

Classification	Mechanism of Action	Indications	Contraindications	Adverse Effects	Nursing Considerations
Anti-Infective Agents					
Penicillin <i>penicillin V (Betapen)</i> <i>amoxicillin (Amoxil)</i> <i>ampicillin (Omnipen)</i> <i>cloxacillin (Tegopen)</i> PO/IV/IM	Inhibition of cell wall synthesis	Mitral Valve Stenosis Endocarditis Sinusitis Pneumonia Gram-negative bacteria	<ul style="list-style-type: none"> Allergy Oral contraceptives (decreases OC efficacy) Kidney failure 	<ul style="list-style-type: none"> Rash Pruritis N/V/D Allergic reaction** **Cephalosporins should also be used with caution**	<ul style="list-style-type: none"> Assess for history of allergy Post administration: clients can have an allergic reaction within 0- 30 minutes Pen. V and amoxicillin should be taken with food. All other penicillins should be taken medication with water, 1 hour before or 2 hours after meals Avoid taking with acidic fruit juices Clients must complete full course of treatment <p><small>Kids</small> Use with caution in neonates r/t immature kidney function slowing elimination</p> <p>Geriatric Hyponatremia and hyperkalemia are possible, but uncommon</p>
Sulfonamide <i>sulfamethoxazole-trimethoprim (Septra)</i> <i>sulfisoxazole (Generic)</i> PO/IV/IM	Do not directly destroy bacteria; however they interfere with their growth by preventing the synthesis of folic acid (required to make the nucleus of DNA)	Sinusitis Pyelonephritis Meningitis Urinary Tract Infection Otitis Media Gram-negative bacteria Gram-positive bacteria	<ul style="list-style-type: none"> Allergy Children under the age of 2 months Renal failure 	<ul style="list-style-type: none"> Rash Photosensitivity N/V/D Allergic reaction 	<ul style="list-style-type: none"> Assess for history of allergy Post administration: clients can have an allergic reaction within 0- 30 minutes Clients must complete full course of treatment <p>Encourage fluids to produce a urine output of 1,200-1,500mL/day to avoid crystalluria (drug crystals in the urine)</p>
Cephalosporin <i>cephalexin (Keflex)</i> <i>cefprozil (Cefzil)</i> <i>cefazolin (Cefazolin)</i> <i>ceftriaxone (Rocephin)</i> PO/IV/IM	Inhibition of cell wall synthesis	Sinusitis Pyelonephritis Meningitis Urinary Tract Infection Skin Infections Gram-negative	<ul style="list-style-type: none"> Allergy Alcohol Oral contraceptives (decreases OC efficacy) 	<ul style="list-style-type: none"> Rash Pruritis N/V/D Allergic reaction 	<ul style="list-style-type: none"> Assess for history of allergy Post administration: clients can have an allergic reaction within 0- 30 minutes Clients must complete full course of treatment <p><small>Kids</small> Used cautiously because immature</p>




		bacteria Gram-positive bacteria			kidney function slows elimination Geriatric Dosages must be reduced by the prescriber in the presence of renal impairment
Tetracyclines <i>doxycycline</i> <i>(Vibramycin)</i> <i>minocycline (Minocin)</i> <i>tetracycline</i> <i>(Achromycin)</i> PO/IV	<ul style="list-style-type: none"> Inhibition of bacterial protein synthesis 	Pyelonephritis Meningitis Urinary Tract Infection Otitis Media Pneumonia Gram-negative bacteria Gram-positive bacteria	<ul style="list-style-type: none"> Allergy Pregnancy Kds Not to be given to children under the age of 8 (r/t permanent discoloration of teeth) Oral contraceptives (decreases OC efficacy) 	<ul style="list-style-type: none"> N/V/D Overgrowth of nonsusceptible organisms (i.e. Candidiasis) Discoloration of teeth Photosensitivity 	<ul style="list-style-type: none"> Avoid taking with antacids, dairy products, iron preparations, or antidiarrheal medications (↓ levels) Avoid exposure to sunlight Clients must complete full course of treatment
