

# 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 50%, 20ml injection (10g in 20ml)

## Reconstitution

Already in solution

## Infusion fluids

Sodium chloride 0.9% or Glucose 5% <sup>(ref 1)</sup>

## Methods of intravenous administration

### Intermittent intravenous infusion (calciophylaxis) <sup>(ref 1,2)</sup>

- 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 <sup>(ref 2)</sup>
- Administer via a large peripheral vein or a central line <sup>(ref 1)</sup>
- 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 <sup>(ref 1, 2,3)</sup>
- Administer via a large peripheral vein or a central line <sup>(ref 1)</sup>

## Dose in adults

### Calciophylaxis <sup>(ref 2)</sup>

The dose of sodium thiosulphate is empiric

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

Non-HD patients- see below

Non dialysis patients		
eGFR 60mL/min/1.73m <sup>2</sup> (or more)	Less than 60kg	Give 12.5g twice weekly, initially Can be increased to <b>five</b> times weekly as required
	Greater than 60kg	Give 25g twice weekly, initially Can be increased to <b>five</b> times weekly as required
eGFR <60mL/min/1.73m <sup>2</sup>	Less than 60kg	Give 12.5g twice weekly initially Can be increased to <b>four</b> times weekly as required
	Greater than 60kg	Give 25g twice weekly initially Can be increased to <b>four</b> 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<sup>(ref 3)</sup>

- 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<sup>(ref 1)</sup>
- Monitor for metabolic acidosis<sup>(ref 1)</sup>
- Monitor blood pressure<sup>(ref 1)</sup>
- Monitor for gastrointestinal adverse effects<sup>(ref 1)</sup>
- Monitor sodium levels - may cause hypernatraemia<sup>(ref 1)</sup>

## Storage

Store at room temperature

## References

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

2: UpToDate- downloaded 29th March 2023

3: Toxbase -Â downloaded 29th March 2023

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

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