

**OXYGEN (O<sub>2</sub>)**

<b>THERAPEUTIC EFFECTS</b>	Oxygen added to the inspired air increases the amount of oxygen in the blood, and thereby increases the amount delivered to the tissue. Tissue hypoxia causes cell damage and death. Breathing, in most people, is regulated by small changes in the acid-base balance and CO <sub>2</sub> levels. It takes relatively large decreases in oxygen concentration to stimulate respiration.
<b>INDICATIONS</b>	Presence of hypoxia as evidenced by respiratory distress or altered mentation. Any situation in which oxygen demands have increased.
<b>CONTRAINDICATIONS</b>	None in the prehospital setting.
<b>PRECAUTIONS/SIDE EFFECTS</b>	<p>If the patient is not breathing adequately on their own, the treatment of choice is ventilation with oxygen, not just supplemental oxygen. In a small percentage of patients with chronic lung disease, administration of oxygen will decrease respiratory drive. Oxygen will dramatically accelerate combustion; ensure that no open flames or sources of ignition are present. Do not withhold oxygen because of this possibility and be prepared to assist ventilation if needed. May result in retrolental fibroplasias if given in high concentrations to premature infants (maintain 30-40% oxygen saturation).</p> <p>Hyperventilation and hyperoxygenation may be detrimental to a broad spectrum of patients. The use of SpO<sub>2</sub> and ETCO<sub>2</sub>, if available, is strongly encouraged.</p>

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<b>ADULT/PEDIATRIC DOSAGE ROUTE</b>	<b>Nasal Cannula</b> <span style="float: right;">2-6 liters a minute</span>
	<b>Small Volume Nebulizer</b> <span style="float: right;">6-10 liters a minute</span>
	<b>Simple Face Mask</b> <span style="float: right;">8-10 liters a minute</span>
	<b>Blow By</b> <span style="float: right;">12-15 liters a minute</span>
	<b>Non-Rebreather Mask</b> <span style="float: right;">12-15 liters a minute</span>
	<b>Bag Valve Mask w/Reservoir</b> <span style="float: right;">12-25 liters a minute</span>
	<b>CPAP</b> <span style="float: right;">Follow device manufacturer's recommendations</span>
<p><b><i>Note on Administration:</i></b></p> <ul style="list-style-type: none"> <li>✓ Titrate the flow rate to maintain a target oxygen saturation range of 94-98%</li> <li>✓ For intubated patients, monitor end-tidal <b>capnography</b>, if available, to verify normal ranges between 35-45 mmHg</li> <li>✓ Adequate oxygenation is measured with SpO<sub>2</sub> while adequate ventilation is measured with ETCO<sub>2</sub></li> <li>✓ Avoid Hyper ventilation and hyperoxygenation</li> </ul> <p>A 5 cm PEEP valve should be applied to all intubated patients, unless one of the following conditions is present:</p> <ol style="list-style-type: none"> <li>A. <b>Asthma</b></li> <li>B. Hypotension</li> <li>C. Suspected pneumothorax</li> <li>D. Cardio pulmonary arrest</li> <li>E. <b>Chest trauma</b> with the exception of flail chest</li> </ol>	