

7.072 CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP)

EMSAC JUNE 2026

ALS

INDICATIONS

- ≥ 8 year of age
- Severe respiratory distress or impending respiratory failure; from causes such as ~~may include~~ acute pulmonary edema, acute bronchospasm, pneumonia or drowning.
- ~~For Patients equal to and greater than 8 in moderate to severe respiratory distress secondary to:~~
- ~~CHF with pulmonary edema~~
- ~~Acute exacerbation of COPD or asthma~~
- ~~Pneumonia~~
- ~~Near drowning~~
- ~~Any other cause of respiratory failure (not respiratory arrest)~~

CONTRAINDICATIONS

~~For Patients who have a GCS < 13~~

- Respiratory or cardiac arrest
- Inability to protect airway/ altered mental status (e.g. GCS < 13)
- Facial deformities or trauma
- Suspected pneumothorax
- Active vomiting or high aspiration risk
- Recent surgeries of the upper airway or gastrointestinal tract

TECHNIQUE

1. Place patient in seated position
2. Set up CPAP system (per manufacturer's recommendation) with initial positive end expiratory pressure set between 7.5-10 cm H₂O
3. Explain procedure to patient.
4. Apply mask while coaching ~~reassuring patient-encourage~~ patient to "breath normally through your mouth" (may have a tendency to hyperventilate). Verify chest rise and adequate mask seal.
5. Re-evaluate the patient's respiratory rate, work of breathing and dyspnea every 5 minutes. Use continuing pulse oximeter. ~~Consider-Use~~ continuous EtCO₂ monitoring. ~~normally the patient will improve in the first 5 minutes with CPAP as evidenced by:~~
6. Signs of improvement (typically within 10-15 minutes)
 - Decrease in respiratory rate
 - Improved ~~increased~~ SpO₂
 - Normalizing EtCO₂
 - Decrease work of breathing

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- Improved mental status
- Patient reports decreased dyspnea
- ~~Overall improvement in vital signs, such as:~~
- ~~Decrease in heart rate~~
- ~~Decrease in blood pressure~~

7. DISCONTINUATION of CPAP and prepare for advanced airway management if:

- Worsening mental status or loss of consciousness
- Hypotension (consider reduction of PEEP, see **hypotension 2.16**)
- Apnea
- Patient unable to tolerate therapy
- Vomiting or aspiration
- Pneumothorax development

DOCUMENTATION

1. EMS Personnel responsible for procedure (eprocedures.09 and eprocedures.10)
2. Time of CPAP initiation
3. Initial and serial vital signs
4. PEEP setting and FiO₂
5. Patient tolerance and response to therapy
6. Time of discontinuation (if applicable) and reason
7. Total duration of CPAP therapy

COMMENTS

- Early application of CPAP may reduce intubation rates and improve patient outcomes
- Patient cooperation is essential for success.
- See Protocol **2.11 Respiratory Distress** for additional recommended therapies (e.g. albuterol, nitroglycerin)