

# HYDROXOCOBALAMIN (CYANOKIT)

## PHARMACOLOGY & MECHANISM OF ACTIONS:

- ❑ Vitamin
- ❑ Hydroxocobalamin (Vitamin B12a) is an effective antidote in the treatment of cyanide poisoning based on its ability to bind cyanide ions. Each hydroxocobalamin molecule can bind one cyanide ion to form cyanocobalamin (vitamin B12), which is then excreted in the urine.
- ❑ Cyanide is an extremely toxic poison. In the absence of rapid and adequate treatment, exposure to a high dose of cyanide can result in death within minutes due to inhibition of cytochrome oxidase resulting in arrest of cellular respiration.
- ❑ Useful in counteracting severe hypoglycemic reactions in known diabetic patients, where administration of oral sugar or IV Dextrose is impossible or impractical
- ❑ Beta-blocker and Calcium channel blocker overdoses

## INDICATIONS:

- ❑ Cyanide poisoning or smoke inhalation with suspected cyanide poisoning due to the presence of coma, persistent hypotension or cardio-respiratory arrest.
- ❑ Cyanide poisoning that has not been treated with Amyl Nitrate and Sodium Thiosulfate

## CONTRAINDICATIONS:

- ❑ Known significant allergy to Hydroxocobalamin

## ADMINISTRATION:

	ADULT	PEDIATRIC	
PARAMEDIC	<ul style="list-style-type: none"><li>❑ 5 g IV over 15 minutes</li><li>❑ May repeat once, max dose 10 g</li></ul>	<ul style="list-style-type: none"><li>❑ 70 mg/kg IV/IO over 15 minutes</li><li>❑ May repeat one time, max. dose 10 g</li></ul>	PARAMEDIC

## PRECAUTIONS & SIDE EFFECTS:

- ❑ Chromaturia, Erythema, Transient hypertension, Headache, Nausea, Allergic reactions, Infusion site reactions
- ❑ Because of its deep red color, hydroxocobalamin has been found to interfere with certain laboratory tests based on light absorption including co-oximetric measurements of carboxyhemoglobin, methemoglobin and oxyhemoglobin.
- ❑ Pregnancy Category C.
- ❑ It is best to administer Hydroxocobalamin through its own IV line to avoid incompatibilities with other medications.
- ❑ If patient has suspected cyanide poisoning, consider obtaining SpCO, if available, before administration of Cyanokit<sup>®</sup> since the latter will interfere with the carboxyhemoglobin monitor.