

RESPIRATORY

ASTHMA DRUGS

Salbutamol

- **Short acting B2 agonist**
- Smooth muscle relaxation causing airway dilation
- **Side effects:**
 - **Tachycardia** caused by B2 effects- peripheral vasodilation & positive chronotropy, may have feeling of palpitations
 - Tremor, sweating, anxiety, agitation, insomnia
- Nebulised, stacked inhaled doses or IV (this should only be done in Resus and under senior supervision)
- **Dose:** 5mg/ ampoule
- Can be given 'back- to -back'
 - Be aware of risk of tachycardia especially in patients with IHD history
 - Consider moving to Resus if giving 'back- to- back'

Ipratropium bromide

- **Muscarinic receptor antagonist** (antimuscarinic/ anticholinergic)
- Onset in 15minutes
- Lasts 3- 5 hours
- Reduces smooth muscle contraction and mucus secretion
- Rarely produces side effects
- **Dose:** 0.5mg/ ampoule



Salbutamol and Ipratropium can be given in the same nebuliser

Corticosteroids

- **Prednisolone** 40- 50mg PO for at least 5 days
- **Hydrocortisone** 100-200mg IV
- Oral steroids are as effective as IV if patient able to swallow and can retain

If at the stage of requiring Magnesium consider moving the patient to Resus or at least monitors and inform an ED senior.

Magnesium Sulphate

- Bronchodilator by causing smooth muscle relaxation
- Exact mechanism of action unknown, possibly by Calcium antagonism in smooth muscle
- **Used in Life- threatening/ Near fatal asthma** and in Acute severe if poor response to inhaled therapy
- **Dose:** 2g IV

IV Aminophylline and IV Salbutamol should only be used in Resus, with cardiac monitoring, by or in the presence of ED seniors, for life threatening/ near- fatal asthma

Aminophylline

- Competitive non- selective Phosphodiesterase Inhibitor
- Non selective Adenosine receptor antagonist
- Compound derived from Theophylline
- Bronchodilation, CNS & CVS stimulation by blocking cAMP
- Induces adrenaline release from adrenals
- **Side effects: Arrhythmias & Vomiting**
- **Dose:**
 - Loading dose: 5mg/kg unless on PO theophylline
 - Infusion of 0.5mg/ kg/ hour

Salbutamol IV

- **Dose:**
 - **IV Bolus:** 250mcg diluted to 50mcg/ml
 - **IV Infusion:** Initially 5mcg/min adjusted to response and heart rate. Usually in the range of 3-20mcg/min
- **Side effects:**
 - **Tachycardia** caused by B2 effects- peripheral vasodilation & positive chronotropy, may have feeling of palpitations
 - Tremor, sweating, anxiety, agitation, insomnia