • Erectile dysfunction • Benign prostatic hypertrophy _____ **Contraindications:** • Do not use with nitrate drugs (i.e. nitroglycerin) **Use with caution:** • Use caution with prolong QT syndrome	**Severe adverse effects:** • Myocardial infarction, sudden cardiac death – d/t shunting of blood away from heart **Most common side effects:** • Priapism • Hearing loss	**Assess/Monitor** • Blood pressure • Hearing loss • Visual disturbances **Patient Education** • Do not use with nitrate drugs • Do not exceed one dose in 24 hrs • Does not protect against STIs

Systemic Drugs - Anti-infectives

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Cephalosporins (-cef, -ceph)	cephalexin (Keflex)	**Used to treat:**	**Severe adverse effects:** • C-diff infection	**Assess/Monitor** • S/S of worsening infection

*IM1 *IM3 *IM5 *IM6 *IM7	cefepime ceftriaxone (Rocephin) • 3rd generation • *Cefazolin (1st generation)* IM2 *IM6	• Bacterial infections (Broad-spectrum bactericidal) _____ **Contraindications:** • Hypersensitivity • Cephalosporins and penicillin are closely related. Watch pt closely if has PCN allergy **Use with caution:** • Prolonged use may cause super infection • Use cautiously with seizure disorder or renal insufficiency	• Hypersensitivity • Anemia **Most common side effects:** • Rash • Nausea • Vomiting • Diarrhea	• WBC • Diarrhea • Bloody stools **Patient Education** • Antibiotics may decrease the effectiveness of birth control – use backup contraception • Complete entire prescribed course of medication
Penicillin (-cillin) *IM3 *IM5 *IM6 *IM7	amoxicillin (Amoxil) ampicillin penicillin G piperacillin	**Used to treat:** • Bacterial infections • Rheumatic fever • Most common medication used to treat GBS+ mothers _____ **Contraindications:** • Hypersensitivity **Use with caution:** • Allergic reaction to cephalosporins	**Severe adverse effects:** • Anaphylaxis (most common antibiotic to have allergic rxn.) **Most common side effects:** • Candidiasis • Rash • Nausea • Vomiting • Diarrhea	**Assess/Monitor** • S/S of worsening infection • WBC • Diarrhea **Patient Education** • Antibiotic may decrease the effectiveness of birth control – use backup contraception • Complete entire prescribed course of medication
Fluoroquinolones (-floxacin) *IM1 *IM3 *IM7	ciprofloxacin (Cipro) Levofloxacin (Levaquin)	**Used to treat:** • Bacterial infections _____ **Contraindications:** • Hypersensitivity **Use with caution:** • Renal disease	**Severe adverse effects:** • **BBW: tendonitis, tendon rupture, peripheral neuropathy, exacerbation of**	**Assess/Monitor** • WBC • Temperature • Intake and Output **Patient Education**

		• Older adults more prone to adverse effects	**myasthenia gravis** • C-diff **Most common side effects:** • Joint pain • Phototoxicity • Prolonged QT • Hepatotoxicity	• Antibiotic may decrease the effectiveness of birth control – use backup contraception • Complete entire prescribed course of medication • Wear sunscreen when outdoors
Antifungals (-azole) *IM1 *IM5 *IM7	fluconazole (Diflucan) miconazole (Monistat) clotrimazole (Lotrimin) *Griseofulvin (Gris-Peg)	**Used to treat:** • Fungal infections • Oral, esophageal, vaginal candidiasis _____ **Contraindications:** • Hypersensitivity • Prolonged QT **Use with caution:** • Renal disease	**Severe adverse effects:** • Prolonged QT • Stevens-Johnson syndrome • Hepatotoxicity **Most common side effects:** • Rash • Diarrhea • Nausea • Dizziness	**Assess/Monitor** • WBC • Temperature • Resolution of infection **Patient Education** • If vaginal infection, complete entire course of treatment before having sex. • Complete entire prescribed course of medication • Wear sunscreen when outdoors
Glycopeptide antibiotic **IM 3** *IM7	vancomycin (Vancocin, Vancoled)	**Used to treat:** • Severe infections _____ **Contraindications:** • Hypersensitivity • Renal Hx **Use with caution:** • Hx of seizures • Skin rashes	**Severe adverse effects:** • Ototoxicity • Red man syndrome • Thrombocytopenia **Most common side effects:** • Thrombophlebitis	**Assess/Monitor** • Platelet count • IV site • Resolution of infection • Peak and trough **Patient Education** • Importance of safety for bleeding • Complete entire prescribed course of medication

