


Section: Drug Reference
Subject: CYANOKIT®
Section #: 348.07
Issue Date: March 21, 2011
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Approved By: 

Page 1 of 2

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Cyanokit®

1. CLASSIFICATION
 - a. Antidote
2. ACTIONS / DESCRIPTIONS
 - a. Hydroxocobalamin is a precursor to vitamin B-12.
 - b. Hydroxocobalamin binds directly to the cyanide ion, forming cyanocobalamin, a natural form of vitamin B-12, a stable, non-toxic compound that is excreted in the urine.
3. INDICATIONS
 - a. If clinical suspicion of cyanide poisoning is high, CYANOKIT® should be administered without delay.
 - b. Cyanide poisoning:
 - i. Hydrogen Cyanide (HCN)
 - ii. Potassium Cyanide (KCN)
4. CONTRAINDICATIONS
 - a. None
5. PRECAUTIONS
 - a. Use caution in the management of patients with known anaphylactic reactions to hydroxocobalamin or cyanocobalamin.
 - b. Allergic reactions may include: anaphylaxis, chest tightness, edema, urticaria, pruritus, dyspnea, and rash
 - c. Substantial increases in blood pressure may occur following Cyanokit therapy.
6. ADVERSE REACTIONS
 - a. Red coloration of the skin, mucous membranes, and urine.
 - b. The most common adverse reactions (>5%) are transient and include chromaturia, erythema, rash (acneiform), increased blood pressure, nausea, headache, decreased lymphocyte percentage, and injection site reactions.
 - c. Usage may interfere with some clinical laboratory evaluations.
 - d. Due to potential photosensitivity patients should avoid direct sun until erythema resolves.
7. Dosage
 - a. Initial dose is 5.0 g (2 vials) IV over 15 minutes **7.5 minutes per vial**
 - b. Depending upon the severity of the poisoning and the clinical response, a second dose of 5.0 g may be administered by IV infusion for a total dose of 10 g.
 - c. The rate of infusion for the second 5.0 g dose may range from 15 minutes (for patients in extremis) to 2 hours based on patient condition.
 - d. Add 100 mL of 0.9% Sodium Chloride Injection to vial using transfer spike. **Fill to line. Vial in upright position.**
 - e. Rock or rotate vial for 30 seconds to mix solution. Do not shake.
 - f. There are a number of drugs and blood products that are incompatible with CYANOKIT®, thus CYANOKIT® requires a separate intravenous line for administration.

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Page 2 of 2



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8. Informational/Discussion Points

- a. Cyanide poisoning is primarily caused by smoke inhalation during closed-space structural fires.
- b. Additional causes of exposure may include:
 - i. Accidental or intentional ingestion/inhalation
 - ii. Dermal exposure in the industrial setting
 - iii. Dermal/inhalation exposure 2° to terrorist act
- c. CYANOKIT® solutions should be visually inspected for particulate matter and color prior to administration
 - i. Discard solution if particulate matter is present or solution is not dark red