

Respiratory Drug Chart

	Drug	Mechanism	Use	Side/Adverse Effects	Nursing Implications
	<p style="text-align: center;">Antihistamines</p> <p>diphenhydramine hydrochloride-BENADRYL</p> <p>ALLEGRA, CLARITIN, ZYRTEC</p>	-competes for H1 receptors	-prevent & treat allergic responses -hypnotic—safe, non-narcotic -anticholinergic -anti-emetic	-CNS: drowsiness, sedation, vertigo CV: hypotension, palpitations, arrhythmias -Resp: dryness of mouth, thickened bronchial secretions -GI: anorexia, N/V, diarrhea or constipation -GU: urinary retention, dysuria	-additive depression of CNS w/ alcohol, hypnotics, antipsychotics, anti-anxiety, narcotics -anticholinergic—caution w. glaucoma, hyperthyroidism, CV dx or hypertension -avoid pregnancy /lactation -take at bedtime to avoid sedation -caution about driving -caution w/ older persons -teach proper administration of nose drops & nose sprays -caution against misuse—rebound congestion DDIs: Inderal antagonizes antihistamines
Bronchodilators	<p style="text-align: center;">Beta Agonists</p> <p><u>Nonselective:</u> Isoproterenol, Epinephrine, Ephedrine</p> <p><u>Selective:</u> albuterol, metaproterenol, terbutaline, salmeterol</p>	-stimulate beta-2 adrenoreceptors -bronchial smooth muscle relaxation -stimulate mucociliary clearance	-“rescue therapy” during acute asthma attacks -prophylaxis for exercise-induced asthma -prophylaxis for exposure to known antigens	-Nonselective: stimulate cardiac beta receptors—tachycardia, arrhythmias, angina -CNS effects: nervousness, anxiety, insomnia, irritability, dizziness & sweating -vasoconstriction: incr. BP	-assess respiratory status -decr. environmental irritants -improve humidification -avoid OTC inhalers DDIs: potentiated by MOA inhibitors, tricyclic antidepressants and other sympathomimetic drugs
	<p style="text-align: center;">Muscarinic-receptor antagonists (anticholinergics)</p>	-inhibits ACh mediated constriction of bronchial smooth muscle -decr. vagal-stimulated mucus secretion	-treat chronic conditions; not for acute use	-systemic side effects minimal especially CV -dryness of oropharynx -cough -exacerbation of symptoms	
	<p style="text-align: center;">Methylxanthines</p>	-inhibits phosphodiesterase leads to incr. cAMP so bronchodilation -decr. histamine release -stimulates ciliary transport of mucus -improve contractility of diaphragm -incr. CO, produces diuresis & decr. PV	-prophylaxis & treatment of asthma -relieve SOB, wheezing & dyspnea -stimulate newborns who don't breath well	-if plasma level >20 ug/ml -CNS: nervousness, insomnia, HA, dizziness, tremors late sign -Cardiac: tachycardia, angina, hypotension -GI: nausea (1 st sign), vomiting, anorexia	-Narrow TI—incr. side effect w/ caffeine -Monitor blood levels—10-20 ug/ml=therapeutic range -Give during day to prevent insomnia -Take w/ food if GI upset -smokers may require incr. dosing Know DDIs

