

REGIONAL STANDARD OPERATING PROCEDURES

Cyanide Exposure Antidote Kit

#: 107.03

REV: 07/2015

SCOPE:

Rapid identification, extrication and treatment of persons who have been exposed to smoke byproducts at any fire incident. Particularly victims removed from closed-space residential structure fires.

PURPOSE:

Cyanide is a colorless, odorless gas released by nearly every material containing carbon and nitrogen when burned or off-gassing at high temperatures with limited oxygen conditions. Signs and symptoms mimic those of Carbon Monoxide including headache, confusion, nausea, lethargy, muscular coordination dysfunction, and unconsciousness. Other signs of direct cyanide exposure include hoarseness, soot around the nose and mouth, and soot in the posterior oropharynx.

Any person with known or suspected exposure to Hydrogen Cyanide should be treated by using the CYANOKIT as soon as it is safe to do so.

SAFETY:

All personnel within the hazard zone of active burning incidents should don and continuously wear all PPE and SCBA. Incidents are not limited to structure, car, and dumpster fires.

PROCEDURE:

A. Location

Two, 5 gram CYANOKIT vials will be secured in the Battalion 363 (BN363) vehicle.

B. Request

Early notification of potential patient need is crucial. All agencies located within Cochise County (or adjacent counties) may request the CYANOKIT for patient use by contacting the Sierra Vista Police Department Dispatch Center at 520-458-3311 and requesting to have the on-duty Battalion Chief contact you via phone (or radio for nearby agencies). The on-duty Battalion Chief will then make the decision to deliver the CYANOKIT, along with a paramedic trained in the administration of the medication, to a location agreed upon by all agencies involved.

C. Dosage

1. Adults - The starting dose is 5 g (contained in a single vial), administered by IV infusion over 15 minutes (approximately 15 mL/min). Reconstituted medication is infused using 60 drop tubing over 15 minutes in its own dedicated line.
 - a. Depending upon the severity of the poisoning and the clinical response, a second dose of 5 g may be administered by IV infusion up to a total dose of 10 g
 - b. The rate of infusion for a potential second dose may range from 15 minutes (for patients in extremis) to 2 hours, as clinically indicated
2. Pediatrics – Recommended dose is 70mg/kg after reconstituting vial with 200 mL of 0.9% Sodium Chloride. Administer desired dose over 15 minutes.

D. Guidelines

1. Maintain patent airway, Administration of 100% oxygen, establish peripheral IV/IO access (preferably 2 sites).
2. Treat patients according to ACLS protocols as patient condition dictates.
3. Reconstitute:
 - a. Place the vial in an upright position
 - b. Add 200 mL of 0.9% Sodium Chloride injection to the vial using the sterile transfer spike (if using a 250 mL bag of NS then remove 50 mL from the bag prior to attaching to the medication vial). **Fill to the line.**
 - i. 0.9% Sodium Chloride injection is the recommended diluent
 - ii. Diluent is not included in the kit
 - iii. Lactated Ringers injection and 5% Dextrose injection have also been found to be compatible with hydroxocobalamin and may be used if 0.9% Sodium Chloride is not readily available
 - c. The vial should be repeatedly inverted or rocked, not shaken, for at least **60 seconds** prior to infusion. Reconstituted medication should be dark red in color with no particulate matter.

- d. Use vented intravenous tubing (supplied in kit)
- e. Hang and infuse the desired dose over 15 minutes

E. Special Considerations

1. CYANOKIT - must be stored at 60-85 degrees. (DO NOT FREEZE)
2. CYANOKIT – Hydroxocobalamin Shelf life is 36 months from date of formulation.
3. CYANOKIT – Hydroxocobalamin administration requires its own dedicated IV/IO line.

****Special Note – This medication will turn your patient's skin, gums, sclera, and body fluids bright orange.**