



WHAT?

Acute hypercapnic respiratory failure is seen on an ABG and is defined as:

- PaCO₂ > 6kPa
- pH < 7.35

There is often an element of hypoxia, which can be corrected with *supplemental oxygen to a target SaO₂ of 88-92%*

Hypercapnia can result in:

- Cardiac arrest
- Respiratory arrest
- Coma
- Seizures
- Arrhythmia

WHY?

Exacerbations of COPD can lead to retention of CO₂ and 1-in-5 results in AHRF. **This can be life-threatening.**

Following maximal medical management, non-invasive ventilation can be used to improve patient's own respiratory effort.
Contraindications to NIV.

Absolute:

- Severe facial deformity
- Facial burns
- Fixed upper airway obstruction

Relative:

- pH < 7.15
- pH < 7.25 and additional adverse features
- GCS < 8
- Agitation/confusion
- Cognitive impairment

HOW?

Chronic obstructive pulmonary disease in over 16s (NICE)
<http://bit.ly/2gXmjFb>

Ventilatory Management of Acute Hypercapnic Respiratory Failure (BTS/ICS) <http://bit.ly/2vPjADL>

Chronic Obstructive Pulmonary Disease (RCEM Learning) <http://bit.ly/2eZEihj>

How to set up an NIV (#EM3)
<http://bit.ly/EM3NIV>



COPD?
With PaCO₂ >6kPa & pH <7.35
Think BiPAP!