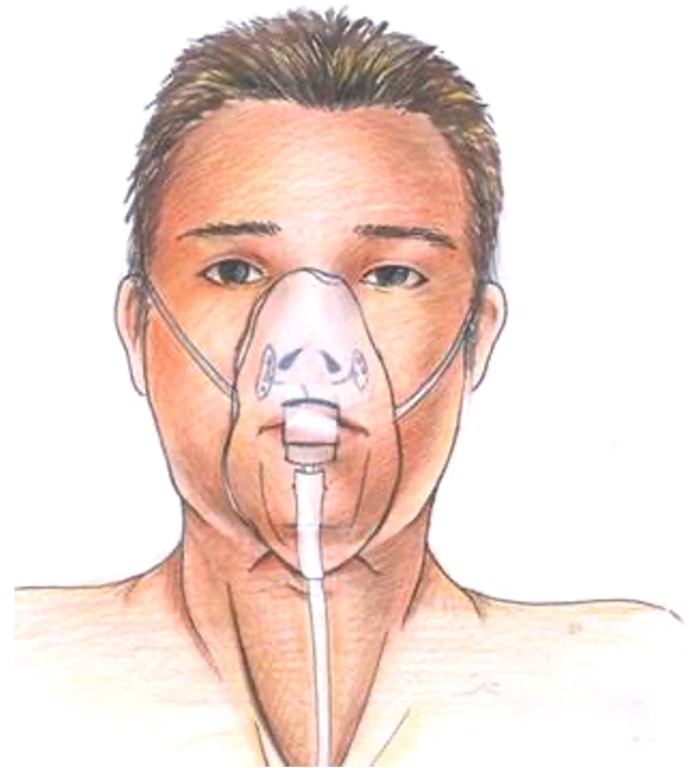


Respiratory monitoring



Clinical

- Respiratory compensation
 - Tachypnoea
 - Accessory muscles
 - Recesssion
 - Nasal flaring



Clinical

- Respiratory compensation
- Sympathetic stimulation
 - \uparrow HR
 - \uparrow BP (early)
 - sweating



Clinical

- Respiratory compensation
- Sympathetic stimulation
- Tissue hypoxia
 - Altered mental state
 - ↓HR and ↓BP (late)

