

# Continuous Positive Airway Pressure (CPAP)

## Indications:

Respiratory distress with spontaneous respirations  
AND a patent, self-maintained airway.

WITH

Systolic BP > 100 mmHg

Contraindications: Patients requiring immediate endotracheal intubation.

Hemodynamic instability.

Signs of tension pneumothorax.

Vomiting.

Facial trauma.

Altered mental status or agitation that precludes use.

## Standing Orders:

Application of up to 10 cmH<sub>2</sub>O CPAP in the conscious, spontaneously breathing patient with a self-maintained airway suffering from respiratory distress

\*\*\*\*\* On-Line Medical Control Options \*\*\*\*\*

When time and clinical condition permits, contact medical control for cases in which the need for non-invasive versus invasive ventilation is not clear.

## Equipment/Supplies:

Oxygen supply source (portable or main tank) with threaded 50 PSI connections.

50 PSI oxygen hose with threaded connections or Oxygen Coupler system.

CPAP Os unit with circuit.

Appropriate face mask with head strap.

Pulse oximeter.

ECG monitor.

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Page 2 of 2

## Procedure:

1. Assess patient's vital signs, attach ECG monitor and pulse oximeter.
2. Open main valve on oxygen cylinder if not already done.
3. Connect the CPAP Os unit to the oxygen delivery system at the 50 psi port.
4. Connect the CPAP Os circuit to the outflow port of the CPAP Os unit.
5. Select appropriate face mask, straps. Mask should form a seal around the bridge of the patient's nose and fully cover both the nose and mouth.
6. Assemble the mask and straps.
7. Attach patient end of CPAP circuit to the face mask.
8. Ensure that the CPAP pressure adjustment knob on the CPAP Os is at zero (turned fully counter-clockwise to stop).
9. Place face mask on patient.
  - a. Explain to the patient what the mask is for and that it will take a few minutes to become accustomed to the feel of the mask and airflow.
  - b. Ensure that the mask fits comfortably. Adjust the head strap as necessary.
10. Turn the CPAP pressure adjustment knob clockwise to increase the amount of pressure. Continually monitor the patient for improvement in work of breathing.
  - a. DO NOT exceed 10 cmH<sub>2</sub>O pressure as indicated on the CPAP Os airway pressure gauge.
11. Continually monitor the patient's vital signs, ECG, and SpO<sub>2</sub> throughout transport recording measurements every 5 minutes.
12. If patient's respiratory or hemodynamic condition worsens and/or the patient's mental status deteriorates, consider endotracheal intubation.

## Comments:

- √ Many patients require close emotional support as they initially adjust to CPAP.
- √ Failure of CPAP is not a direct indication for endotracheal intubation. Reassessment of the patient must be done to determine the need for intubation.