Thiopental sodium Intravenous for Adults

Who can administer

Administration RESTRICTED - see Appendix 1

Important information

- Stored as a controlled drug in GUH
- For use by anaesthetists only
- **Extravasation** can cause local tissue necrosis and severe pain - use central line or large peripheral line [ref 1].
- **Resite cannula** at first signs of **inflammation** [ref 1]
- **Accidental** intra-arterial injection causes severe arterial spasm and an intense burning pain around the injection site [ref 1]
- For Y-site compatibility see below

Available preparations

Important:

- Different brands have differing expiry times for infusion (after reconstitution)
- Check which brand is being used to determine expiry time, and discuss with pharmacist

Brand	Product	Expiry time for infusion after preparation
Inresa	Thiopental 500mg vial	Not licensed for administration by intravenous infusionÂ Clinical decision required - **see comment on Metavision** (ICU CIS)
Panpharma	Thiopental 500mg vial	9 hours [ref 1]
Advanz	Thiopental 500mg vial	6 hours [ref 1]

Reconstitution

If for Bolus intermittent injection

- **Water for injection**
- 20ml per 500mg vial (produces a 25mg/ml (2.5%) solution)
- Inject the required volume of diluent into the vial so that the solvent vigorously swirls up the powder (to avoid lumping)

If for Continuous intravenous infusion

- **Water for injection or Sodium chloride 0.9%** [ref 1]

- Inject the required volume of diluent into the vial so that the solvent vigorously swirls up the powder (to avoid lumping)

Infusion fluids

Sodium chloride 0.9%

Methods of intravenous administration

Bolus intravenous injection

- Administer over 20 seconds (some brands specify a slightly different rate [ref 1])
- Some manufacturers suggest a **test dose** of 25 to 75mg (over 10 to 15 seconds) can precede the main administration [ref 1,2].
    - Monitor for at least 60 seconds to assess tolerance or unusual sensitivity to the drug[ref 1]

Continuous intravenous infusion

- Prepare a 2mg or 4mg per mL solution using infusion fluid above
- **Fluid restricted patients:** May use a concentration of up to 50mg/mL[ref 1]
- Some manufacturers suggest a **test dose** of 25 to 75mg (over 10 to 15 seconds) can precede the main administration [ref 1,2].
    - Monitor for at least 60 seconds to assess tolerance or unusual sensitivity to the drug[ref 1]

Dose in adults

Use in convulsive states [ref 3]

- Give 75 to 125mg as soon as possible after the convulsion begins
- Further doses may be required

Use in ventilated neurological patients with raised intracranial pressure [ref 2,3]

- Intermittent bolus doses of 1.5 to 3mg/kg may be given to reduce elevations of intracranial pressure

Barbiturate coma for refractory status epilepticus or for refractory high intracranial pressure (unlicensed)[ref 2,4]

- **Loading dose** by bolus intravenous injection
    - Give 3 to 5 mg/kg
- **Maintenance dose** by continuous intravenous infusion
    - Give 3 to 5 mg/kg/hour
- Titrate infusion rate to burst suppression pattern on electroencephalography (EEG)
- Higher doses have been tried for refractory status epilepticus (up to 7mg/kg/hour) [ref 2]

Use in anaesthesia

- A test dose of 25 to 75mg can precede the main administration [ref 1,2]. Monitor for at least 60

seconds to assess tolerance or unusual sensitivity to the drug[ref 1]
- Give 100 to 150 mg over 10 to 15 seconds[ref 2,3]
- A repeat dose of 100 to 150mg may be given after 30 to 60 seconds[ref 2,3]
- Maximum dose 500mg[ref 3]

Monitoring

- Severe or refractory hypokalaemia during the infusion has been reported, severe rebound hyperkalaemia may occur after administration has stopped [ref 1]
- Monitor injection site (can cause extravasation)

Storage

- Controlled drug
- Do not store above 25^{0}C

References

Thiopental Inresa SPC 06/09/2014

1: Injectable medicines guide, downloaded from Medusa 26/03/2026

2: Martindale, downloaded from Medicinescomplete 26/03/2026

3: BNF, downloaded from Medicinescomplete 26/03/2026

4: Critical Illness, downloaded from MedicinesComplete 26/03/2026

Search synonym thiopentone

Therapeutic classification

Barbiturate

(used as a general anaesthetic agent - hence Appendix 1)