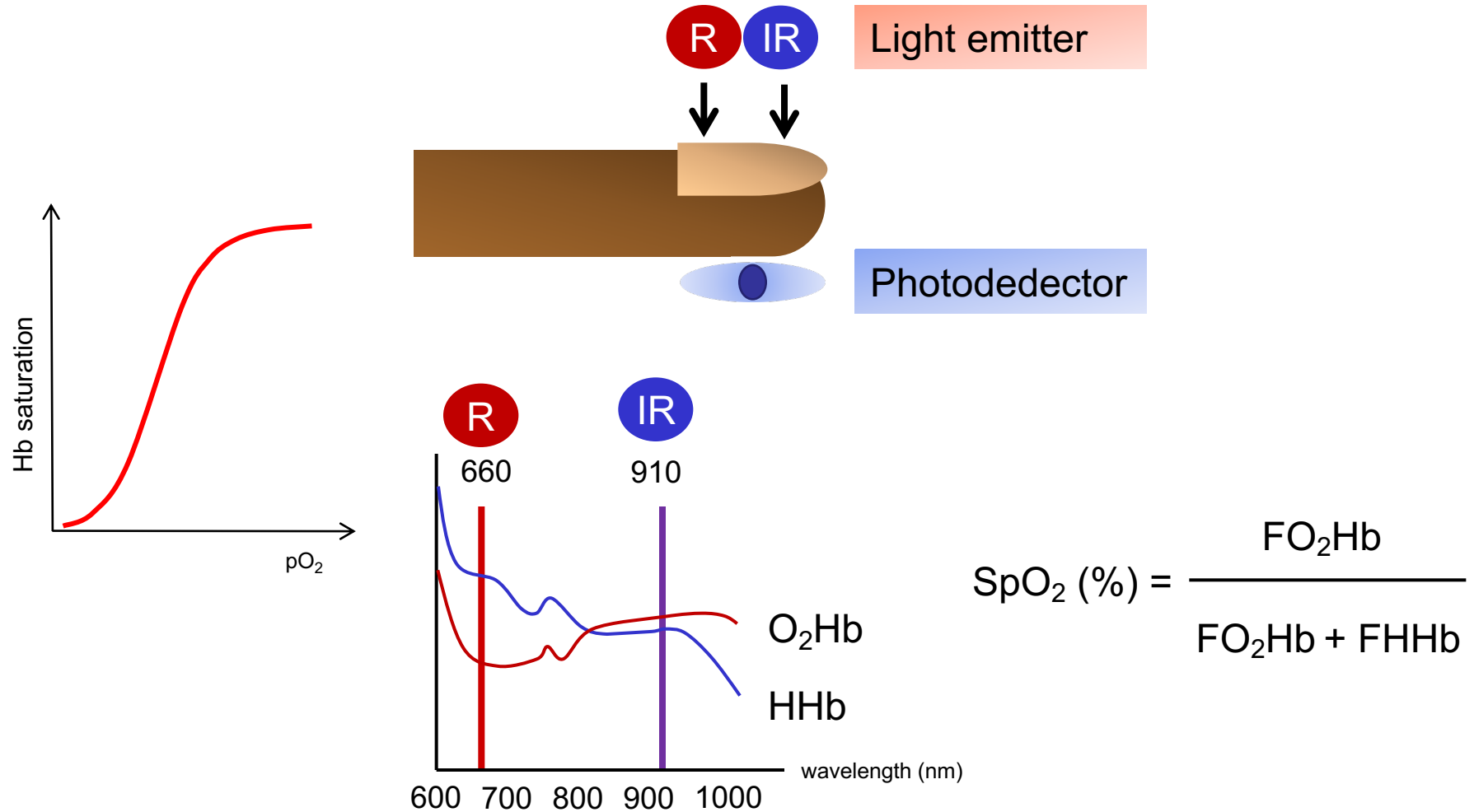


Clinical

- Respiratory compensation
- Sympathetic stimulation
- Tissue hypoxia
- Haemoglobin desaturation
 - Cyanosis (FHHb > 50g/L)

