

Acute Asthma/COPD Management

Type I IgE mediated hypersensitivity reaction causing smooth muscle contraction in airways.

Classifying asthma severity

- Life-threatening (PEFR < 33%): **33, 92 CHEST**
 - **33**: PEFR <33% predicted
 - **92**: Sats <92%
 - Cyanosis
 - Hypotension
 - Exhaustion
 - Silent chest
 - Tachycardia
- Severe (PEFR < 50%): can't complete sentences, RR > 25, PR >110
- Moderate (PEFR <75%)
- Mild (PEFR >75%)

Include in assessment

- **History**: baseline and severity, exacerbation history, ICU admissions, normal PEFR (if asthmatic), infective symptoms, inhaler compliance, home oxygen/nebs
- **PEFR** (in asthma)
- **Investigations**:
 - ABG (should be hyperventilation picture; if hypoxic/hypercapnic, patient is tiring)
 - CXR
 - Bloods (including regular potassium monitoring)

Treating asthma attack

Mnemonic **O SHIT ME!**

Give all together Give if needed with senior input	}	• O xxygen	→ use oxygen driven nebs
		• S albutamol 2.5-5mg NEB	→ back to back nebs (5-10mg/hour)
		• H ydrocortisone 100mg IV (or prednisolone 40mg PO)	→ oral daily, IV 6 hourly; oral is as effective if can retain it
		• I pratropium 500mcg NEB	→ 4-6 hourly (if poor response/severe/life threatening)
	}	• T heophylline: aminophylline infusion 1g in 1L saline 0.5ml/kg/h	→ usually in ICU (need daily level, U&Es, cardiac monitor)
		• M agnesium sulphate 2g IV over 20mins	→ one off dose if life threatening (before theophylline)
		• E scalate care (intubation and ventilation)	

If hypoxia/hypercapnia is worsening despite maximal therapy, involve senior/anaesthetist with a view to intubation and ventilation.

Treating COPD exacerbation

- **O SHIT** as in asthma but give controlled oxygen i.e. 24-28% (venturi mask), then do an ABG after 15 minutes (then regular ABGs) to determine further therapy (see [oxygen therapy](#) notes)
- **Antibiotics**: as per guidelines e.g. Doxycycline 100mg OD (with 200mg loading dose)
- **Chest physiotherapy**
- **Consider BiPAP** if you cannot get enough oxygen into them (to maintain sats 88-92%) without decreasing their respiratory drive and causing a hypercapnic acidosis

If hypoxia/hypercapnia is worsening despite maximal therapy and BiPAP, involve senior/anaesthetist with a view to intubation and ventilation.

Intensive care indications

- Requiring ventilator support
- Worsening hypoxia/hypercapnia/acidosis
- Exhaustion
- Drowsiness/confusion