Macrolide <i>azithromycin</i> <i>(Zithromax)</i> <i>clarithromycin</i> <i>(Biaxin)</i> <i>erythromycin</i> <i>(Generic)</i> PO	<ul style="list-style-type: none"> Inhibition of bacterial protein synthesis 	Pyelonephritis Urinary Tract Infection Pneumonia Gram-positive bacteria	<ul style="list-style-type: none"> Allergy Warfarin use (increases serum concentration) Liver disease 	<ul style="list-style-type: none"> N/V/D Rash Palpitations 	<ul style="list-style-type: none"> Clients must complete full course of treatment Avoid taking with fruit juices
Fluoroquinolones <i>ciprofloxacin (Cipro)</i> <i>levofloxacin</i> <i>(Levaquin)</i> <i>moxifloxacin (Avelox)</i> PO/IV	<ul style="list-style-type: none"> Inhibition of bacterial enzymes → stops DNA synthesis in the cell 	Pyelonephritis Urinary Tract Infection Pneumonia Gram-negative bacteria Gram-positive bacteria	<ul style="list-style-type: none"> Liver disease Kidney disease Warfarin use (increases serum concentration) Kds Not to be used in children under the age of 18 (safety has not been established) 	<ul style="list-style-type: none"> N/V/D Candidiasis Photosensitivity Tendon injury (tendonitis r/t apoptosis and decreased collagen synthesis in a tendon) 	<ul style="list-style-type: none"> Clients must complete full course of treatment Encourage fluids to produce a urine output of 1,200-1,500mL/day to avoid crystalluria (drug crystals in the urine) Avoid exposure to sunlight
Aminoglycoside <i>gentamicin sulfate</i> <i>(Gentamicin)</i> <i>tobramycin sulfate</i> <i>(Tobramycin)</i>	<ul style="list-style-type: none"> Inhibit cell wall synthesis 	VRE Skin infections (folliculitis) Gram-negative bacteria	<ul style="list-style-type: none"> Allergy Kidney disease Pregnancy (can cause congenital bilateral deafness in 	<ul style="list-style-type: none"> Nephrotoxicity Ototoxicity Skin rash Headache Dizziness 	<ul style="list-style-type: none"> Monitor blood levels of the medication Assess for toxicity (i.e. hearing loss/tinnitus, kidney failure) Preferred choice for VRE infections

IV			children if taken during pregnancy)		
Nitroimidazole <i>metronidazole (Flagyl)</i> PO/IV	<ul style="list-style-type: none"> Inhibits DNA synthesis of a cell 	C. Diff Bacterial Vaginosis Trichomonas	<ul style="list-style-type: none"> Alcohol use Liver disease 	<ul style="list-style-type: none"> Dizziness GI upset Headache Neurotoxicity (seizures) 	<ul style="list-style-type: none"> Encourage client to take with food/milk Alcohol should not be consumed during, and for at least 24 hours after last dose
Nitrofurantoin <i>(MacroBID)</i> PO	<ul style="list-style-type: none"> Interferes with the activity of enzymes that regulate bacteria metabolism and disrupts cell wall synthesis 	Urinary Tract Infection	<ul style="list-style-type: none"> Allergy Kidney disease 	<ul style="list-style-type: none"> N/V Dizziness Headache 	<ul style="list-style-type: none"> Clients must complete full course of treatment Increase fluids to 1,200-1,500 mL/day
