

Student: _____ Level: EMT- I A CC P Date: _____
 Evaluator: _____ Start: _____ End: _____ Total: _____ Pass/Fail _____

Continuous Positive Airway Pressure (CPAP)

Conditions	The candidate should perform this skill on a simulated patient under existing indoor, ambulance, or outdoor lighting, temperature, and weather conditions.
Indications	A patient experiencing respiratory insufficiency or failure, including pulmonary edema or bronchoconstrictive disease, is able to follow commands, and has oxygen saturations < 90%.
Red Flags	Contraindicated in patients with pneumothorax, apnea, unconsciousness, and full cardiopulmonary arrest. Relative contraindications include trauma with suspicion of elevated intracranial pressure, abdominal distention with risk for vomiting, and hypotension. Patients who have emphysema should be monitored closely when CPAP is applied, as they are at increased risk for barotrauma and pneumothorax.

Don appropriate standard precautions	
Position the patient	
Check for adequate blood pressure by the presence of radial pulses	
Place patient in position that will optimize ease of ventilation (high fowler, tripod, etc.)	
Prepare the patient	
Assess patient prior to confirm use of CPAP	
Primary and secondary survey, especially lung sounds	
ECG, oxygen saturation, ETCO ₂ monitoring, vital signs	
Peak flow measurement (if available)	
Explain procedure to patient	
Prepare the Equipment	
Connect CPAP generator to a 50 psi oxygen source	
Do not use oxygen regulator or a flow meter	
Assemble mask and tubing according to manufacturer instructions	
Turn power/oxygen on	
Set device parameters	
Turn the rate (frequency) dial to 8- 12 per min. (based on local protocols)	
Turn the oxygen concentration dial to the lowest setting (28-29% oxygen)	
Titrate oxygen concentration to an oxygen saturation > 92%	
Set tidal volume to 10-12 mL/kg (based on local protocol)	
Set pressure relief valve at +/- 40cmH ₂ O (based on local protocols)	
Occlude tubing to test for peak pressure required to activate pressure relief valve and adjust as necessary	
Perform Procedure	
Have patient hold mask to his own face or apply head straps and ensure proper mask seal	
Insert the CPAP valve into the mask (5 cm, 7.5 cm, or 10 cm H ₂ O pressure valve - based on local protocol)	
Coach patient to breathe normally and adjust to air pressure	
Frequently reassess patient for desired effects	
Decrease in level of ventilatory distress	
Oxygen saturation >92%	
Decreased adventitious lung sounds	

Absence of adverse reactions (barotrauma and pneumothorax)	
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Critical Criteria:

- ___ Use standard precautions
- ___ Assess patient prior to and frequently after the application of the CPAP device.
- ___ Ensure patient understands procedure
- ___ Ensure proper parameters (pressure relief, tidal volume, oxygen concentration, rate, etc.)
- ___ Test pressure relief valve prior to application