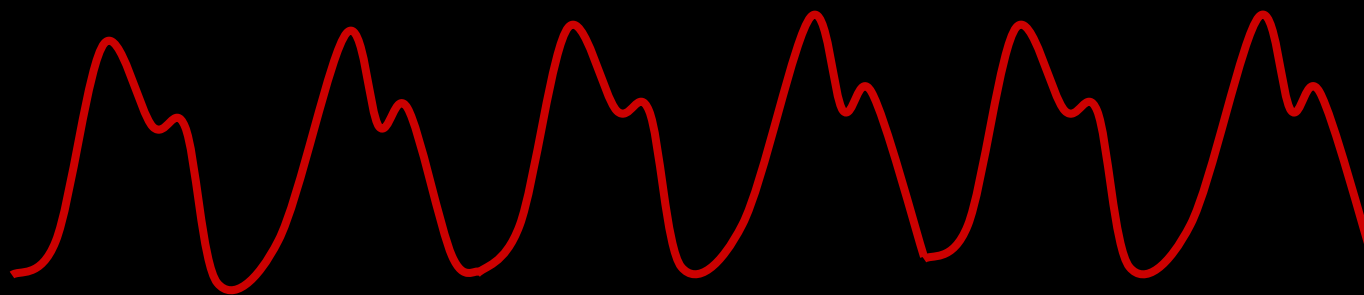


Pulse oximetry





123



80

40



87%

HR=95

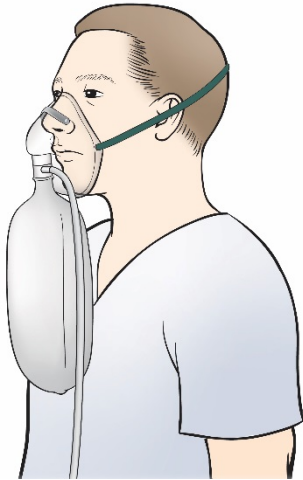
Treatment



Treatment

- Treat the cause
- Supportive treatment