Glycopeptide <i>vancomycin (Vancocin)</i> IV/PO	<ul style="list-style-type: none"> Binds to the cell wall and produces inhibition of cell wall synthesis 	MRSA C. Diff	<ul style="list-style-type: none"> Kidney disease Hearing loss 	<ul style="list-style-type: none"> Ototoxicity Kidney failure Skin rash Hypotension Flushing of the skin 	<ul style="list-style-type: none"> Monitor blood levels of the medication Assess for toxicity (i.e. hearing loss, kidney failure) Preferred choice for MRSA infections
Laxatives					
Stimulant <i>bisacodyl (Dulcolax)</i> <i>senna (Senokot)</i> <i>sennosides (Ex-Lax; USA)</i> PO/PR	<ul style="list-style-type: none"> Irritates intestinal smooth muscle + colonic intramural plexus → increased peristalsis Promotes <u>some</u> water into stool 	Constipation	<ul style="list-style-type: none"> Allergy Acute abdomen Intestinal obstruction Undiagnosed abdo pain Appendicitis Electrolyte imbalance Renal failure Children < 6 years 	<ul style="list-style-type: none"> Diarrhea Abdo cramping Electrolyte imbalances Dizziness 	<ul style="list-style-type: none"> Assess fluid and electrolytes Increase dietary fibre (whole grain, bran, fruit, greens) Increase water intake Long-term use (7d+) results in low bowel tone = dependency May interact with milk/juices/antacids
Bulk Forming <i>psyllium (Metamucil)</i> <i>methylcellulose (Entrocel, Citrucel)</i> PO	<ul style="list-style-type: none"> Increase size and softness of stool → triggering peristalsis Absorbs water into stool 	Constipation IBS **Has shown to lower LDL in Hypercholesteremia	same	<ul style="list-style-type: none"> Constipation Abdo cramping Flatulence 	<ul style="list-style-type: none"> Assess fluid and electrolytes Increase dietary fibre (whole grain, bran, fruit, greens) Increase water intake Long-term use (7d+) results in low

	•				bowel tone = dependency • May interact with milk/juices/antacids
Emollient <i>docusate sodium (Colace)</i> <i>mineral oil (Fleet* mineral oil enema)</i> *sodium phosphate/Fleet is the more common saline enema* PO/PR	<ul style="list-style-type: none"> Lubricates intestinal wall Promotes water and fat into stool 	Constipation Diagnostic preparations (i.e. colonoscopy)	<ul style="list-style-type: none"> Others are same Caution in pregnancy 	<ul style="list-style-type: none"> Cramping Diarrhea 	<ul style="list-style-type: none"> Usually taken hs; onset = 6-8 hrs (mineral oil) or 24-72 hr (docusate sodium) Assess fluid and electrolytes Increase dietary fibre (whole grain, bran, fruit, greens) Increase water intake Long-term use (7d+) results in low bowel tone = dependency Safe in pregnancy docusate should not be taken within 2 hrs of mineral oil r/t ↑mineral oil absorbed by the body May interact with milk/juices/antacids
Saline Laxative <i>magnesium sulfate (Epsom Salts)</i> <i>magnesium citrate (Citro-Mag)</i> <i>magnesium hydroxide (Milk of magnesia/MOM; Diovol)</i> <i>sodium phosphate (Fleet)</i> PO (liquid or tablet)	<ul style="list-style-type: none"> Increases osmotic retention of fluid Increases peristalsis 	Constipation Diagnostic preparations (i.e. colonoscopy)	<ul style="list-style-type: none"> same Children < 2 years 	<ul style="list-style-type: none"> ↓ BP Diarrhea Abdo cramping Electrolyte imbalances Muscle cramping Dizziness 	<ul style="list-style-type: none"> 30 min – 3 hr onset Assess fluid and electrolytes Increase dietary fibre(whole grain, bran, fruit, greens) Increase water intake Long-term use (7d+) results in low bowel tone = dependency Safe in pregnancy May interact with milk/juices/antacids
