# CPAP

**ALS Protocol**

For patients with moderate to severe respiratory distress or progressive symptoms (1)

Apply oxygen as indicated

Prepare patient for CPAP
- inform them of procedure and sensation of CPAP

Place CPAP mask and seucre to patient

If adjustable PEEP, start setting at 5 cm H2O. Increase in 2.5 cm H2O increments as needed for oxygenation (2)

Assess lung sounds and vitals after placement

Administer medications as indicated
- Give in-line nebulized medications if indicated (3)
- If giving oral/sublingual medications, try to administer prior to CPAP placement to prevent aspiration. Otherwise, remove mask to give needed medications (i.e. NTG, ASA). Allow them to be completely swallowed or dissolved.

Monitor for side effects of positive pressure ventilation (4)

Reassess breath sounds/vital signs frequently (slowing of heart rate is a typical sign of improvement)

For progressive respiratory failure, consider advanced airway placement (5)

Notify receiving facility that the patient is arriving on CPAP

**Possible Causes:**
- **COPD**
- **CHF**
- **Pneumonia**
- **Aspiration**
- **Asthma**

**Contraindications:**
- **Unconscious**
- **Vomiting**
- **Hypotension (SBP<90 mmHg)**
- **Trauma**
- **Suspected Pneumothorax**
- **Inability to seal mask**
- **Patient unable to cooperate (this can often be mitigated with effective coaching)**

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**1**. Use CPAP early or if initial round of therapy is ineffective. For example, if arriving to a COPD call and the patient looks poor at the initial evaluation (i.e. hypoxia, increased work of breathing) move quickly to CPAP with nebulized therapies.
2. Do not increase PEEP if systolic BP is < 90 mmHg.
3. For patients with severe asthma prioritize administration of continuous albuterol. CPAP can be a useful adjunct if they are having ineffective respiratory effort or to assist in medication delivery if no improvement from albuterol treatments alone.
4. Positive pressure ventilation can cause hypotension by decreasing venous return. For dehydrated patients who have pneumonia or COPD, a small fluid bolus may be necessary to avoid hypotension once CPAP is started. Watch for gastric distension and vomiting. Remove mask if vomiting occurs.
5. For patients who are difficult to oxygenate without positive pressure/CPAP (i.e. oxygen saturations <94% despite 100% NRB), consider leaving the patient on CPAP as RSI is initiated in order to maximize pre-oxygenation and allow for the best intubating conditions. Once sedatives and paralytics are given, the patient can be reclined and intubation performed.

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