



CPAP for Respiratory Distress

- Protocol -

Level: Advanced, Intermediate/Paramedic

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Indications:

1. Moderate to severe respiratory distress with signs and symptoms consistent with asthma, COPD, pulmonary edema, CHF, or pneumonia.
2. Near-drowning with intact mentation

Contraindications:

1. Suspected pneumothorax or chest trauma
2. Facial trauma or deformity
3. Respiratory or cardiac arrest
4. Agonal or inadequate respirations
5. Vomiting or active GI bleeding with emesis
6. Hypotension with SBP < 90mmHg
7. Tracheostomy

Requirements:

- Patient is over 12 years of age
- Awake **and** able to follow commands
- Ability to maintain an open airway without intervention or adjunct

Intervention:

1. Place patient in upright (>45°) position
2. Connect full circuit to oxygen source
3. Place patient on pulse oximeter, nasal EtCO₂ circuit, and cardiac monitoring (I/P)
4. Assure air is flowing from mask and there are no leaks along circuit or at connection to O₂ source
5. Place mask over mouth and nose and manually seal against face. It is okay to do short periods of CPAP with breaks in between to allow patient to adjust if needed.
6. Secure mask with straps. Adjust to eliminate leaks
7. If patient mentation deteriorates to the point where patient can no longer follow commands or respiratory status deteriorates, remove CPAP and consider assisting ventilation with a BVM

Titrating PEEP

- Advanced, Intermediate, and Paramedic level providers at CARS can titrate PEEP.
- The Pulmodyne O2 MAX recommended starting PEEP is 5cm H₂O
- Increase PEEP by 2.5cm H₂O increments every 5 minutes to maintain O2 saturation >88%
- Reassess SBP, respirations, mental status, ability to maintain open airway, and lung sounds before each PEEP increase

Side Effects:

- Hypotension
- Gastric distention, vomiting

Administration Notes:

- CPAP can and should still be used for patients with DNRs.
- Notify hospital that patient is on CPAP. A respiratory therapist will need to be present to transfer patient to hospital machine.
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Literature

- JEMS: [CPAP Best Practices](#)
- PubMed StatPearls: [Positive End-Expiratory Pressure](#)