# Drug Therapy Protocols: Enoxaparin

<table>
<thead>
<tr>
<th>Policy code</th>
<th>DTP_ENO_0119</th>
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<tbody>
<tr>
<td>Date</td>
<td>January, 2019</td>
</tr>
<tr>
<td>Purpose</td>
<td>To ensure a consistent procedural approach to enoxaparin administration.</td>
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<tr>
<td>Scope</td>
<td>Applies to all Queensland Ambulance Service (QAS) clinical staff.</td>
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<tr>
<td>Health care setting</td>
<td>Pre-hospital assessment and treatment.</td>
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<tr>
<td>Population</td>
<td>Applies to all ages unless specifically mentioned.</td>
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<tr>
<td>Source of funding</td>
<td>Internal – 100%</td>
</tr>
<tr>
<td>Author</td>
<td>Clinical Quality &amp; Patient Safety Unit, QAS</td>
</tr>
<tr>
<td>Review date</td>
<td>January, 2022</td>
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**Enoxaparin**

**Drug class**
Anticoagulant

**Pharmacology**
Enoxaparin has several actions on the coagulation pathway through its binding to antithrombin III. The antithrombotic activity is related to inhibition of thrombin generation and inhibition of two key coagulation factors: factor Xa and thrombin.[1,2]

**Metabolism**
Hepatic but mostly eliminated unchanged.[3]

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### Indications
- **Patients with STEMI** (as defined by the relevant QAS coronary artery reperfusion checklist) who will receive QAS tenecteplase (as an adjunct medication to aspirin and clopidogrel).[3]

### Contraindications
- Allergy and/or Adverse Drug Reaction
- Patients contraindicated for pre-hospital fibrinolysis administration

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### Precautions
- Renal/hepatic impairment
- Low bodyweight (women < 45 kg and men < 57 kg)
- Older people

### Side effects
- Haemorrhage
- Thrombocytopenia

### Presentation
- Injection (prefilled syringe with graduated markings), 60 mg/0.6 mL with enoxaparin sodium
- Injection (prefilled syringe with graduated markings), 100 mg/1 mL enoxaparin sodium

### Onset (IV) | Duration (IV) | Half-life
---|---|---
Immediate (peak 3 hours) | 12–24 hours | 4.4 hours for 40 mg dose
**Special notes**

- Ambulance officers must only administer medications for the listed indications and dosing range. Any consideration for treatment outside the listed scope of practice requires mandatory approval via the QAS Clinical Consult and Advice Line.

- For all IV administrations an enoxaparin 60 mg/0.6 mL graduated prefilled syringe must be used. The volume to be injected (30 mg/0.3 mL) should be measured precisely using the markings on the syringe. The air bubble is **NOT** to be administered with the medication.

- For all SUBCUT administrations an enoxaparin 100 mg/1 mL graduated pre-filled syringe must be used. The volume to be injected (1 mg/kg) should be measured precisely using the markings on the syringe. When adjusting to the correct dose, hold the syringe with the needle tip pointing down. Depress the plunger so the bottom of the air bubble is level with the marking on the syringe that corresponds to the dose required. The air bubble is required to be administered with the medication.

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**Schedule**

- **S4** (Restricted drugs).

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**Routes of administration**

- Subcutaneous injection (SUBCUT)
- Intravenous injection (IV)

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**Adult dosages**

- **Patients with STEMI** (as defined by the relevant QAS coronary artery reperfusion checklist) **who will receive QAS tenecteplase** (as an adjunct medication to aspirin and clopidogrel)

<table>
<thead>
<tr>
<th>Route</th>
<th>Loading dose – 30 mg</th>
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<tbody>
<tr>
<td>IV</td>
<td>To be administered 15 minutes prior to SUBCUT maintenance dose (listed below).</td>
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</table>

<table>
<thead>
<tr>
<th>Route</th>
<th>Maintenance dose – 1 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBCUT</td>
<td>Single dose only, not to exceed 100 mg. To be administered 15 minutes following IV enoxaparin loading dose (listed above).</td>
</tr>
</tbody>
</table>

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**Paediatric dosages**

- **Note**: QAS officers are **NOT** authorised to administer enoxaparin to paediatric patients.