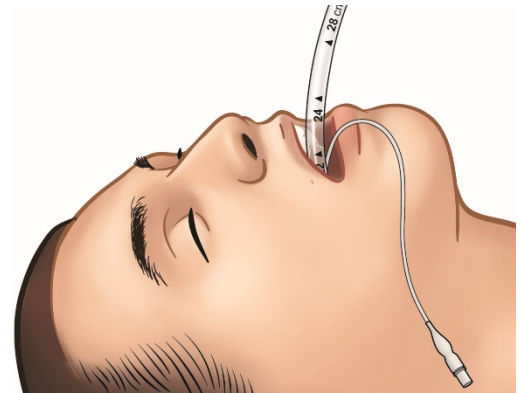
Oxygen
therapy



Non-invasive
ventilation

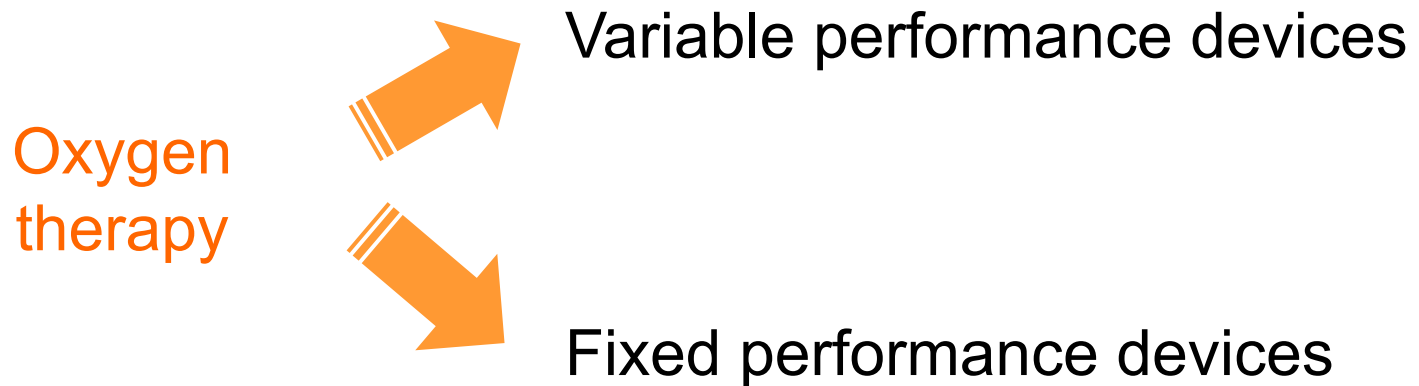


Mechanical
ventilation



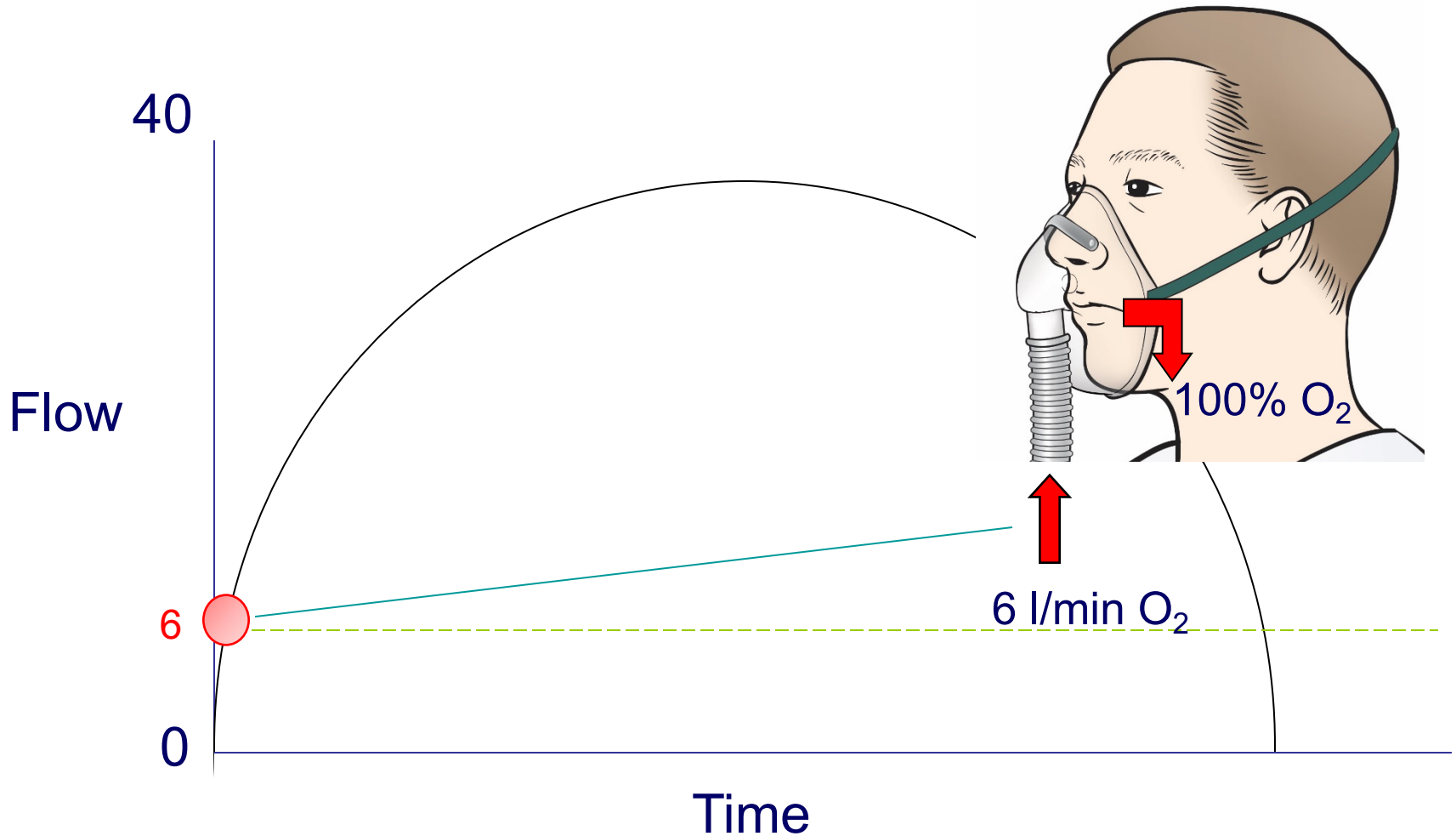
