

# 2.20P Smoke Inhalation – Pediatric

## EMT STANDING ORDERS

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- Routine Patient Care.
- Oxygen 100% via non-rebreather mask or BVM.
- Decontamination concurrent with initial resuscitation.
- If a carbon monoxide (CO) oximeter (e.g., Rad-57) is available, obtain carbon monoxide levels.
- If a measuring device is available, obtain atmospheric levels of carbon monoxide (CO) and cyanide (CN).


## ADVANCED EMT/PARAMEDIC STANDING ORDERS

For a history of smoke exposure with an altered level of consciousness and/or hemodynamic or respiratory compromise, administer, if available:

A/P

- Hydroxocobalamin via use of Cyanokit:
  - Reconstitute: Place the vial of hydroxocobalamin in an upright position; add 0.9% NaCl to the vial (200 mL for 5 grams) vial using the transfer spike. Fill to the line.
  - Rock vial for at least 60 seconds (do not shake).
  - Using vented intravenous tubing, infuse per [Pediatric Color Coded Appendix 3](#) over 7.5 minutes for 100 mL vial set or 15 minutes for 200 mL vial set.
  - Depending on clinical response, a second dose may be required.

Medical Protocol 2.20P

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- Oxygen saturation may be inaccurate in patients exposed to carbon monoxide or cyanide.
  - CO oximeter devices may yield inaccurate low/normal results for patients with CO poisoning. All patients with probable or suspected CO poisoning should be transported to the nearest appropriate hospital, based on their presenting signs and symptoms.
  - Do not administer other drugs concurrently in same IV as hydroxocobalamin.

Percent CO in Blood	Typical Symptoms
<10	None
10-20	Slight headache
21-30	Headache, slight increase in respirations, drowsiness
31-40	Headache, impaired judgment, shortness of breath, increasing drowsiness, blurring of vision
41-50	Pounding headache, confusion, marked shortness of breath, marked drowsiness, increasing blurred vision
>51	Unconsciousness, eventual death if victim is not removed from source of CO

**Symptoms:** headache, confusion, dyspnea, chest tightness, nausea.

**Signs:** soot in the nose or mouth, change in level of consciousness, seizure, dilated pupils, coughing, tachypnea and hypertension (early), bradypnea and hypotension (late), shock, vomiting.

### PEARLS:

- Smoke is a dangerous mixture of toxic gases and suspended chemicals consequential to combustion. While it may be impossible to predict exactly what components of combustion are inhaled, cyanide (CN) and carbon monoxide (CO) are common elements found in smoke and should be suspected in all smoke inhalation victims.