				• Will be taken orally if pt has c-diff
Lancomycin antibiotic *IM6 *IM7	clindamycin	**Used to treat:** • Group B Strep • Infections **Contraindications:** •	**Maternal effects:** • Nausea, vomiting • Abdominal pain • Mild skin rash, • Vaginal itching **Fetal effects:** • N/A	**Assess/Monitor:** • monitor stools • Liver function test • Renal function tests **Patient education:** • Does NOT pass into breast milk

Drugs for Pain Management - Analgesics

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
IV Opioids: * IM2 *IM3 *IM5 *IM7	*morphine sulfate* fentanyl Duragesic	**Used to treat:** • Severe Pain • Pain associated with MI • Pulmonary edema _____ **Contraindications:** • Hypersensitivity • Respiratory depression • Paralytic illius **Use with caution:** • Head trauma • Severe liver impairment • Severe liver impairment • Pt taking MAO inhibitors	**Severe adverse effects:** • Respiratory depression • hypotension **Most common side effects:** • Sedation • Constipation • Confusion	**Assess/Monitor** • Assess BP, HR and respiration • Hold if respiration < 10 bpm • Assess type, location & intensity of pain • High Alert Drug **Patient Education** • Do not use other CNS depressants (alcohol, other opioids) • Teach to count respirations • Risk of addiction, tolerance
Oral Pain Meds	Hydrocodone Most commonly combined with	**Used to treat:** • Severe pain _____ **Contraindications:**	**Severe adverse effects:** • Respiratory depression	**Assess / Monitor:** • Assess BP, HR and respiration rate • O2 stat • High Alert Drug

	acetaminophen	• Respiratory depression • Hypersensitivity **Use with caution:** • Head injury, • Brain tumor • Asthma • If pt is being treated for HIV or hepatitis C • If pt taking drugs that affect serotonin level	**Most common side effects:** • Constipation • Dizziness • Drowsiness • Cold symptom • headache	**Patient Education:** • Risk of addiction • Do not drink alcohol
Non-opioid analgesic *IM2 *IM3 *IM5 *IM6 *IM7	acetaminophen	**Used to treat:** • Fever • Mild – moderate pain • Has no anti-inflammatory properties _____ **Contraindications:** • Severe liver or renal impairment **Use with caution:** • Alcoholism • Malnutrition	**Severe adverse effects:** • Hepatotoxicity **Most common side effects:** • Elevated liver enzymes • Steven Johson Syndrome	**Assess/Monitor** • Overall health status • Alcohol usage • Fever or Pain assessment, pre & post **Patient Education** • Max dose 4000mg/24hrs, may be less for those with decreased liver/kidney function • Be aware drug may be combined in other medications • Stop drug if rash occurs
Non-opioid – non-steroidal anti-inflammatory: *Ibuprofen* *Ketorolac* *Tramadol*	*Motrin	**Used to treat:** • Fever • Mild – moderate pain _____ **Contraindications:** • Hypersensitivity • Active GI bleed or ulcers	**Severe adverse effects:** • GI bleed / ulcers • Hypersensitivity	**Assess/Monitor** • Pain – pre & post dosing • Temperature – pre & post dosing • CBC, bleeding time, renal & fiver function **Patient Education**

*IM2 *IM6 *IM7		**Use with caution:** • H/O GI bleed or ulcers • Cardiac, liver or kidney disease • PG women should not take after 20 wk gestation	• Steven Johnson Syndrom **Most common side effects:** • Dyspepsia • N/V • Constipation	• Avoid concurrent use of alcohol, aspirin acetaminophen or other GI irritants • Teach S/S of GI bleed Pediatrics: • Not given to infants <6 months old

Musculoskeletal- Drugs Affecting Calcium Levels and Bone Mineralization

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Antiresorptive	Raloxifene (Evista)	**Used to treat:** • Osteoporosis AND breast CA _____ **Contraindications:** • Pregnancy • Hx venous thrombosis **Use with caution:** • Hx of cardiovascular event	• Venous thromboembolism • Fetal harm • Hot flashes	**Assess/Monitor** • Prolonged immobilization • Pregnancy status **Patient Education** • Should discontinue 72 hours before prolonged immobilization and should not resume until fully mobile
Bisphosphonate	Alendronate (Fosamax)	**Used to treat:** • Osteoporosis _____ **Contraindications:** • Hypersensitivity • Hypocalcemia **Use with caution:**	• Anorexia • Weight loss • Gastritis • Esophagus irritation	**Assess/Monitor** • GI side effects • Calcium level **Patient Education** • Take with a full glass of water • Remain upright for at least 30 minutes