Hyperosmotic <i>glycerin (Glycerin supp.)</i> <i>Lactulose (APO-Lactulose)</i> <i>sorbitol</i> <i>polyethylene glycol; PEG (Restoralax, PegLyte)</i>	<ul style="list-style-type: none"> Increases stool water content Promotes peristalsis **Lactulose can be used to decrease serum ammonia; seen in portal systemic encephalopathy**	Constipation Diagnostic preparations (i.e. colonoscopy)	<ul style="list-style-type: none"> same Diabetes (lactulose contains lactose) 	<ul style="list-style-type: none"> ↓ BP Diarrhea Abdo cramping Electrolyte imbalances Belching & flatulence 	<ul style="list-style-type: none"> Assess fluid and electrolytes Increase dietary fibre(whole grain, bran, fruit, greens) Increase water intake Long-term use (7d+) results in low bowel tone = dependency Safe in pregnancy May interact with milk/juices/antacids

PO					
Diabetes	•				
<p>Insulin</p> <p><u>Rapid Acting</u></p> <p><i>NovoRapid</i></p> <p><i>Humalog</i></p> <p><u>Short Acting</u></p> <p><i>Humulin R</i></p> <p><i>Novolin ge Toronto</i></p> <p><u>Intermediate Acting</u></p> <p><i>Novolin ge NPH</i></p> <p><u>Long Acting</u></p> <p><i>Lantus</i></p> <p>IV/SC</p>	<ul style="list-style-type: none"> • Insulin is a hormone • Acts on β cells in pancreas • Helps to metabolize proteins, fats and carbohydrates • Helps to store glucose in the liver • Moves glucose from blood to cells 	<p>Type 1 Diabetes</p> <p>Type 2 Diabetes</p>	<ul style="list-style-type: none"> • Allergy • Hypoglycemia • Corticosteroids (increases glucose) • Diuretics (increases glucose) • Birth control (increases glucose) 	<ul style="list-style-type: none"> • Hypoglycemia 	<ul style="list-style-type: none"> • Insulins differ in onset and duration of action • Insulin can not be given orally; must be given subcutaneously or IV (regular insulin) • Insulin can be stored at room temperature or in the fridge • Injection sites can not be used more than once a month (must move at least 1/2 inch from previous site) • Effective management requires a consistent schedule of meals, snacks, exercise, injections and blood glucose monitoring <p>Geriatric Impaired vision may result in inaccurate dosages</p>
<p>Sulfonylureas</p> <p><i>glyburide (Diabeta)</i></p> <p><i>gliclazide (Diamicon)</i></p> <p><i>glimepiride (Amaryl)</i></p> <p>PO</p>	<ul style="list-style-type: none"> • Stimulate the pancreas to produce more insulin (therefore ineffective if β-cells of the pancreas can no longer function) 	Type 2 Diabetes	<ul style="list-style-type: none"> • same • Alcohol (lowers glucose) 	<ul style="list-style-type: none"> • Hypoglycemia • Weight gain • Hemolytic anemia • Nausea 	<ul style="list-style-type: none"> • Should <u>not</u> be taken at bedtime • Should be taken no more than 30 minutes prior to eating • Meals and snacks should be taken routinely
<p>Biguanides</p> <p><i>metformin (Glucophage)</i></p> <p>PO</p>	<ul style="list-style-type: none"> • Acts by decreasing the hepatic production of glucose (gluconeogenesis) • Helps to decrease intestinal absorption of glucose • Helps to improve insulin receptor sensitivity • Does <u>not</u> increase insulin secretion, thus does not cause hypoglycemia 	Type 2 Diabetes	<ul style="list-style-type: none"> • Allergy • Hypoglycemia • Some antacids • Iodine containing contrast mediums 	<ul style="list-style-type: none"> • Diarrhea • Nausea • Metallic taste in mouth • Anorexia 	<ul style="list-style-type: none"> • Must be taken with meals • Must stop medication 48 hours prior to iodine radiological studies