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Anti-Inflammatory	Cromolyn Sodium (non-steroidal) INTAL	-prevents influx of Ca into mast cells, therefore inhibiting degranulation and release of histamine & leukotrienes -inhibits the recruitment of inflammatory cells into airway -inhibits late bronchoconstriction	-prophylaxis in asthma (esp for children or exercise induced asthma) -seasonal allergic rhinitis & ophthalmic adm in allergic conjunctivitis	-HA -bronchospasm -dry throat	-teach proper use of inhaler & nasal sprays -drug in powder form may cause bronchospasm -assess breath sounds pre & post tx -mouth care after use to minimize irritation to the throat & oral mucosa
	Leukotriene Inhibitors ZYFLO, ACCOLATE	-blocks the formation of leukotrienes from arachidonic acid -prevents bronchoconstriction & airway inflammation	-Maintenance therapy in chronic asthma	-hepatitis w/ ZYFLO -drug allergy w/ ACCOLATE	-incr. plasma concentrations of theophylline, warfarin, beta-adrenergic blockers -not for pts w/ liver dx or alcoholism
	Glucocorticoids	-incr. CHO, protein & fat metabolism -suppress inflammatory process -suppress normal immune system	-acute & maintenance asthma management	Inhalation: -fungal (<i>Candida</i>) infections -oral & nasal irritation Oral: -immunosuppressant effect -growth retardation, muscle wasting -hyperglycemia, hypertension -mood swings, physical changes	-teach proper use inhaler properly -gargle & rinse mouth after each use -notify care provider if—illness or feel worse, continued asthma attacks, incr. in stressful situations -wear medical alert -assessment VS, wt, monitor glucose -assess for signs of depression -do not abruptly withdraw, taper slowly -avoid injury to skin—fragile -avoid risk of infection -take care w/ application of topical
	Decongestants Oxymethazoline (AFRIN, DRISTAN) Phenylephrin (NEO-SYNEPHRINE) Pseudoephedrine + chlorpheniramine + dextromethorphan + acetaminophen (COMTrex) Pseudoephedrin hydrochloride (SINUTAB, SUDAFED)	-shrinks nasal membranes by a vasoconstrictive mechanism (alpha-1 adrenergic agonists)	-systemic relief of allergic rhinitis, sinusitis, colds & flu	-CNS: nervousness, restlessness, insomnia -GI: N/V -palpitations, hypertension -rebound engorgement—congestion worsens after incr. frequency of use	-instruct not to overuse; may be addictive -limit # of days (3-5) -NO w/ incr. BP, nsg mother, w/ MAO inhibitors -caution w/ elderly, glaucoma, BPH, DM & hyperthyroidism -limit caffeine intake ▪maintain sitting position when takin nasal sprays -avoid taking w/ diet pills

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<p align="center">Expectorants</p> <p>Guaifenesin (ROBITUSSIN)</p>	<ul style="list-style-type: none"> -incr. respiratory tract fluid -decr. viscosity of bronchial & tracheal secretions 	<ul style="list-style-type: none"> -persistent coughs -mucus plugs -common cold, bronchitis 	<ul style="list-style-type: none"> -allergies to the drug -GI: N/V, anorexia -pregnancy category C 	<ul style="list-style-type: none"> -assess lung sounds & secretions -sufficient humidification -teach effective coughing -use no more than 1 wk -encourage fluid intake 2-3 L/day -drink full glass of water after each dose taken -avoid ETHOL or drugs w/ ETHOL
<p align="center">Antitussives</p> <p><u>Nonnarcotic</u> benzonatate (TESSALON) dextromethorphan (OTC cough syrups) diphenhydramine (BENYLIN)</p> <p><u>Narcotic</u> codeine sulfate hydrocodone bitartrate (HYCODAN)</p>	<ul style="list-style-type: none"> -suppress cough reflex center in medulla 	<ul style="list-style-type: none"> -suppresses nonproductive cough 	<ul style="list-style-type: none"> -GI, sedation, anesthesia of mouth 	<ul style="list-style-type: none"> -wait 15-20 min after taking syrup before drinking liquid -monitor use of controlled substance -take at bedtime -dryness of mouth—relieve w/ hard candy, ice chips, mouth care -caution w/ activities -pregnancy category C -not used for children < 6 yr -avoid use of ETHOL -OTC drugs—read directions carefully -opiates more sedating
<p align="center">Mucolytic drugs</p> <p>MUCOMYST</p>	<ul style="list-style-type: none"> -reduce thickness of mucus -makes mucus secretions less tenacious -alters metabolism of acetaminophen 	<ul style="list-style-type: none"> -Inhaled—respiratory conditions -Orally—acetaminophen overdose 	<ul style="list-style-type: none"> -may irritate nasal passages 	<ul style="list-style-type: none"> -odor of rotten eggs may cause GI upset -administered through nebulizer -caution older adults—bronchospasm -assess lung sounds & respiratory status -Oral: mix w/ iced liquid—17 doses over 4 day period for overdose of acetaminophen