Sodium thiosulphate Intravenous for Adults

Who can administer

May be administered by registered competent doctor or nurse/midwife

Important information

- Unlicensed preparation

Available preparations

Sodium thiosulphate 25%, 50ml injection (12.5g in 50ml)

Reconstitution

Already in solution

Infusion fluids

Sodium chloride 0.9% or Glucose 5% [ref 1]

Methods of intravenous administration

Intermittent intravenous infusion (calciphylaxis) [ref 1,2]

- Dilute with infusion fluid (volume not critical)
- Administer over 30 to 60 minutes
- If on haemodialysis, administer during the last hour of, or after the haemodialysis session
- In patients who experience gastrointestinal side effects, the duration of infusion can be increased by an additional 30 to 60 minutes [ref 2]
- Administer via a large peripheral vein or a central line [ref 1]
- The residual volume in the infusion line must be flushed through at the same rate to avoid significant underdosing

Slow intravenous injection (for cyanide poisoning)

- May be administered undiluted over 10 minutes [ref 1, 2,3]
- Administer via a large peripheral vein or a central line [ref 1]

Dose in adults

Calciphylaxis [ref 2]

The dose of sodium thiosulphate is empiric

Dialysis patients	
Weight >60kg	The most commonly reported dose is 25 grams at each haemodialysis session (three times weekly) [ref 2,4]
weight <60kg	A reduction of dose to 12.5g is suggested [ref 2,4]
The dose may need adjustment if patient is on more frequent dialysis, or on continuous renal replacement therapies [ref 2,4]	

Non-HD patients- see below

Non dialysis patients		
eGFR 60mL/min/1.73m^2 (or more)	Less than 60kg	Give 12.5g twice weekly, initially Can be increased to **five** times weekly as required
	Greater than 60kg	Give 25g twice weekly, initially Can be increased to **five** times weekly as required
eGFR <60mL/min/1.73m^2	Less than 60kg	Give 12.5g twice weekly initially Can be increased to **four** times weekly as required
	Greater than 60kg	Give 25g twice weekly initially Can be increased to **four** times weekly as required
Monitor serum bicarbonate weekly for two weeks for development of metabolic acidosis. In absence of overt metabolic acidosis (serum bicarbonate concentration below 18 mEq/L), or hypotension, increase gradually as per table above		

Cyanide poisoning [ref 3]

- Contact Poisons information service -see TOXBASE
- Give 25ml of 50% solution (12.5g) over 10 minutes
- In severe poisoning, a further dose may be given

Monitoring

- Monitor for injection site irritation [ref 1]
- Monitor for metabolic acidosis [ref 1]
- Monitor blood pressure [ref 1]
- Monitor for gastrointestinal adverse effects [ref 1]
- Monitor sodium levels - may cause hypernatraemia [ref 1]

Storage

Store at room temperature

References

1: Injectable Medicines information guide, downloaded from Medusa 29th March 2023

2: UpToDate- downloaded 29th March 2023

3: Toxbase -downloaded 29th March 2023

4:Calciphylaxis; Risk Factors, Diagnosis and Treatment Am J Kidney Dis 2015:66(1) 133-146