<p>Thiazolidinediones <i>pioglitazone (Actos)</i> <i>rosiglitazone (Avandia)</i> PO</p>	<ul style="list-style-type: none"> Helps to enhance the sensitivity of insulin receptors Helps to stimulate glucose storage Inhibits glucose production in the liver 	Type 2 Diabetes	<ul style="list-style-type: none"> Allergy Hypoglycemia 	<ul style="list-style-type: none"> Edema Weight gain <p>Liver failure</p>	<ul style="list-style-type: none"> Can be taken with or without food
<p>Meglitinides <i>repaglinide (GlucoNorm)</i> <i>nateglinide (Starlix)</i></p>	<ul style="list-style-type: none"> Stimulates the pancreas to produce more insulin (therefore ineffective if β-cells of the pancreas can no longer function) 	Type 2 Diabetes	<ul style="list-style-type: none"> Antifungal medications (lowers glucose) Nonsteroidal anti-inflammatory medications (NSAIDS) (lowers glucose) Anti-seizure medications (increases glucose) 	<ul style="list-style-type: none"> Hypoglycemia Headache Dizziness 	<ul style="list-style-type: none"> Must be taken 0 to 30 minutes before meals If a meal is skipped, the dose should be skipped. If a meal added, then a dose should be added
Respiratory					
<p>Antitussive <u>Non-opioid</u> <i>dextromethorphan (Benlyn/Buckleys/Robitussin)</i> <u>Opioid</u> Hydrocodone/Codeine PO</p>	<p>Suppress cough reflex by numbing stretch receptors in resp. tract → cough reflex not initiated or Suppress the cough reflex; medulla</p>	<p>Cough (<u>nonproductive only!</u>) URTI (viral and bacterial)</p>	<ul style="list-style-type: none"> Allergy Opioid dependency Children <6 years of age Risk for respiratory depression 	<p>Drowsiness/sedation Dizziness N/V Constipation (opioids)</p>	<ul style="list-style-type: none"> Adequate respiratory assessment Avoid driving, operating heavy machinery Push fluid intake
<p>Decongestants <u>Adrenergic Agonist</u> <i>pseudoephedrine (Sudafed)</i> <i>oxymetazoline (Vicks/Dristan/Dimetapp)</i> <i>xylometazoline (Otrivin/Triaminic)</i> <u>Corticosteroid</u> <i>budesonide</i></p>	<ul style="list-style-type: none"> Vasoconstriction of arterioles of nasal mucosa Anti-inflammatory effect 	<p>Allergies URTI (viral and bacterial) Rhinitis Sinusitis</p>	<ul style="list-style-type: none"> Allergy HTN Diabetes Hyperthyroidism 	<ul style="list-style-type: none"> Mucosal dryness/irritation Palpitations Insomnia Tremors 	<ul style="list-style-type: none"> Potential for rebound congestion (rhinitis medicamentosa); if used >5 days → nasal passage damage Avoid caffeine Report fever, productive cough, etc. lasting >5-7d

<p>(Pulmicort/Symbicort) mometasone furoate (Nasonex) PO/INH</p>					
<p>Antihistamine (H1) diphenhydramine (Benadryl) cetirizine (Reactine) loratadine (Claritin) PO/IV/IM</p>	<ul style="list-style-type: none"> Compete with histamine for specific receptor sites <p>**Remember: Histamine causes constriction of smooth muscles, increased body secretions, and vasodilatation**</p>	<p>Rhinitis Anaphylaxis Allergies in general</p>	<ul style="list-style-type: none"> Glaucoma Pregnancy Heart disease Kidney disease 	<ul style="list-style-type: none"> Drowsiness (side effect) Anticholinergic effects <input type="checkbox"/> Tachycardia <input type="checkbox"/> Restlessness <input type="checkbox"/> Dilated pupils <input type="checkbox"/> Decreased salivation <input type="checkbox"/> Urinary retention 	<p> May experience paradoxical excitement</p> <p>Geriatric May cause confusion, dizziness, and hypotension</p> <p>Geriatric diphenhydramine is sometimes used as a sleeping aid for occasional use</p> <ul style="list-style-type: none"> Avoid driving and use of heavy machinery
