

# Enoxaparin

## 20mg/0.2mL injection

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**Note:**

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

**This is a High Risk Medication** ⚠

An overdose can be rapidly fatal.

### Synonym

Low Molecular Weight Heparin (LMWH)

### Dose and Indications

1 mg is equivalent to 100 units

### Consult Haematology prior to use

#### For prophylaxis of thrombosis

**Subcutaneous**

0.75mg/kg per dose twice a day

#### For treatment of thrombosis

**Subcutaneous**

Initially 1.7 to 2mg/kg per dose twice a day

All treatment needs to be individualised based on anti-factor Xa levels. Seek advice from Haematology



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### Preparation and Administration

#### Subcutaneous

Draw 0.8mL of sodium chloride 0.9% into a 2mL syringe. Inject the contents of enoxaparin 20mg/0.2mL pre-filled syringe into the sodium chloride syringe to make a final volume of 1mL. The resulting solution contains 20mg/mL.

| Dose   | 1.5mg   | 2mg   | 3mg    | 4mg   | 5mg    |
|--------|---------|-------|--------|-------|--------|
| Volume | 0.075mL | 0.1mL | 0.15mL | 0.2mL | 0.25mL |

Discard remaining solution

Administration may be aided by using a small plastic indwelling subcutaneous catheter (Insuflon®).

#### Compatible Fluids

Glucose 5%, Sodium chloride 0.9%

#### Adverse Effects

##### Common

Bruising and pain at injection site, bleeding, thrombocytopenia, hyperkalaemia

##### Rare

Skin necrosis (at injection site), transient elevation of liver enzymes, osteoporosis (with long term use)

#### Monitoring

- > Anti-factor Xa levels - Treatment: range 0.5 -1 units/mL (see Table 1)
  - Prophylaxis: range 0.1-0.4 units/mL
- > Platelet count every 2-3 days
- > Potassium levels

Consult Haematology for further advice.



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**Dose adjustment for a given anti-factor Xa result in patients requiring therapeutic anticoagulation with LMWH.** It is assumed there is no bleeding.

| Anti-factor Xa level (units/mL) | Hold next dose                    | Dose adjustment | Next anti-Xa level measurement  |
|---------------------------------|-----------------------------------|-----------------|---|
| <0.35                           | No                                | Increase by 25% | 4 hours post next morning dose  |
| 0.35 – 0.49                     | No                                | Increase by 10% | 4 hours post next morning dose  |
| 0.5-1.0                         | No                                | No change       | Once a week, 4 hours post morning dose                                |
| 1.1-1.5                         | No                                | Decrease by 20% | 4 hours post next morning dose  |
| 1.6-2.0                         | 3 hours                           | Decrease by 30% | Trough level pre-dose, then 4 hours post next morning dose            |
| >2.0                            | Until anti-Xa level <0.5 units/mL | Decrease by 40% | Trough level pre-next dose and if not <0.5units/mL repeat twice a day |

### Practice Points

- > Preterm babies may need doses greater than 2mg/kg to achieve target level
- > It takes several days to attain the therapeutic anti factor-Xa levels. Consult haematology for further advice
- > Protamine is the agent used to reverse the effects of enoxaparin
- > Low molecular weight preparations of heparin offer many advantages over standard heparin. These include less bleeding, greater efficacy, longer half-life, less monitoring and more predictable dosage requirements
- > Reduce dose in severe renal impairment; alternatively, heparin can be used
- > CAUTION in bleeding diathesis, uncontrolled arterial hypertension and haemorrhage
- > Epidural haematoma has been reported in paediatric patients who underwent lumbar puncture while receiving enoxaparin. It is recommended that 2 doses of enoxaparin be held prior to lumbar puncture or any invasive surgical procedure. Contact on call haematologist if required.
- > DO NOT give INTRAMUSCULARLY
- > For outpatient use, discuss with pharmacy production units about the availability of manufactured diluted pre-filled enoxaparin syringes for home administration

### Reference

- > [Clexane Guidelines for Clinicians Low Molecular Weight Heparin, 2014, The Royal Children's Hospital Melbourne, Clinical Haematology](#)
- > Malowany JI, Monagle P, Knoppert DC et al, Enoxaparin for neonatal thrombosis: a call for a higher dose in neonates, Thrombosis research, 2008, 122:826-830
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- > Monagle P, Chan PKC, Goldenberg NA, Antithrombotic Therapy in Neonates and Children, Chest, 2012, 141, 2: 737S-801S



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### Document Ownership & History

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