		• Esophageal abnormalities		• Take 30 mins before food or other medication
Hormone	Calcitonin (calcitonin-salmon)	**Used to treat:** • Osteoporosis/ Hypercalcemia _____ **Contraindications:** • Allergy to fish products • Renal insufficiency • Pregnancy • Hypocalcemia	• Hypocalcemia • Nasal irritation • Dizziness • Red streaks on skin	**Assess/Monitor** • Calcium levels • Thyroid function **Patient Education** • Alternate nostrils when using nasal form • Must use calcium supplementation

Electrolyte Imbalances- Hyperkalemia

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Kayexalate *IM4 *IM7	Sodium Polystyrene Sulfonate	**Used to treat:** • Hyperkalemia _____ **Contraindications:** • Avoided in patients who have not had a recent bowel movement. **Use with caution:** • Patients with GI issues	**Severe adverse effects:** • Intestinal Necrosis • Bleeding/Bowel Obstruction **Most common side effects:** • Nausea • Vomiting • Loss of Appetite • Constipation	**Assess/Monitor** • Bowel sounds • Monitor Potassium levels • Frequent bowel movements **Patient Education** Avoid using antacids or laxatives without doctor's advice. Do not use potassium, calcium, or salt substitutes. Avoid eating/drinking anything that contains sorbitol.
Compound *IM4 *IM7	Sodium Bicarbonate	**Used to treat:** • Hyperkalemia _____ **Contraindications:**	**Severe adverse effects:** • Fluid Retention • Metabolic alkalosis **Most common side effects:**	**Assess/Monitor** • Electrolyte levels • Fluid balance (I&Os, daily weights)

		• Patient with chloride loss from vomiting or from continuous GI suctions. Diuretics (known to produce hyperchloremic alkalosis). **Use with caution:** • Hypocalcemia	• GI issues • Increased thirst • Unpleasant taste • Fatigue	• Acid base balance **Patient Education** Can affect the absorption of other medications.
Supplement *IM4 *IM6 *IM7	Calcium Gluconate	**Used to treat:** • Hyperkalemia/Hypocalcemia • Reversal agent for magnesium toxicity _____ **Contraindications:** • Hypercalcemia • Sarcoidosis **Use with caution:** • Patients on digoxin	**Severe adverse effects:** • Renal Impairment • Cardiac dysrhythmias **Most common side effects:** • Cardiac dysrhythmias	**Assess/Monitor** • Electrolyte levels • Fluid balance • Cardiac telemetry **Patient Education** • Notify the nurse if you are having chest pain.
Combinations medication *IM4 *IM7	Insulin and Glucose	**Used to treat:** • Hyperkalemia _____ **Contraindications:** • Issues with blood sugar • Diabetic • Renal impairment **Use with caution:** • Monitor blood glucose closely	**Severe adverse effects:** • hypoglycemia **Most common side effects:** Shakiness, sweating. confusion	**Assess/Monitor** • Electrolyte levels • Blood glucose levels **Patient Education** • Notify the nurse if you are feeling shaky/sweating. These are signs your blood glucose is dropping.

Compound *IM4 *IM6 *IM7	Magnesium Sulfate	**Used to treat:** • Severe Hypomagnesemia • Depresses myometrium contractility • CNS depressant _____ **Contraindications:** • Seizure disorders **Use with caution:** • Renal impairment	**Severe adverse effects:** • Seizures • Heart arrhythmias **Most common side effects:** Seizures *IM6 **Maternal effects:** Flushing, dry mouth, lethargy, headache, muscle weakness, pulmonary edema, cardiac arrest **Fetal effects:** Lethargy, hypotonia, respiratory depression. May reduce risk of cerebral palsy in neonate; shown to offer neuro protection in preterm infant	**Assess/Monitor** • Electrolyte levels • Fall/seizure precautions • Deep Tendon Reflexes • Intake & Output *IM6 Monitor FHR, contractions, and MgSO4 levels. Monitor for s/sx of maternal toxicity. Have Calcium Gluconate (antidote) at bedside for magesium toxicity. **Patient Education** • Notify the nurse if you are feeling lightheaded. Do not get up by yourself.

Vaccinations - Adults

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Influenza Vaccine *IM2		**Used to treat:** • Preventing the spread of influenza _____ **Contraindications:** • Currently ill • H/O GBS or severe reaction **Use with caution:** • H/O egg allergy	**Severe adverse effects:** • Anaphylaxis, Guillain-Barré Syndrome (GBS) **Most common side effects:** • Pain, swelling at injection site. • mild fever, • headache, • GI upset	**Assess/Monitor** • Assess for severe reaction **Patient Education** • Postpone if moderately or severely ill • Avoid if H/O severe reaction to this vaccine or GBS • 1 dose annually