Treatment

Supportive treatment: **Oxygen therapy**



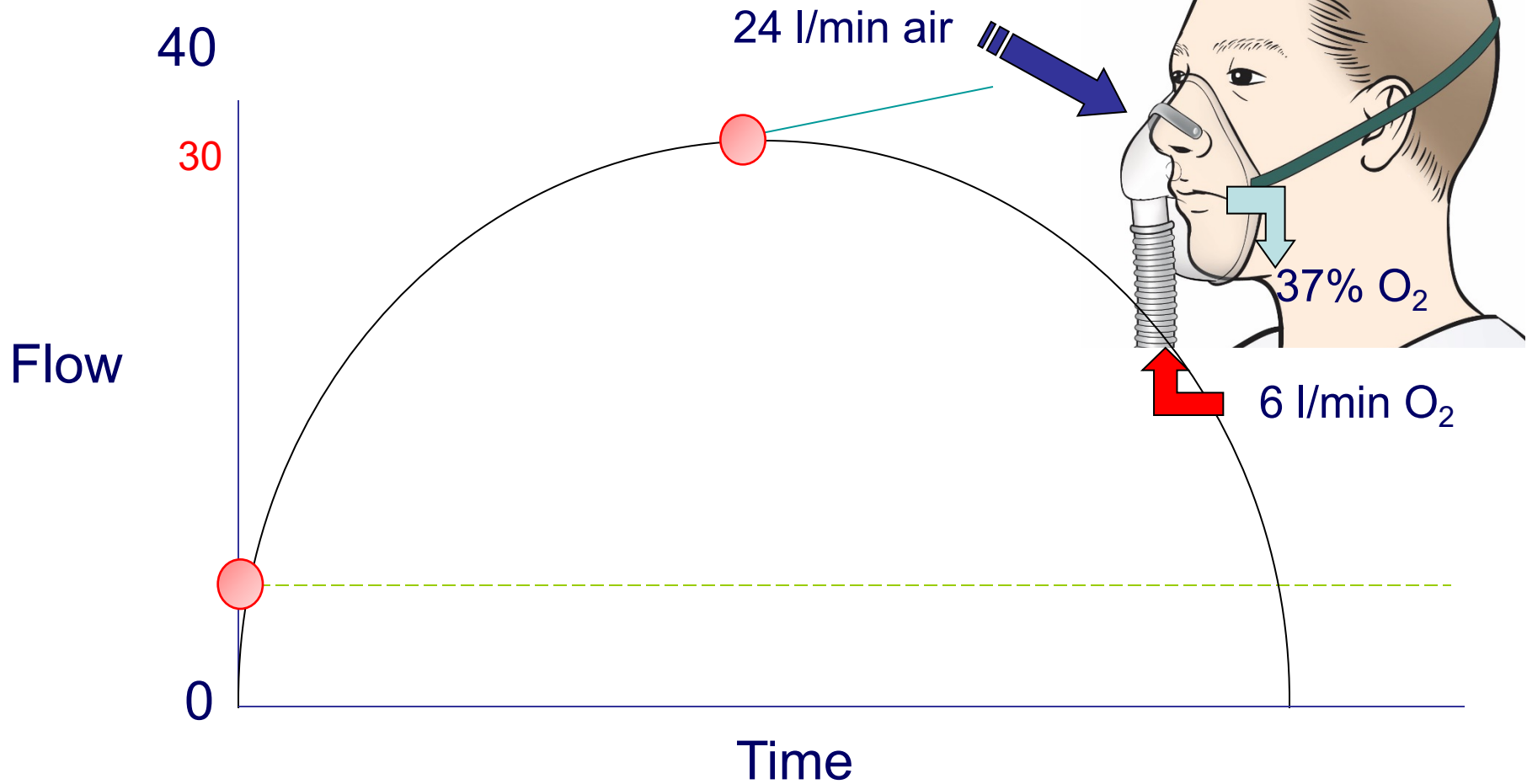
Treatment

Oxygen therapy: **variable performance devices**



