CLINICAL GUIDELINES ID TAG	
Title:	**Anticoagulation: ENOXAPARIN DOSING – Quick Reference Guide**
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SHSCT Inpatients

See full guidance

1. Venous Thromboembolism Prophylaxis Procedure
2. VTE Appendices

Surgical Guidance

1. VTE Prevention Guidelines for Emergency Surgical Admissions
2. VTE Prevention Guidelines for Elective Surgical Inpatients

VTE Prophylaxis

Weight	Enoxaparin Dose	Weight	Enoxaparin Dose
		Renal Impairment eGFR <30ml/min	
<50kg	20mg OD	**<50kg**	20mg OD
50–100kg	40mg OD	**50–100kg**	20mg OD
101–150kg	40mg BD	**101–150kg**	40mg OD
>150kg	80mg OD on discharge if district nursing to administer 60mg BD 100mg OD on discharge if district nursing to administer	**>150kg**	60mg OD

VTE Treatment

Uncomplicated femoral/popliteal DVT		All other patients such as those with obesity (>100kg), symptomatic PE, cancer, recurrent VTE or proximal (iliac vein) thrombosis	
1.5mg/Kg ONCE DAILY		**1mg/Kg TWICE DAILY**	
WEIGHT	**DOSE**	**WEIGHT**	**DOSE**
37–43kg	60mg OD	40-45kg	40mg BD
44–50kg	70mg OD	46-55kg	50mg BD
51–56kg	80mg OD	56-65kg	60mg BD
57–63kg	90mg OD	66-75kg	70mg BD
64–73kg	100mg OD	76-85kg	80mg BD
74–85kg	120mg OD	86-95kg	90mg BD
86–95kg	135mg OD	96-110kg	100mg BD
96–100kg	150mg OD	111-125kg	120mg BD
		126-140kg	135mg BD
		141-155kg	150mg BD

Renal Impairment (eGFR <30ml/min)
1mg/Kg ONCE DAILY

If patient self-administering consider amending dose to nearest commercially available syringe e.g. 20mg, 40mg, 60mg, 80mg, 100mg, 120mg, 150mg

Anti-Xa monitoring recommended when treatment doses used for > 3 days in CKD stage 4 & 5, + patients < 50kg or > 150kg to guide initial dosing.

Peak anti-factor Xa level is checked 4 hours post LMWH dose[4] usually after 3rd dose (BD dosing – peak level 0.6 – 1.1, OD dosing 1.0 – 2.0 IU/ml)

Trauma / Orthopaedic

In General
THR – Enoxaparin prophylaxis 28 days post-op
TKR – Enoxaparin prophylaxis 14 days post-op

Lower Limb Immobilisation

(see full guideline)

Weight	Enoxaparin Dose	Weight	Enoxaparin Dose
		Renal Impairment eGFR<30ml/min; Reduce dose to 50%	

Enoxaparin administration in obese patients

Abdominal wall haematoma must always be considered as a diagnosis in patients with abdominal pain injecting low molecular weight heparin (LMWH) into the subcutaneous tissue of the abdominal wall.

ENOXAPARIN DOSING – Quick Reference Guide (SHSCT Anticoagulant Team Nov 2015, last updated June 2024)

Further information is available under each guideline including Risk Assessment Tools & references

	<50kg 50–100kg 101–150kg >150kg	20mg OD 40mg OD 40mg BD 60mg BD	<50kg 50–100kg 101–150kg >150kg	20mg OD 20mg OD 40mg OD 60mg OD	In patients with severe obesity, LMWH injection into subcutaneous tissue of the thighs (rather than the abdominal wall) should be considered to reduce the risk of haematoma formation.

