

7.09 CARBOXYHEMOGLOBIN MONITORING

INDICATION

- Suspected Carbon Monoxide Exposure
- Ambulance company medical directors must approve the use of carboxyhemoglobin (SpCO) monitors.

PROCEDURE

1. Follow manufacture's recommendations.
2. Place probe on finger or; apply nasal device
3. Place patient on 100% high-flow Oxygen

NOTES

Duration of exposure and concentration of CO will determine onset and severity of symptoms. The symptom chart below indicates exposure and (approximate PPM ranges) and associated risks.

Ranges	Symptoms
> Approx. 35 ppm (0.0035%)	Headache and dizziness within 6 - 8 hours of constant exposure.
100 ppm (0.01%)	Slight headache in 2- 3 hours.
200 ppm (0.02%)	Slight headache within 2 - 3 hours. Loss of judgment/confusion.
400 ppm (0.04%)	Frontal headache within 1 – 2hours.
800 ppm (0.08%)	Dizziness, nausea and convulsions within 45 min. AMS within 2 hours.
1,600 ppm (0.16%)	Headache, tachycardias, dizziness and nausea within 20 min. Death in less than 2 hours.
3,200 ppm (0.32%)	Headache, dizziness and nausea in five to ten minutes. Death within 30 minutes.
6,400 ppm (0.64%)	Headache and dizziness in one to two minutes. Convulsions, respiratory arrest and death in less than 20 minutes.
12,800 ppm (1.28%)	Unconsciousness after 2–3 breaths. Death in less than three minutes.

- **Some inhalational poisonings, such as carbon monoxide and hydrogen sulfide, may result in patients with normal oxygen saturation readings, but cellular hypoxia due to displacement of the oxygen molecule from the hemoglobin in red blood cells.**
- In all of the above cases, maximal oxygen therapy should be delivered to the patient regardless of pulse oximeter or SpCO monitor readings if the patient has signs of respiratory compromise.