Enoxaparin (Lovenox®) Considerations for Use*

Non-FDA Approved Indication: Alternative to Oral Anticoagulation for Stroke Prevention in Atrial Fibrillation

Black Box Warning*	Epidural and spinal hematomas may occur in patients who are anticoagulated and are receiving neuraxial anesthesia or undergoing spinal punctures.
Mechanism of Action	A low molecular weight heparin with antithrombotic properties
Dosing†	Adult: 1 mg/kg twice daily[2] Elderly: No specific dosage adjustment Hepatic Impairment: No specific dosage adjustment Renal Impairment: CrCl < 30 mL/min: 1 mg/kg SQ daily
Contraindications	Active pathological bleeding, thrombocytopenia, history of heparin-induced thrombocytopenia, pork allergy
Major Side Effects	Hemorrhagic event, heparin-induced thrombocytopenia
Dosage forms and Strengths	SQ: solution for injection
Reversal	Discontinue enoxaparin. Anticoagulation effects should be minimized within 12 hours. Protamine, given as a slow IV infusion (1 % solution), may largely neutralize enoxaparin. • If enoxaparin was given within the past 8 hours, the dose of protamine should match the dose of enoxaparin given (1 mg protamine neutralizes 1 mg of enoxaparin). If the aPTT remains prolonged after 2-4 hours, a second infusion of 0.5 mg protamine per 1 mg of enoxaparin may be given. • If enoxaparin was given more than 8 hours ago, an infusion of protamine 0.5 mg for every 1 mg of enoxaparin may be given.
Conversion to/from other drugs	From enoxaparin to warfarin: • Initiate warfarin when appropriate (usually start on same day or within 72 hours of enoxaparin). • Continue enoxaparin until INR is within therapeutic range for at least 2 days.
Special Notes	Monitor for signs and symptoms of bleeding. Monitor hemoglobin, hematocrit, platelets, stool for occult blood. Consider monitoring anti-Xa activity (goal 0.3 to 0.7 IU/mL antifactor Xa activity) with severe renal dysfunction, weight < 45 kg, or obese patients. Discontinue all heparin products when heparin induced thrombocytopenia is suspected or diagnosed. Not adequately studied in patients with mechanical heart valves.
Counseling	Report signs and symptoms of bleeding (e.g., unexpected bleeding or bleeding that lasts a long time; red or black, tarry stool; pink or brown urine; unusual bruising; coughing up blood; vomiting blood or vomit that looks like coffee grounds; unexplained pain, swelling, or joint pain; unusual headaches, dizziness, or weakness; recurring nose bleeds)

* Refer to prescribing information for more complete information.

†Dosages given in the table may differ from those recommended by the manufacturers.

Sources:

1. American College of Cardiology (ACC), American Heart Association (AHA), and Heart Rhythm Society (HRS). *2011 ACCF/AHA/HRS Focused Update on the Management of Patients With Atrial Fibrillation (Update on Dabigatran)*. Washington, DC: American College of Cardiology Foundation. 2011.
2. Chest Supplement, Antithrombotic Therapy and Prevention of Thrombosis, 9th edition, American College of Chest Physicians.
3. Lovenox® prescribing information, 5/16/07.