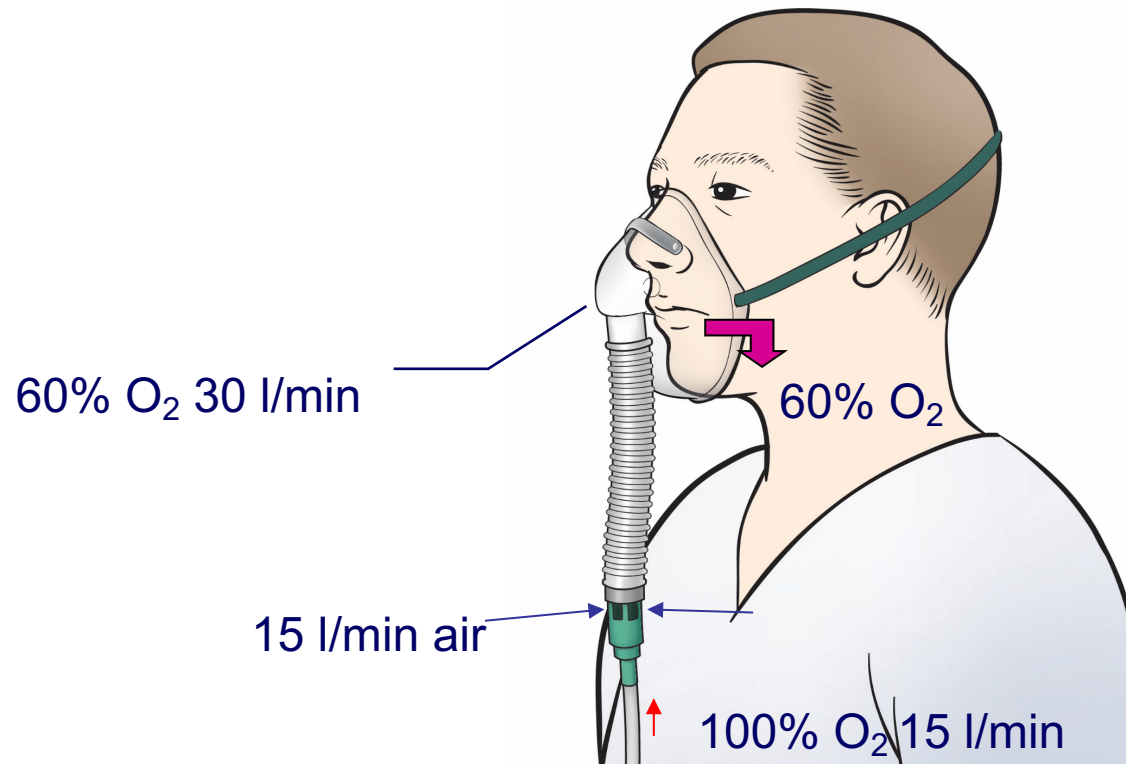
Treatment

Oxygen therapy: **variable performance devices**



Treatment

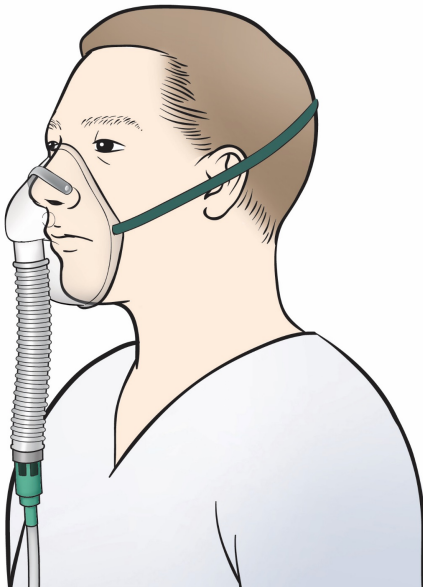
Oxygen therapy: **fixed performance devices**



