Tinzaparin

SALAD
Ensure correct strength selected

Preferred Low Molecular Weight Heparin (LMWH) in CUH is **Enoxaparin**

Preferred LMWH in CUMH is **Tinzaparin**

Tinzaparin dosing is weight based – use Actual Weight.
Ensure accuracy of documented weight before administration

Caution: High administration Risk Rating

Form

- Innohep® 10,000 IU/ml **vials**
- Innohep® 20,000 IU/mL **vials**
- **Innohep® Prefilled injection**

Store below 25°C

Any portion of the contents not used at once should be discarded. The liquid may turn yellow in storage but this does not affect product quality.
*Doses are administered in 1,000 IU increments facilitated by the 0.05 ml graduations on the syringes.

Innohep Prefilled Injection	Injection concentration
2500	10,000 units/mL
3500	10,000 units/mL
4500	10,000 units/mL
8000	**20,000 units/mL**
10,000	**20,000 units/mL**
12,000	**20,000 units/mL**
14,000	**20,000 units/mL**
16,000	**20,000 units/mL**
18,000	**20,000 units/mL**

Reconstitution

Already in solution

Administration

SC: Prophylaxis of venous thromboembolic disease

Administer dose SC
Manufacturer advises caution if eGFR < 30mL/min/1.73m^2
In patients with a creatinine clearance level < 20 ml/minute seek specialist advice

SC: Treatment DVT and PE

175 units/kg SC ONCE daily
Doses are administered in 1,000 IU increments facilitated by the 0.05 ml graduations on the syringes.

In patients with a **creatinine clearance** level < 20 ml/minute seek specialist advice.
Treatment dose for **patients >165kg** – seek specialist advice
See administration table below

Monitoring

The risk of **heparin induced thrombocytopenia** HIT also exists with LMWHs. Should thrombocytopenia occur, it usually appears between the 5th and the 21st day following the beginning of tinzaparin.
The risk of HIT is higher in postoperative patients and mainly after cardiac surgery and in patients with cancer.

	• All patients should have a platelet count before starting treatment and then regularly thereafter during the treatment. • If there are clinical symptoms suggestive of HIT (any new episode of arterial and/or venous thromboembolism, any painful skin lesion at the injection site, any allergic or anaphylactoid reactions on treatment), platelet count should be measured. • If a confirmed significant decrease of the platelet count is observed (30 to 50 % of the initial value), tinzaparin treatment must be immediately discontinued and the patient switched to another non-heparin anticoagulant alternative treatment, and haematology consult requested. • For patients who have been exposed to heparin of any sort in the last 100 days a platelet count 24 hours after starting tinzaparin should be obtained. Tinzaparin can suppress adrenal secretion of aldosterone leading to **hyperkalaemia**. • All patients should have potassium monitored before and during treatment in patients at risk e.g. renal impairment, diabetes mellitus and patients taking potassium sparing drugs. Routine **anti-Xa activity monitoring** is not usually required but may be considered in patients: • At risk of under or over anticoagulation, e.g. in patients with renal or hepatic impairment or at extremes of bodyweight or metallic mechanical heart valves. If you are considering anti-Xa activity monitoring please contact haematology.
Neutralisation of LMWH	The anticoagulant effects of LMWH is neutralized by the slow IV injection of **protamine**. Excessive protamine doses may worsen bleeding. If tinzaparin neutralization is clinically indicated, see below: • Dose of protamine should equal the dose of tinzaparin administered. Administer 1 mg of protamine to neutralize 1,000 anti Xa IU LMWH; administer by slow IV injection over ~10 minutes; or as a constant, slow intravenous infusion, maximum single injection (bolus dose): 50 mg. However, even with high doses of protamine, the anti-Xa activity of tinzaparin is never completely neutralized (in vitro studies anti Xa neutralised 81% for tinzaparin).
Additional Information	• Tinzaparin is administered by deep SC injection. The injection should be administered preferably when the patient is lying down and rotating the site of injection • CrCl calculator is available on MDCalculator https://www.mdcalc.com • **Vials contain benzyl alcohol**. Due to the presence of benzyl alcohol this presentation should not be given in pregnancy or to premature babies or neonates.

Information provided relates to Innohep (Leo Laboratories)
Last updated 9/12/2025

Table 1: Calculating Therapeutic Dose of Tinzaparin to Prescribe and Administer

Body weight (kg)	175 IU/kg OD (CrCL >20mL/min)	
	Dose	Volume to be administered
32-37	6,000	0.30 mL from 8000IU syringe
38-42	7,000	0.35 mL from 8000IU syringe
43-48	8,000	0.40 mL from 8000IU syringe
49-54	9,000	0.45 mL from 10,000IU syringe
55-59	10,000	0.50 mL from 10,000IU syringe
60-65	11,000	0.55 mL from 12,000IU syringe
66-71	12,000	0.60 mL from 12,000IU syringe
72-77	13,000	0.65 mL from 14,000IU syringe
78-82	14,000	0.70 mL from 14,000IU syringe
83-88	15,000	0.75 mL from 16,000IU syringe
89-94	16,000	0.80 mL from 16,000IU syringe
95-99	17,000	0.85 mL from 18,000IU syringe
100-105	18,000	0.90 mL from 18,000IU syringe
>105	175 units/kg	Round to nearest 0.05mL
In pregnancy and breastfeeding use a syringe and not a vial (contains benzyl alcohol)		

Doses are administered in 1,000 IU increments facilitated by the 0.05 ml graduations on the syringes. The calculated dose, based on the patient's body weight, should therefore be rounded up or down as appropriate.