<p>Beta-adrenergic Agonist (β2-Agonist) salbutamol (Ventolin) salmeterol (Serevent) terbutaline (Bricanyl) PO/INH</p>	<ul style="list-style-type: none"> Dilates airways by stimulating β2-adrenergic receptors in lung tissue (bronchodilation) 	<p>Asthma Bronchitis COPD</p>	<ul style="list-style-type: none"> Allergy Cardiac dysrhythmia Hypertension (medications cause vasoconstriction)  Under the age of 6 is limited Beta-blocker use (inhibits bronchodilation) 	<ul style="list-style-type: none"> Tachycardia Insomnia Tremors Hyperglycemia 	<ul style="list-style-type: none"> Preferred medication for acute respiratory symptoms Cardiac and respiratory assessments Hold breath for 5-10 seconds post inhalation Use a spacer or ‘Aero chamber’ for administration Wait 2 minutes between inhalations Rinse mouth after inhalation (metallic taste)
<p>Anticholinergic ipratropium bromide (Atrovent) INH</p>	<ul style="list-style-type: none"> Block ACh (acetylcholine) receptors to prevent bronchoconstriction <p>**Remember—ACh comes from the PSNS and causes bronchial constriction**</p>	<p>Asthma Bronchitis COPD</p>	<ul style="list-style-type: none"> Allergy  Not recommended in children under the age of 12 	<ul style="list-style-type: none"> Anticholinergic effects <input type="checkbox"/> Tachycardia <input type="checkbox"/> Restlessness <input type="checkbox"/> Dilated pupils <input type="checkbox"/> Decreased salivation <input type="checkbox"/> Urinary retention 	<ul style="list-style-type: none"> Do not use medication to terminate an acute attack Hold breath for 5-10 seconds post inhalation Use a spacer or ‘Aero chamber’ for administration Wait 2 minutes between inhalations Rinse mouth after inhalation
<p>Corticosteroids cortisone (Cortistan) hydrocortisone (Cortef)</p>	<ul style="list-style-type: none"> Medications work in the same manner as naturally occurring steroid hormones 	<p>Addison’s Disease Asthma Inflammatory Bowel Disease</p>	<ul style="list-style-type: none"> Allergy Cataracts Glaucoma Peptic ulcer disease 	<ul style="list-style-type: none"> Impaired wound healing Masking of infections 	<ul style="list-style-type: none"> (decrease absorption & increase excretion of calcium) Long-term use may cause Cushing’s disease/syndrome

<p><i>methylprednisolone (Medrol)</i> <i>prednisone (Winpred)</i> <i>dexamethasone (Decadron)</i> <i>fluticasone (Flovent)</i> PO/IV/IM/TOPICAL/INH</p>	<ul style="list-style-type: none"> Gonadocorticoids: (androgens) contribute to onset of puberty Mineralocorticoids: recall function of aldosterone Glucocorticoids: (cortisol) <ol style="list-style-type: none"> Increase blood glucose by inhibiting insulin secretion and promoting gluconeogenesis Breakdown lipids and proteins Suppress the inflammatory response <p>Influence CNS to affect mood</p>	<p>Rhinitis Pruritis Chronic Obstructive Pulmonary Disease Hodgkin's Disease Leukemias Sinusitis</p>	<ul style="list-style-type: none"> Psychiatric problems Systemic infections 	<ul style="list-style-type: none"> Hypokalemia Peptic ulcers Edema Sodium/fluid retention Nausea Anxiety Weight gain Heart failure Increased intraocular pressure Fragile skin Candidiasis (inhaler use) 	<ul style="list-style-type: none"> Oral glucocorticoids should be given in the morning to decrease amount of adrenal suppression Oral glucocorticoids should be given with milk or food to decrease GI upset <small>Kids</small> Growth retardation is possible. Thus, smaller doses should be considered and accurate weekly height and weight must be documented Geriatric Corticosteroids often aggravate other conditions (i.e. hypertension, CHF, diabetes, infection) Rinse mouth after inhaled use to prevent candidiasis