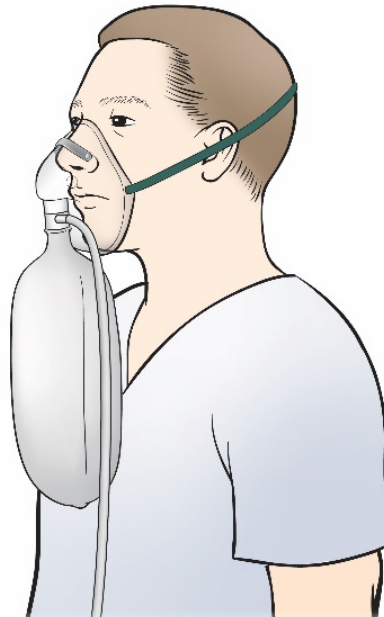
Treatment

Oxygen therapy: fixed performance devices

Venturi mask



Non-rebreather face mask

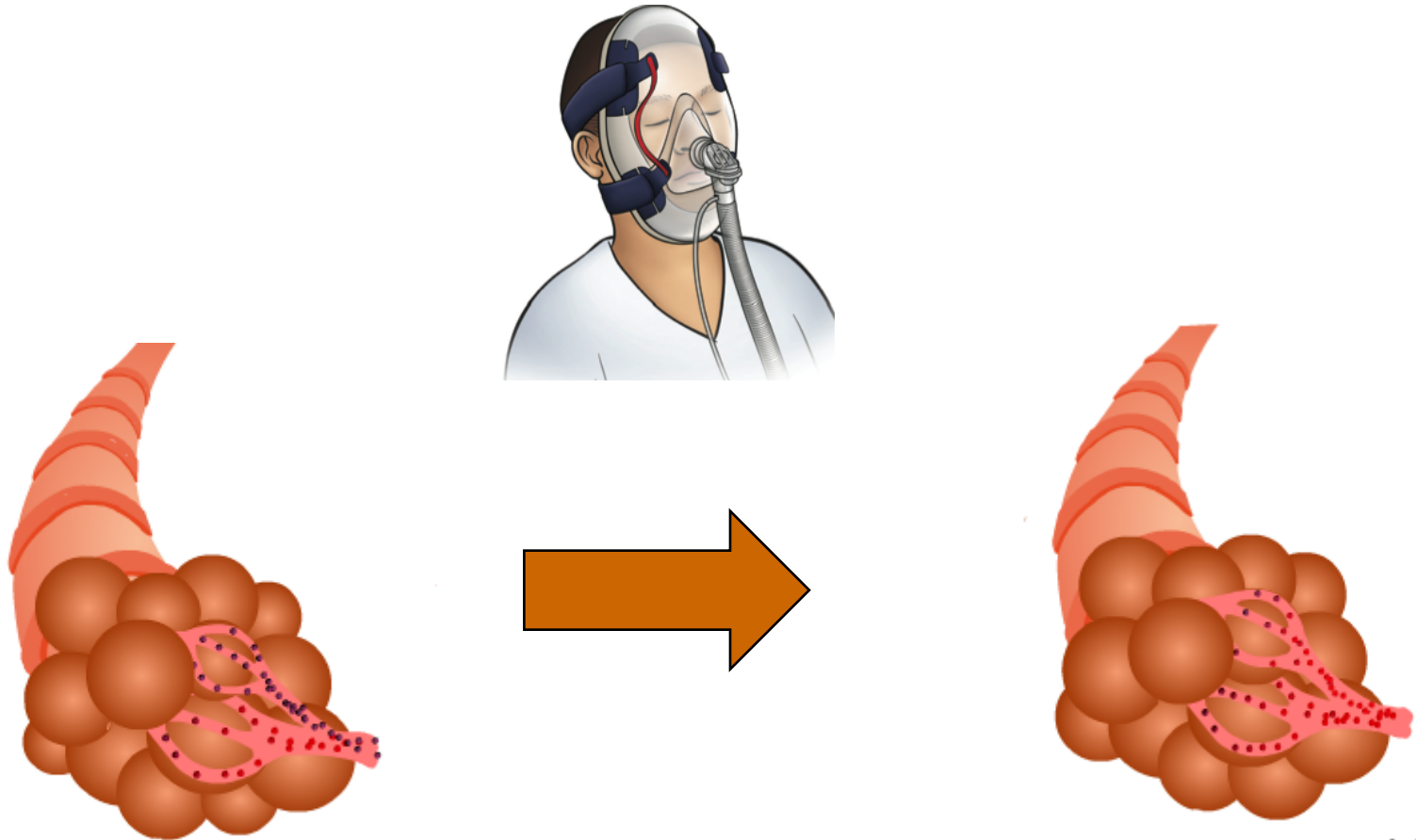


Bag valve resuscitator



Treatment

Supportive treatment: **Non invasive ventilation**

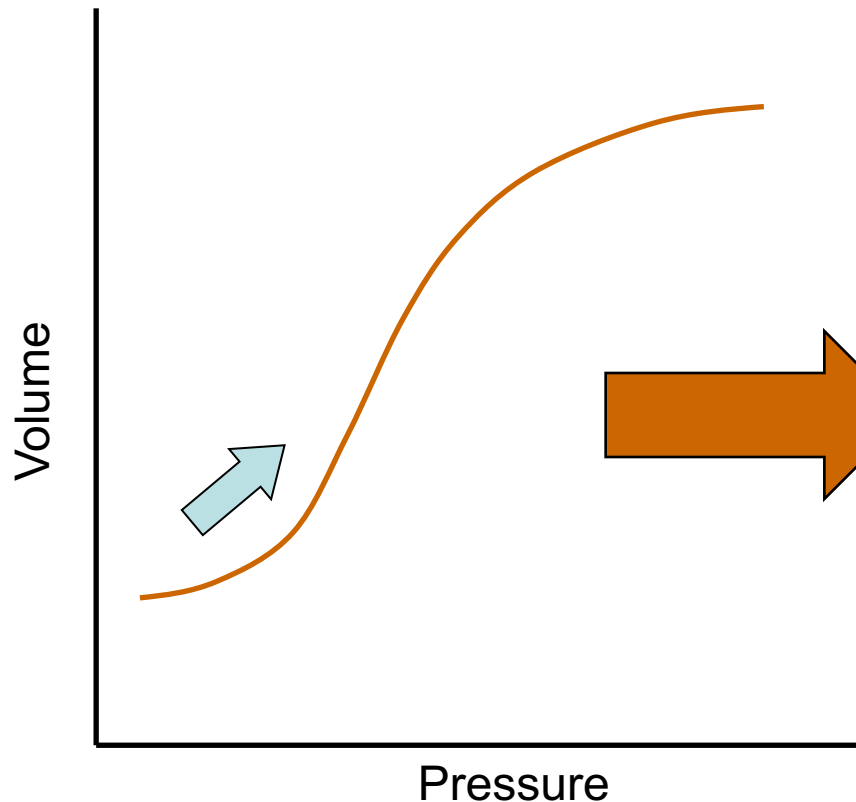


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Treatment

Supportive treatment: **Non invasive ventilation**



- reduces shunt by recruiting partially collapsed alveoli
- reduces work of breathing