	VTE Prophylaxis		VTE Treatment	
VTE in Pregnancy (including lower limb immobilisation) RCOG guidelines; 1. Reducing the Risk of Thrombosis during Pregnancy 2. Reducing the risk of venous thrombosis in pregnancy and after birth 3. Thromboembolic disease in pregnancy and the puerperium	**Booking Weight**	**Enoxaparin Dose**	**Booking Weight**	**Enoxaparin dose**
	<50kg 50–90kg 91–130kg 131–170kg >170kg	20mg OD 40mg OD 60mg daily* 80mg daily* 0.6 mg/kg/day* *may be given in two divided doses	**1mg/kg TWICE DAILY antenatal (1mg/kg TWICE DAILY or 1.5mg/kg ONCE DAILY postnatal)**	
			WEIGHT	**DOSE**
	• **Other risk factors + weight determine LMWH dose** • **LMWH usually 10 days but can be for 6 weeks following delivery**		<50kg 50–69kg 70–89kg 90–109kg 110–125kg > 125kg	40mg BD or 60mg OD 60mg BD or 90mg OD 80mg BD or 120mg OD 100mg BD or 150 mg OD 120mg BD or 180mg OD Discuss with haematologist
Pre-Operative Patients (stopping warfarin then LMWH bridging if required) see full guideline	Day 3 & 2 Pre-Op dose = 1.5mg/kg Day 1 Pre-op dose is 50% of full dose (round down to the nearest 10) **Renal Impairment** **eGFR <30ml/min** Day 3 & 2 Pre-Op dose = 1mg/kg Day 1 Pre-op dose is 50% of full dose (round down to the nearest 10)			

Points to Remember

1. ALL patients need risk assessed on admission to hospital for their risk of developing VTE using the appropriate assessment form.
2. For patients with at extremes of body weight, **Creatinine Clearance (CrCl)** calculated using Cockcroft Gault Calculation (using the patient's actual body weight and age) will give a more accurate CrCl than eGFR. (Link to online CrCl calculator)
3. **Anti-Xa monitoring** recommended when treatment doses used for > 3 days in CKD 4 & 5 (CKD 4 is GFR 15-29, CKD 5 <15 ml/min) and in patients over 150kg in weight – It is generally recommended that a peak anti-factor Xa level is checked 4 hours after the LMWH dose[4]. Haematology departments should be consulted to advise on monitoring requirements (e.g. when to initiate monitoring and how frequently this is required), and the most suitable target range for anti-factor Xa activity due to small variations in laboratory techniques. Anti-Xa monitoring should only be checked in a hospital setting.
4. **LMWH monitoring** – Routine monitoring of the full blood count (FBP) to identify heparin induced thrombocytopenia is not required. All patients must be alerted to the symptoms of HITT, given the 'Patient information sheet on Inhixa® (Enoxaparin)' and asked to report symptoms urgently. Only patients who have received unfractionated heparin or undergone cardiothoracic surgery within 3 weeks, require routine platelet count monitoring at baseline and between days 5 and 15.
5. **Hyperkalaemia risk** – LMWH is reported to cause hypoaldosteronism which is rarely of clinical significance. Patients already at risk of hyperkalaemia should have potassium monitored; for example those with renal impairment, ACE inhibitors, angiotensin II receptor blockers and potassium sparing diuretics.
6. If the General Practitioner is to continue prescribing Enoxaparin after discharge from hospital, ensure that a 'Referral to GPs for arrangement of shared care for patients on enoxaparin' form is completed Enoxaparin Shared Care Letter for GP.

References;

1. http://www.medsafe.govt.nz/profs/datasheet/c/clexaneinj.pdf
2. http://www.ukcpa.net/charge-files/group-documents/40/1332417353-QA326_Thromboprophylaxis_body_weight1.pdf
3. Clexane pre-filled syringes, Electronic Medicines Compendium, Last updated 09/06/2017.
4. Garcia DA, Baglin TP, Weitz JI, Samama MM. Parenteral anticoagulants. Antithrombotic therapy and prevention of thrombosis, 9th ed: American college of chest physicians evidence-based clinical practical guidelines. Chest 2012; 141 (2) (Suppl): e24S-e43S.
5. RCOG: "Reducing the risk of thrombosis and embolism during pregnancy and puerperium". Green-top Guideline No. 37a. April 2015.
6. RCOG: "Thromboembolic disease in pregnancy and the puerperium: acute management". Green-top Guideline No. 37b. April 2015.