

OXYGEN

Drug Classification: Other, metabolite

BACKGROUND

Pharmacodynamics

Oxygen increases arterial oxygen tension (SaO₂) and hemoglobin saturation.

Indications^{1, 2, 3}

- For low flow oxygen (nasal cannula):
 - Patient with chronic use of low flow oxygen
 - Mild hypoxia (SaO₂ < 94% but > 88%)
- For high flow oxygen (non-rebreather):
 - Smoke, carbon monoxide, or toxic gas inhalation
 - Trauma or suspected significant blood loss
 - Moderate to severe hypoxia (SaO₂ < 88%)
 - Respiratory distress, cyanosis, or other indications of poor oxygenation
 - Unresponsive patient (spontaneously breathing)
 - Obstetric patients with known or suspected complications

Contraindications

- None in the prehospital setting

Cautions

- This guideline refers to spontaneously breathing and adequately ventilating patients only
- High concentration O₂ in some cases (emphysema and asthma) may depress respiratory drive; be prepared to assist ventilation, but don't allow patients to become hypoxic for fear of respiratory arrest.

DOSAGE and ADMINISTRATION

1. Deliver low flow oxygen via nasal cannula at 1-6 L/min.
 - a. Titrate oxygen delivery to attain saturations between 94-98%.
2. Deliver high flow oxygen via non-rebreather mask at 10-15 L/min.
 - a. Make sure reservoir bag is fully inflated before putting mask on patient.
 - b. Titrate oxygen delivery to attain saturations between 94-98%.
3. Deliver nebulizer treatments using 6-8 L/min.

HEALTHEAST MEDICAL TRANSPORTATION MEDICAL OPERATIONS MANUAL

ADVERSE REACTIONS/SIDE EFFECTS

- Potential for suppressing respiratory drive in some chronic COPD patients⁴.

NOTES

¹ If oximetry is unavailable, patients should receive high concentration oxygen, unless low concentration is indicated.

² If a pediatric patient cannot tolerate a mask or nasal cannula it is acceptable to deliver the oxygen using blow-by method.

³ Attempt to attain and document pulse oximetry readings before and during oxygen therapy.

⁴ Do not withhold oxygen for fear of respiratory suppression. Instead, be prepared to assist ventilations and proceed to intubation if necessary.

REFERENCE GUIDELINE

1B General Assessment and Care