<p>Xanthines <i>theophylline (Theo-Dur)</i> <i>aminophylline (Somophylline)</i> PO/IV</p>	<ul style="list-style-type: none"> Causes bronchodilation Acts on the CNS medulla to enhance respiratory drive 	<p>Asthma Bronchitis COPD</p>	<ul style="list-style-type: none"> Allergy Cardiac dysrhythmia Seizure disorders Antibiotic use (increases serum levels of xanthine) Caffeine 	<ul style="list-style-type: none"> N/V Anorexia Cardiac dysrhythmia 	<ul style="list-style-type: none"> Limit caffeine intake Report s/s of toxicity (anorexia, N/V, hypotension, seizure) Limit cigarette smoking (reduces therapeutic effect of xanthines) <small>Kids</small> Between 6 months and 16 years of age may need increased doses r/t rapid metabolism <small>Kids</small> Under the age of 6 months have prolonged elimination r/t immature liver Geriatric Very unpredictable r/t drug interactions, renal and hepatic impairment
<p>Antileukotrienes <i>montelukast sodium (Singulair)</i> <i>zafirlukast (Accolate)</i> PO</p>	<ul style="list-style-type: none"> Prevent smooth muscle contraction of the bronchi Decreases mucus secretion Decreases 	<p>Asthma</p>	<ul style="list-style-type: none"> Allergy Allergy to lactose (inactive ingredient in antileukotrienes) Liver disease 	<ul style="list-style-type: none"> N/D Headache Liver failure 	<ul style="list-style-type: none"> Monitor liver function tests (especially during early course of treatment) Do not use medication to terminate an acute attack

	inflammation in lungs by preventing mobilization and migration of WBCs into the lungs				
Cardiovascular	•				
<p>Anticoagulants</p> <p><i>Heparin</i></p> <p><i>dalteparin (Fragmin)(LMWH)</i></p> <p><i>enoxaprin (Lovenox)(LMWH)</i></p> <p><i>warfarin (Coumadin)</i></p> <p>PO/IV/IM/SC</p>	<ul style="list-style-type: none"> • Prevents thrombus formation • Inhibits clotting factors in intrinsic pathway (Xa, IX, X, XI, XII & VIII) • Inhibits prothrombin to thrombin & fibrinogen to fibrin 	<p>Venous Thrombosis</p> <p>Pulmonary Embolism</p> <p>Atrial Fibrillation</p> <p>CVA Thrombosis</p> <p>MI</p>	<ul style="list-style-type: none"> • Allergy • Active internal bleeding • Severe hypertension • Bleeding disorders • ASA/NSAIDS (↑ anticoagulant effect) • Trauma • Intracranial hemorrhage 	<p>Thrombocytopenia (↓ platelet count)</p> <ul style="list-style-type: none"> • Bleeding • HematuriaNausea • Local irritation (preferably injected SC into abdomen) 	<ul style="list-style-type: none"> • Prophylaxis use only (they do not work on clots that have already formed) • Monitor blood work, values such as aPTT (heparin use) and INR (warfarin use) • Check for bleeding especially in gums and stool • Heparin (20 min onset) usually starts therapy, followed by Warfarin (36h onset) • <u>Vitamin K</u> is used to reverse effects of warfarin toxicity • <u>Protamine sulfate</u> is used to reverse heparin effects <p><small>Kids</small> Heparin containing benzyl alcohol must not be given to neonates (fatal reactions have been reported)</p> <p><small>Kids</small> When warfarin is used, all care providers should be informed to avoid unnecessary physical trauma</p> <p>Geriatric More likely to experience bleeding complications</p> <p>Geriatric dalteparin and enoxaparin can cause renal failure</p>