

# ALBUTEROL

## PHARMACOLOGY & MECHANISM OF ACTIONS:

- ❑ Sympathomimetic
- ❑ Aqueous solution administered by oral inhalation with the aid of a nebulizer system
- ❑ Primary effect is to relax bronchial smooth muscles with resultant relief of bronchospasm
- ❑ Pharmacological effects partly due to stimulation through beta-adrenergic receptors of intra-cellular adenylyl cyclase that catalyzes the conversion of ATP to cyclic-AMP.
- ❑ Increased cyclic-AMP levels are associated with relaxation of bronchial smooth muscles and inhibition of release of mediators of immediate hypersensitivity from cells.
- ❑ Very selective Beta<sub>2</sub> agonist with very little beta<sub>1</sub> stimulation

## INDICATIONS:

- ❑ Bronchospasm secondary to respiratory distress
- ❑ Treatment of hyperkalemia (excess potassium) in renal failure patients

## CONTRAINDICATIONS:

- ❑ Known hypersensitivity to adrenergic amines
- ❑ Cardiac dysrhythmias (relative)

## ADMINISTRATION:

	ADULT	PEDIATRIC	
<b>EMT</b>	<p><b><i>ASTHMA/BRONCHOSPASM:</i></b></p> <ul style="list-style-type: none"> <li>❑ 2.5mg in 3cc 'pearl' administer by small volume nebulizer @ 6 to 8 LPM oxygen flow                             <ul style="list-style-type: none"> <li>○ Dose may be repeated as needed q 20 minutes</li> </ul> </li> <li>❑ May assist patient with their own MDI if they have an RX</li> </ul>	<ul style="list-style-type: none"> <li>❑ SAME AS ADULT</li> </ul>	<b>EMT</b>
<b>PARAMEDIC</b>	<p><b><i>DIALYSIS EMERGENCY (HYPERKALEMIA)</i></b></p> <ul style="list-style-type: none"> <li>❑ 2.5mg in 3cc 'pearl' administered by small volume nebulizer @ 6 to 8 LPM oxygen flow.</li> <li>❑ Repeat x3 in rapid succession</li> </ul>		<b>PARAMEDIC</b>

## PRECAUTIONS & SIDE EFFECTS:

- ❑ Tremor; Palpitations; Tachycardia; Nervousness; Dizziness; Hypertension; Nausea; Vomiting; Angina; Headache; Drying of oropharynx
- ❑ As with other adrenergic aerosols, the potential for paradoxical bronchospasm exists.
- ❑ Use with caution for patients being treated with monoamine oxidase inhibitors (e.g. Nardil®, Parnate®) or tricyclic antidepressants (e.g. Elavil®, Sinequan®), since the action of albuterol may be potentiated on the vascular system
- ❑ Discontinue if pulse increases by 20 bpm, onset of frequent PVCs, or onset of tachydysrhythmias.