TOXIC EXPOSURE - CYANIDE

ALL PROVIDERS / EMT

- ❑ Scene Management
  - If properly trained and equipped, safely and rapidly remove patient from the source of exposure.
  - Request HazMat response as appropriate.
  - Industries in which to consider cyanide exposure:
    - Electroplating and Metallurgy
    - Organic chemicals production
    - Photographic developing
    - Manufacture of plastics
    - Fumigation of ships
    - Some mining processes especially gold/copper
  - Patients and EMS providers may be exposed to cyanide in the following ways;
    - Breathing air, drinking water, touching soil, or eating foods that contain cyanide.
    - Breathing smoke during closed-space fires.
    - Breathing air near a hazardous waste site containing cyanide.
    - Eating foods naturally containing cyanide compounds, such as tapioca, lima beans, apricot seeds and almonds. However, the portions eaten in the United States contain relatively low amounts of cyanide.
- ❑ Focused history and physical exam
  - Be alert for exposure related signs and symptoms;
    - Acute dyspnea/tachypnea without cyanosis
    - Nausea/vomiting
    - Seizures
    - Hyper or hypotension
    - Total body erythema (redness)
    - Cardiac monitor, ETCO2, and Pulse Oximetry monitoring when available
- ❑ **Treatment Plan**
  - Administer high flow oxygen immediately and continuously
  - Pulse oximetry readings may not be accurate because of cyanide interaction
  - Cardiac monitor and ETCO2, when available

ADULT

AEMT

- ❑ Advanced airway, vascular access and fluid therapy
- ❑ **Hydroxocobalamin (CYANOKIT®) for adults is 5 g** (contained in a single vial), administered by IV/IO infusion over 15 minutes (approximately 15 mL/min)

PARAMEDIC

- ❑ **Epinephrine2–10 mcg/min** IV/IO infusion for hypoperfusion. Titrate to maintain a SBP >100 mmHg.
- ❑ **Push Dose Epinephrine 10mcg** as needed to maintain a SBP >100 mmHg after fluid bolus

PEDIATRIC (<15 years of Age)

NOTE: Pediatric weight based dosing should not exceed Adult dosing.

AEMT

- ❑ Advanced airway, vascular access and fluid therapy
- ❑ **Hydroxocobalamin (CYANOKIT®)** can be used in children. Administer **70mg/kg** over 15 minutes IV/IO (approximately 15ml/min) not to exceed a max dose of 5 grams under direction of OLMC or Poison Control

PARAMEDIC

- ❑ **Epinephrine 0.1–2 mcg/kg/min** IV/IO infusion for hypoperfusion. Titrate to maintain a SBP >70 + (age in years x 2) mmHg.
- ❑ **Push Dose Epinephrine** 1 mcg/kg (dose in appendix) as needed to maintain a SBP>70 + (age in years x 2) mmHg after fluid bolus