Health and Social Care Board

Interface Pharmacist Network Specialist Medicines

Enoxaparin

Low Molecular Weight Heparin Shared Care Guideline

Specialist Details	Patient Identifier
Name: _____	
Location: _____	
Tel: _____	**Date:** _____

Introduction

Licensed indications: Treatment and prophylaxis of venous thromboembolism (VTE).
Unlicensed indications: see detailed advice from specialist.

- Short term bridging anticoagulant in high risk patients on warfarin.
- Extended therapy beyond two weeks in selected patients.
- Treatment and prophylaxis of VTE during pregnancy and following delivery. (Guidance of the Royal College of Obstetricians and Gynaecologists Green Top Guideline No 37a www.rcog.org.uk).

Essential information such as dose, weight, renal function, indication and duration of treatment should be communicated at transfers of care (e.g. by discharge letters) to ensure that future doses are safe.

Adult Dosage and Administration

Dosing checks based on patient information should be made by healthcare professionals who review, dispense or administer LMWHs when this information is readily available to them.
Adult dosage and administration: Dose should be calculated on the patient's current weight (in pregnancy use early pregnancy booking weight) and renal function.
Available as

- Enoxaparin 20mg, 40mg, 60mg, 80mg,100mg prefilled syringes containing 100mg/mL solution for injection.
- Enoxaparin 120mg and 150mg prefilled syringes containing 150mg/mL solution for injection. (* note higher concentration).
- Enoxaparin multidose 300mg vial containing 100mg/mL solution for injection.

Clexane® and biosimilars are available: Inhixa®, Arovi® and Enoxaparin Becat®. Refer to the SPC of any biosimilar for licensed indications and available forms.

- The MHRA recommends that it is good practice to prescribe all biosimilars by brand name to ensure that automatic substitution doesn't occur when the medicine is dispensed or administered.
- Patients should ideally remain on the same brand, and any decision on switching should involve the prescriber in consultation with the patient.
- With more than one brand of enoxaparin now available, prescribers may need to adjust their current practice as most prescribing of enoxaparin is currently generic.
- Pharmacists receiving a generic prescription should take necessary steps to try to confirm the brand required before dispensing. If this isn't possible, or if the required brand is not available, a professional judgement will need to be made, taking into account the clinical urgency for supply. In most cases, supplying something will be better than supplying nothing. Ensure that patients switching brands receive counselling on differences in administration technique.

Hospital Specialist Responsibilities

- Assess the need for extended prophylaxis or treatment.
- Assess if the patient is suitable for treatment with enoxaparin.
- Provide the patient/carer with relevant written and verbal information on use, side effects, and need for monitoring of medication.
- Counsel patients or carers on the symptoms and signs of VTE and how to access urgent assessment if required.
- Provide education/training on self-administration (preferred sites and rotation of sites) if appropriate and disposal of sharps box.
- Arrange Shared Care with the patient's GP.
- Provide the GP with the relevant information for each patient.

- Treatment to be prescribed, dose, weight, renal function, indication, and duration of treatment. (NPSA/2010/RRR014)
- Indicate if patient has been trained and will self-administer. Advise which enoxaparin device/brand the patient has been trained to use. If patient cannot self-administer, contact GP and arrange administration in primary care.
- Advise if monitoring is required. If monitoring required, advise on frequency of monitoring platelets, potassium, and renal function, and give baseline results.

- Send a written summary to the GP whenever the patient is reviewed.
- Provide any other advice or information for the GP if required.
- Consider anti-embolism stockings until discharge from hospital. When indicated, measure and prescribe anti-embolism stockings e.g. TED, and provide instructions on use. (Mechanical and pharmacological treatments are not normally indicated at the same time after discharge to primary care).

Monitoring

- **Monitoring is not routinely required** and is not necessary in pregnant women on prophylaxis.
- **When monitoring is indicated (as per specialist):** Arrange and record on-going monitoring as recommended:
  - Repeat FBC between days 5-7 and 10-14. In patients at risk of hyperkalemia (see below) check potassium between days 5-7 and 10-14, and thereafter according to clinical judgement. From Day 15 onwards there is no need for routine monitoring unless clinical condition changes or is likely to change in which case check U&E as necessary.

GP Responsibilities

- Prescribe enoxaparin and appropriate sized sharps bin for the duration of the course (dose, weight, renal function, indication and duration of treatment should be recorded in the patients clinical record).
- The device/brand of enoxaparin on which the patient has been initiated on in secondary care, or has been trained to use, should be continued where possible in line with guidance on prescribing and supply of biosimilar medicines.
- Ensure systems are in place for daily administration.
- **Monitoring is not routinely required** and is not necessary in pregnant women on prophylaxis.
- **When monitoring is indicated (as per specialist):** Arrange and record on-going monitoring as recommended:
  - Repeat FBC between days 5-7 and 10-14. In patients at risk of hyperkalemia (see below) check potassium between days 5-7 and 10-14, and thereafter according to clinical judgement. From Day 15 onwards there is no need for routine monitoring unless clinical condition changes or is likely to change in which case check U&E as necessary.
- **Identify and report adverse reactions** to initiating specialist and the usual bodies (e.g. MHRA).
  - From day 5 - 14 of therapy allergic skin reaction at injection site or further thrombosis (arterial or venous) may indicate HITT. Stop LMWH, request FBP and refer urgently to local haematologist for management.
- Alert the initiating specialist to any significant changes in patient's weight, renal function or platelet count.
- Ensure no drug interactions with other medicines.
- Normally graduated compression stockings are not indicated in primary care whilst on enoxaparin.

Adverse Effects, Precautions and Contraindications

Hyperkalaemia: LMWH can cause hypoaldosteronism, which may result in hyperkalaemia. Potassium should be monitored before and during treatment, particularly in patients at risk of high potassium e.g. renal impairment, ACE inhibitors, angiotensin II receptor blockers, potassium sparing diuretics etc.

Heparin Induced Thrombocytopenic Thrombosis (HITT): is a rare side effect of LMWH. HITT should be suspected if platelet count falls by more than 30% from baseline alongside clinical suspicion of a new thrombotic event. Platelet count should be performed before treatment is started and between days 5-7 and 10-14. If HITT is suspected, stop LMWH, request FBP and refer urgently to local haematologist for further management. Seek specialist advice before further prescription of LMWH in patients with history of HITT.

Dosage may need to be reduced to lower the risk of haemorrhage due to drug accumulation in severe renal impairment (eGFR <30ml/min/1.73m^2) or CrCl<30ml/min.

No dose adjustments are recommended in obesity or low body weight, but careful clinical monitoring may be required in patients at extremes of weight.

Contraindications include: Major bleeding disorders including active peptic ulcer, severe thrombocytopenia, hypersensitivity to enoxaparin or other LMWH.

Common Drug Interactions

Drugs affecting haemostasis (e.g. antiplatelets, anticoagulants, NSAIDS, systemic glucocorticoids, thrombolytics) should be discontinued before LMWH is initiated unless their use is essential. If the combination cannot be avoided, LMWH should be used with careful clinical and laboratory monitoring.

Communication

For queries about this patient's treatment with enoxaparin, contact the specialist named at the top of the document.

This information is not inclusive of all prescribing information and potential adverse effects. Refer to full prescribing data in the SPC or the BNF

Date Prepared: June 2020 Date of review: June 2025