

Sodium thiosulfate metabolizes cyanide to thiocyanate, which is minimally toxic and renally excreted. It is a second line agent in treating cyanide toxicity

Indications

Suspected or confirmed cyanide poisoning if hydroxocobalamin is not available

Moderate-severe cyanide poisoning in addition to hydroxocobalamin

(See separate Cyanide (CN) guideline)

Contraindications:

- No absolute contraindications

Adverse effects:

- Hypotension, nausea and vomiting
- Hypernatraemia
- Osmotic diuresis effect (due to hyperosmolar property of sodium thiosulfate)

Presentation

- One 10 mL vial of sodium thiosulphate contains 2.5 grams (25% solution)

Dose and Administration (discuss use with a clinical toxicologist)

- 50 mL sodium thiosulfate 25% (12.5 g) IV over 10 minutes
- give another 25 mL sodium thiosulfate 25% (6.25 g) IV 30-60 minutes from initial dose if no clinical improvement

Paediatric dose:

- 1.6 mL/kg (max 50 mL) sodium thiosulfate 25% (400 mg/kg up to 12.5g) IV over 10 minutes
- give another half of this dose intravenously 30-60 minutes from initial dose if no clinical improvement

**Sodium thiosulfate is dialyzable. Dosing needs to be increased if patient is on haemodialysis.*

Therapeutic Endpoint:

- Improvement in cardiovascular status and metabolic acidosis

Pregnancy:

- Category C
- The use of sodium thiosulfate should not be withheld if potential benefit outweighs any potential risk