

PHARMACOLOGY REVIEW SHEET

- **Review Respiratory Care drugs** (see medication grid):
categories, undiluted dosages, % solutions, trade names,
frequencies: Q4°-bronchodilators, QID-steroids, others per grid
- **Properties of α , β -1 and β -2** (heart, blood vessels, smooth muscles)
- **Differences between adverse reactions and side effects**
- **Steps to take in case of an adverse reaction (HR \uparrow 20 beats):**

1. Stop therapy.
2. Monitor vital signs and stabilize patient.
3. Call R.N. and Respiratory Care Charge Therapist.
4. Document incident completely per policy.

- **Formulas for drug calculations**

1. **$mL = (mg \div \% \div 10)$** How many mL are in 5 mg of 20% solution?

$$mL = (5 \div 20 \div 10) = \mathbf{0.025 mL}$$

2. **$mg = (mL \times \% \times 10)$** How many grams are in 5 mL of 10% solution?

$$\begin{aligned} mg &= (5 \times 10 \times 10) = 500 \text{ mg} \\ g &= (500 \text{ mg} \div 1000) = \mathbf{0.5 g} \end{aligned}$$

3. **$(V1C1 = V2C2)$** What is the concentration of a 6%, 10 mL solution if 2 mL are added?

$$\begin{aligned} (10 \times 6) &= (12X) \\ 60 &= (12X) \\ \mathbf{5\%} &= X \end{aligned}$$

4. **$\% \text{ solution} = [(grams \div mL) \times 100]$** Change 1:300 to % solution:

$$[(1 \div 300) \times 100] = \mathbf{0.33\%}$$

RESPIRATORY CARE MEDICATION REVIEW

CHEMICAL NAME	TRADE NAME	CLASSIFICATION	DOSAGE	FREQUENCY	NOTES
Albuterol Sulfate (Racemic)	Proventil	"S" and "R" isomer bronchodilator	2.5-10 mg*	Q 1-Q 12°	10 mg max over 1 hour
Levalbuterol HCl	Xopenex	"R" isomer bronchodilator	0.63, 1.25 mg*	Q 6-8°	Selective for beta-2 receptor sites
Salmeterol Xinafoate	Serevent	Maintenance bronchodilator	2 puffs MDI 1 puff Diskus	Q 12°	Overdosage may be fatal
Metaproterenol Sulfate	Alupent	Sympathomimetic bronchodilator	0.2-0.3 cc*	Q 3-4°	Beta-1 stimulation may cause ↑ H.R.
Ipratropium Bromide	Atrovent	Anticholinergic bronchodilator	0.5 mg liquid; 2 puffs MDI	Q 6-8°	Opens larger airways; Inactivated by light
Atropine Sulfate	Atropine	Anticholinergic bronchodilator	1-2 mg*	TID or QID	Use caution with thick secretions
Ipratropium Bromide and Albuterol Sulfate	DuoNeb	Combination bronchodilator (liquid)	0.5 mg Ipratropium with 2.5 mg Albuterol base	Up to 6 times per day	Action should last about 5 hours
Ipratropium Bromide and Albuterol Sulfate	Combivent	Combination bronchodilator (MDI)	2 puffs	QID	Onset = 15"; Peaks in 1-2 hours
Racipinephrine	S2	Decongestant	0.25-0.5 mL*	Prn	Possible rebound effect
Dexamethasone Sodium Phosphate	Decadron	Corticosteroid	1-4 mg with bronchodilator	Per bronchodilator	Rinse mouth to prevent thrush
Fluticasone	Flovent	Corticosteroid	1-4 puffs	BID	Check strength per puff
Acetylcysteine	Mucomyst	Mucolytic	10%: 6-10 cc 20%: 3-5 cc	Per bronchodilator frequency	Do not mix with aerosolized antibiotics; use with bronchodilator
Xylocaine	Lidocaine	Local Anesthetic	QS 20 mg/mL or 40 mg/mL	Prn	May increase Raw
Tobramycin	Tobi	Antibiotic	300 mg	BID	Pre-tx with bronchodilator; Do not mix with mucolytic

Fluticasone and Salmeterol	Advair	Corticosteroid with Maintenance Bronchodilator	1 puff of 50 mcg Salmeterol with 100, 250, or 500 mcg Fluticasone	BID (12 hours apart)	Do not use as rescue inhaler; rinse mouth
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