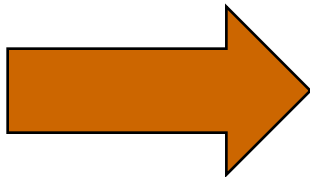


Treatment

Supportive treatment: **mechanical ventilation**



Decision to ventilate



- complex
- multifactorial
- no simple rules

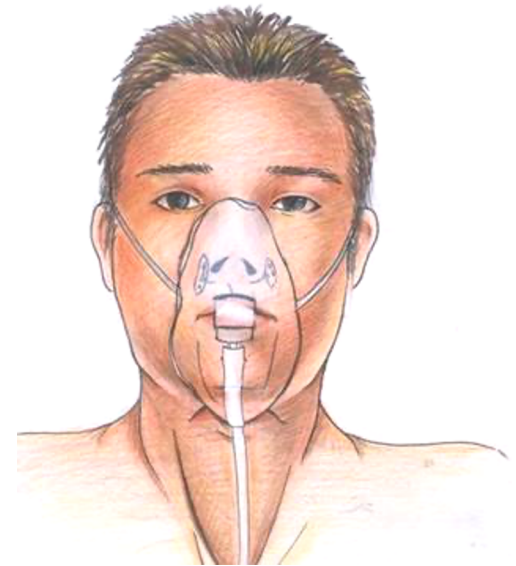
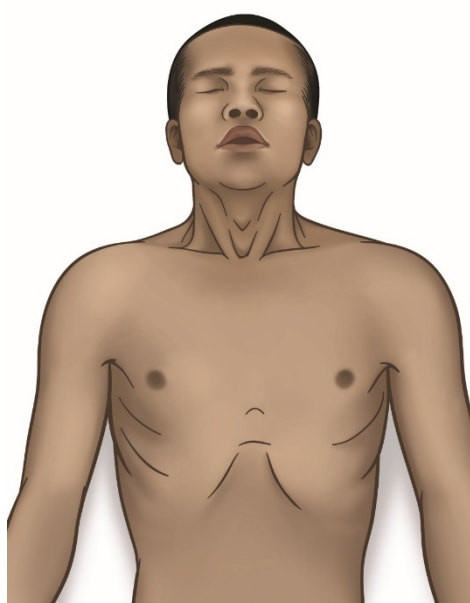


Treatment

Supportive treatment: **mechanical ventilation**

Factors to consider

- **Severity of respiratory failure**



Treatment

Supportive treatment: **mechanical ventilation**

Factors to consider

- Severity of respiratory failure
- **Cardiopulmonary reserve**

Treatment

Supportive treatment: **mechanical ventilation**

Factors to consider

- Severity of respiratory failure
- Cardiopulmonary reserve
- **Adequacy of compensation**
 - ventilatory requirement

Treatment

Supportive treatment: **mechanical ventilation**

Factors to consider

- Severity of respiratory failure
- Cardiopulmonary reserve
- Adequacy of compensation
 - ventilatory requirement
- **Expected speed of response**
 - underlying disease
 - treatment already given

Treatment

Supportive treatment: **mechanical ventilation**

Factors to consider

- Severity of respiratory failure
- Cardiopulmonary reserve
- Adequacy of compensation
 - ventilatory requirement
- Expected speed of response
 - underlying disease
 - treatment already given
- **Risks of mechanical ventilation**

Treatment

Supportive treatment: **mechanical ventilation**

Factors to consider

- Severity of respiratory failure
- Cardiopulmonary reserve
- Adequacy of compensation
 - ventilatory requirement
- Expected speed of response
 - underlying disease
 - treatment already given
- Risks of mechanical ventilation
- **Non-respiratory indication for intubation**

