



SMOKE INHALATION/CO EXPOSURE/SUSPECTED CYANIDE TOXICITY (Expanded Scope Specialty Program)

I. PURPOSE

To identify and treat smoke inhalation and suspected cyanide toxicity.

II. AUTHORITY

California Health and Safety Code, Sections 1797.172 and 1797.185

California Code of Regulations, Title 22, Division 9, Chapter 4

III. FIELD ASSESSMENT/TREATMENT INDICATORS

- Indicators
 - Exposure to fire and smoke particularly in an enclosed-space structure fires.
 - Hydrogen cyanide concentration measured in the air does not accurately correlate to patient's level of exposure and toxicity. Consider possibility of carbon monoxide (CO) and cyanide exposure/toxicity in any patient (or unprotected EMS field personnel) with smoke inhalation.
- Cyanide Toxicity
 - Initial signs and symptoms are non-specific and may include; headache, dizziness, nausea, vomiting, confusion, and syncope.
 - Worsening signs and symptoms may include; altered level of consciousness (ALOC), hypotension, shortness of breath, seizures, cardiac dysrhythmias, and cardiac arrest.
 - The "bitter almond" smell on the breath of a cyanide-poisoned patient is neither sensitive nor specific and should not be considered in making the assessment.
- Carbon Monoxide Poisoning
 - Initial signs and symptoms are non-specific and may include; flu like symptoms, dizziness, severe headache, nausea, sleepiness, weakness and disorientation.

- Worsening signs and symptoms may include; blurred vision, shortness of breath, and altered level of consciousness.

IV. ALS INTERVENTIONS

- Remove patient from exposure area.
- Administer 100% oxygen via non-rebreather mask.
- Monitor pulse oximetry (SpO₂) though values may be unreliable in patients suffering from smoke inhalation.
- Monitor Carboxyhemoglobin (SpCO) levels. (SpCO monitor is required for participation in this Specialty program.)
- IV access, consider fluid bolus of 300cc NS.
- Patients exhibiting signs and symptoms of cyanide toxicity which persist after treatment with 100% oxygen therapy should be treated rapidly with the Cyanokit.
 - Administer Hydroxocobalamin.
 - Dosage: 5 gm IV over 15 minutes. May repeat one (1) time with base hospital orders. Second dose given over 15 minutes to 2 hours depending on the response to the first dose.
 - Reconstitute: Place the vial in an upright position. Add 200 mL of 0.9% Sodium Chloride Injection (not included in the kit) to the vial using the transfer spike. Fill to the line.
 - Mix: The vial should be repeatedly inverted or rocked, not shaken, for at least 60 seconds prior to infusion.
 - Infuse Vial: Use vented intravenous tubing, hang and infuse over 15 minutes.
- Use BVM with airway adjuncts as needed. Consider advanced airway if indicated.
- Refer to ICEMA Reference #11010 - Adult Respiratory Emergencies, for treatment of bronchospasm as indicated by wheezing
- Ensure rapid transport to closest receiving emergency department. In patients with SpCO of > 25% (> 15% if pregnant) or signs and symptoms of worsening CO poisoning, consider transport to a hyperbaric facility.

➤ Hyperbaric Medicine

- Arrowhead Regional Medical Center
- Loma Linda University Medical Center
- Redlands Community Hospital
- St. Mary Regional Medical Center

V. REFERENCE

<u>Number</u>	<u>Name</u>
11010	Adult Respiratory Emergencies