

Bronchodilators

Sub-type	β 2-agonists	Methylxanthines	Muscarinic-antagonists
Prototype	Short acting: <u>Salbutamol</u> Long acting: <u>Salmeterol</u> Non-selective: <u>Epinephrine</u>	<u>Theophylline</u>	<u>Ipratropium</u>
MOA	1. Increasing c-AMP which leads to smooth muscle relaxation 2. Also, may prevent activation of mast cells.	1. Increasing c-AMP by inhibition of phosphodiesterase (PDE). 2. Antagonism of adenosine receptors	Blocking of ACh receptors
PK	Injections, oral, inhaled and nebulizer	oral and injectable	inhalation and nebulizer
Uses	Short acting: Acute asthma Long acting: Nocturnal asthma	refractory status asthmaticus	COPD
Side effects	<u>Tachycardia</u> , Tolerance, hypertension	<u>Low therapeutic index</u> , <u>tachycardia</u> , GIT, renal, CNS	----