Pneumococcal Conjugate (PCV13, 15, 20) *IM2		**Used to treat:** • Preventing pneumococcal disease _____ **Contraindications:** • H/O anaphylaxis **Use with caution:**	**Severe adverse effects:** • Anaphylaxis, **Most common side effects:** • Pain, swelling at injection site. • mild fever, • headache,	**Assess/Monitor** • Assess for severe reaction • **Patient Education** • Postpone if moderately or severely ill • Avoid if H/O severe reaction to this vaccine • If 1st dose taken before age 65 then need 2nd dose after age 65
Recombinant Zoster *IM2	Shingrix (RZV)	**Used to treat:** • Preventing shingles _____ **Contraindications:** • H/O anaphylaxis • Pregnant or breastfeeding **Use with caution:**	**Severe adverse effects:** • Anaphylaxis, **Most common side effects:** • Pain, swelling at injection site. • mild fever, headache,	**Assess/Monitor** • Assess for severe reaction • **Patient Education** • Postpone if moderately or severely ill • Avoid if H/O severe reaction to this vaccine • 2 doses for ages ≥ 50 or if age 19+ with compromised immune system
Tdap Tetanus, Diphtheria, Pertussis Vaccine **Td** Tetanus, Diphtheria *IM2 *IM7		**Used to treat:** • Preventing Tetanus, Diphtheria, Pertussis _____ **Contraindications:** • H/O anaphylaxis **Use with caution:** • PG women recommend get between 27-36 wks of each pregnancy	**Severe adverse effects:** • Anaphylaxis, **Most common side effects:** • Pain, swelling at injection site. • mild fever, • headache,	**Assess/Monitor** • Assess for severe reaction • **Patient Education** • Dose taken at age 18 then every 10 yrs a Td booster or if traumatic injury (animal bites, lacerations)
MMR		**Used to treat:**	**Severe adverse effects:**	**Assess/Monitor**

Measles Mumps Rubella *IM6		• Preventing measles, mumps or rubella • Prevention of congenital defects _____ **Contraindications:** • H/O severe allergy reactions • Severe immunodeficiency • Pregnancy	• Anaphylaxis • seizures **Most common side effects:** • Pain • Swelling at injection site. • mild fever, • headache rash	• Assess for severe reaction • **Patient Education** • To manage discomfort, administer pain relievers or apply a cold pack • Can be given postpartum if mother is Rubella equivocal or non-immune to help protect future pregnancies from congenital effects • Can not be given while pregnant as it is a live vaccine

Crystalloids & Colloids – Intravenous Fluids

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Crystalloid intravenous fluid *IM7	**Hypotonic**: less than 250 mOsm/L 0.25% NS 0.45% NS 5% D5W	• Shifts fluid out of vessels into cells • D5W spares protein: provides calories and free water: treats hyperkalemia: is a diluent for IV drugs.	• May worsen hypotension • Can increase edema • May cause hyponatremia • D5W may also irritate veins	**Assess/Monitor** • Assess for severe reaction
Crystalloid intravenous fluid *IM7	**Isotonic**: greater than 250 mOsm/L 0.9% NS Lactated Ringer's	• No fluid shift • Vascular expansion • Electrolyte replacement	• May worsen hypotension • Can increase edema • May cause hyponatremia	**Assess/Monitor** • Assess for severe reaction
Crystalloid intravenous fluid *IM7	**Hypertonic**: greater than 375 mOsm/L D5 0.45%NS D5 0.9%	• Shifts fluid back into circulation • Vascular expansion • Replaces electrolytes	• Irritation to veins • May cause fluid overload • May cause hypernatremia	**Assess/Monitor** • Assess for severe reaction

	Hypertonic saline (HS) 3% or 5%		• May cause hyperchloremia • HS slows inflammation and increases capillary permeability	
Colloid intravenous Fluid *IM7	Albumin (plasma proteins) 5% or 25%	• Keeps fluid in vessels • Maintains volume • Used to replace protein and treat shock and erythroblastosis fetalis	• May cause anaphylaxis (watch for hives, fever, chills, headache) • May cause fluid overload and pulmonary edema	**Assess/Monitor** • Assess for severe reaction

Catecholamines

Class (Prefix or Suffix)	Generic (Brand Name)	Indication	Adverse Reactions	Nursing Considerations
Adrenergic agonist *IM7	epinephrine (Adrenalin)	Treatment of: • Bronchospasms • Hypotension • Bradycardia • Cardiac Arrest	**Severe adverse effects:** • Hypertensive crisis • Lethal Dysrhythmias • Angina Pectoris • Necrosis if extravasation in peripheral intravenous line	**Assess/Monitor** • Assess for severe reaction • Patient vital signs for changes • Preferred via central line • Preferred on EKG monitor

			Most common side effects: • Heart palpitations • Headache • Nausea/vomiting	