10. OXYGEN

a) Pharmacology

(1) Increases oxygen content of the blood
(2) Improves tissue oxygenation
(3) Decreases energy expended for respirations

b) Pharmacokinetics

Changing the percentage of inspired oxygen results in an increased blood and tissue level equilibration within 5–20 minutes.

c) Indications

(1) If evidence of hypoxia (Less than 94% SpO_2)
(2) Respiratory distress
(3) Cardiopulmonary arrest
(4) Trauma
(5) Suspected CO exposure
(6) Dyspnea

d) Contraindications

Not clinically significant

e) Adverse Effects

High concentrations of oxygen will reduce the respiratory drive in some COPD patients; these patients should be carefully monitored.

f) Precautions

(1) Never withhold oxygen from those who need it.
(2) Oxygen should be given with caution to patients with COPD.
(3) Simple or partial rebreather face masks must be supplied with a minimum 6 lpm.
(4) Non-breather (NRB) face masks must be supplied with a minimum 12 lpm.

g) Dosage

(1) Adult: Administer 12–15 lpm via NRB mask or 2–6 lpm via nasal cannula, as needed. CO exposure: Administer 100% oxygen via NRB mask. Maintain SpO_2 at 100%
(2) Pediatric: Administer 12–15 lpm via NRB mask or 2-6 lpm via nasal cannula, as needed. CO exposure: Administer 100% oxygen via NRB mask. Maintain SpO_2 at 100%

Percent O_2 Saturation	Ranges	General Patient Care
94–100%	Normal	Give oxygen as necessary
91–93%	Mild Hypoxia	Give oxygen as necessary
86–90%	Moderate Hypoxia	Give 100% oxygen Assisting Ventilations if necessary
less than or equal to 85%	Severe Hypoxia	Give 100% oxygen Assist Ventilations If indicated, Intubate
ALERT	INACCURATE OR MISLEADING SpO_2 READINGS MAY OCCUR IN THE FOLLOWING PATIENTS: HYPOTHERMIC, HYPOPERFUSION (SHOCK), CO POISONING, HEMOGLOBIN ABNORMALITY, ANEMIA, AND VASOCONSTRICTION.	