

## SMOKE INHALATION / CO MONITORING

- **Routine Medical Care**
- **Symptoms of Carbon Monoxide (CO) poisoning:**
  - Initial symptoms are similar to the flu with no fever and can include dizziness, severe headaches, nausea, sleepiness, fatigue/weakness and disorientation/confusion
- **Note:** Carbon Monoxide is a colorless, odorless and tasteless poisonous gas that can be fatal when inhaled. CO inhibits the blood's capacity to carry oxygen. CO can be produced when burning any fuel. CO is a by- product of incomplete combustion. Suspect CO in the presence of any fire. **SpCO = carboxyhemoglobin**

1. Pulse oximetry values may be unreliable in **smoke inhalation** (SI) patients
2. Cyanide and/or the combination of cyanide and carbon monoxide may be responsible for the majority of SI deaths
3. SI should be particularly suspected in patients rescued from closed-space structure fires
4. Sodium thiosulfate should not be given prophylactically
5. Remove **patient** from the source of exposure
  - 5.1. Completely remove **patient's** clothing prior to transport
  - 5.2. Perform Spinal Motion Restriction (SMR) if indicated **by mechanism**
  - 5.3. Evaluate patient for facial burns, hoarseness, black sputum, and soot in the nose or mouth
  - 5.4. Monitor SpCO (if available)
  - 5.5. Assess and treat for traumatic and/or thermal injuries - **see "Trauma Patient Care" (see [page 25](#)) and/or "Burn Patient Care" (see [page 7](#)).**
6. Administer 100% oxygen via NRB
  - 6.1. Control airway early. Use BVM with airway adjuncts
  - 6.2. Perform endotracheal intubation / **SGA placement if indicated**
    - 6.2.1. **Endotracheal intubation is preferred**
  - 6.3. If bronchospasm present, go to **"Respiratory Distress" (see [page 47](#)).**
7. Provide cardiopulmonary support (go to appropriate "Cardiac Arrest" policy, if indicated)
8. Start IVs. Consider IV fluids if hypotensive or meeting **"Burn Patient Criteria" (see "Burn Patient Care" see [page 7](#)).**
9. **ONLY** if the patient exhibits serious signs and symptoms of SI with concern for **Cyanide Poisoning** (especially burning of nitrogen-containing polymers) – see "Cyanide Poisoning" (see [page 149](#)).
  - 9.1. Administer sodium thiosulfate or hydroxocobalamin (Cyanokit)
    - 9.1.1. Sodium thiosulfate IV slowly over 10 minutes
 

**Adult:** 12.5 g/50 ml | **Pediatric:** use an LBRT to determine pediatric medication dosages, to for patients with any of the following signs of cyanide poisoning:

      - Unconsciousness, non-responsiveness
      - Hypotension
      - Severely altered level of consciousness with soot in the mouth or nose
      - **Cardiac arrest without full body burns incompatible with life**
    - 9.1.2. Hydroxocobalamin - Optional (Additional Training Required) Adults: 5g over 15 minutes
10. Treatment of cyanide poisoning must include immediate attention to airway patency, adequacy of oxygenation and hydration, cardiovascular support, and management of any seizure activity
11. If seizures are present, go to **Seizure** policy (see [page 51](#)).
12. If cardiac arrhythmia present, go to appropriate arrhythmia policy – **Bradycardia (see [page 33](#)), Cardiac Arrest (see [page 34](#)), or Tachycardia (see [page 59](#))**
13. Ensure rapid transport

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