

Hydroxocobalamin is an effective cyanide chelator and is largely devoid of serious adverse effects. It is used first line in treating suspected cyanide toxicity.

Indications

Suspected / known cyanide poisoning with evidence of significant clinical toxicity, which may include:

- Loss of consciousness / seizures
- CVS instability, hypotension, arrhythmias
- Metabolic acidosis with raised lactate (>10)

Contraindications:

- no absolute contraindications

Adverse effects:

- Red or orange discoloration of bodily fluids and skin, which can last 2-3 days
- Hypertension
- Rare: urticaria, oedema, anaphylaxis, bradycardia and tachycardia have all been reported
- May interfere with biochemistry measurements: (COHb, AST, CK, bilirubin, iron, Mg, lactate)

Presentation

- "Cyanokit" containing 5 g of IV hydroxocobalamin

Dose and Administration

- **Adults:** Reconstitute 5 g in 200 mL of normal saline (add normal saline to the vial)
- **Invert or rock the vial, avoid shaking**
- Infuse intravenously over 15 minutes
- Dose can be repeated (30 to 60 min later) up to a maximum of 15 g in cases of severe toxicity

Paediatric dose:

- 70mg/kg up to 5 g diluted in 0.9% sodium chloride 2.8ml/kg up to 200ml given over 15 minutes

Hydroxocobalamin is incompatible with sodium thiosulphate: DO NOT administer through the same line

Therapeutic Endpoint:

- Improvement in CVS status and metabolic markers of toxicity (increased bicarbonate / pH, decreased lactate)

Pregnancy:

- No contraindication to use in pregnant patients with known or suspected significant cyanide toxicity