**Drug Therapy Protocols: Noradrenaline (norepinephrine)**

**Disclaimer and copyright**
©2016 Queensland Government

All rights reserved. Without limiting the reservation of copyright, no person shall reproduce, store in a retrieval system or transmit in any form, or by any means, part or the whole of the Queensland Ambulance Service (‘QAS’) Clinical practice manual (‘CPM’) without the prior written permission of the Commissioner.

The QAS accepts no responsibility for any modification, redistribution or use of the CPM or any part thereof. The CPM is expressly intended for use by QAS paramedics when performing duties and delivering ambulance services for, and on behalf of, the QAS.

Under no circumstances will the QAS, its employees or agents, be liable for any loss, injury, claim, liability or damages of any kind resulting from the unauthorised use of, or reliance upon the CPM or its contents.

While effort has been made to contact all copyright owners this has not always been possible. The QAS would welcome notification from any copyright holder who has been omitted or incorrectly acknowledged.

All feedback and suggestions are welcome, please forward to:
Clinical.Guidelines@ambulance.qld.gov.au

<table>
<thead>
<tr>
<th>Date</th>
<th>April, 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>To ensure a consistent procedural approach to Noradrenaline (norepinephrine) administration.</td>
</tr>
<tr>
<td>Scope</td>
<td>Applies to all QAS clinical staff.</td>
</tr>
<tr>
<td>Author</td>
<td>Clinical Quality &amp; Patient Safety Unit, QAS</td>
</tr>
<tr>
<td>Review date</td>
<td>April, 2018</td>
</tr>
</tbody>
</table>

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view a copy of this license, visit http://creativecommons.org/licenses/by-nc-nd/4.0/.
**Noradrenaline (norepinephrine)**

**Drug class**
Sympathomimetic

**Pharmacology**
Noradrenaline is a vasopressor which acts predominantly on $\alpha$, and to a lesser extent $\beta$ adrenergic receptors thereby increasing vascular tone.[1–3]

**Metabolism**
Noradrenaline is primarily metabolised by monoamine oxidase at the synaptic level.[1]

---

**Indications**
- Shock unresponsive to adequate fluid resuscitation (excluding haemorrhagic causes)

**Contraindications**
- Nil

---

**Precautions**
- Hypertension
- Hypovolaemic shock
- Concurrent MAOI therapy

**Side effects**
- Reflex bradycardia
- Hypertension
- Extravasation necrosis

**Presentation**
- Variable (hospital presentations may vary)

**Onset (IV) | Duration (IV) | Half-life**
---|---|---
30 seconds | 5–10 minutes | 2 minutes
Special notes

- All noradrenaline (norepinephrine) infusions are to be initiated using hospital supplies; noradrenaline will not be supplied by QAS.
- Authorised officers should, where possible, administer noradrenaline (norepinephrine) infusions through an appropriately placed CVL.
- Authorised officers should, where possible, utilise invasive pressure monitoring for patients being administered noradrenaline (norepinephrine) infusions.
- Noradrenaline (norepinephrine) infusions must be administered through a dedicated line.

Schedule

- S4 (Restricted drugs).

Routes of administration

Intravenous infusion (IV INF)

Adult dosages

Shock unresponsive to adequate fluid resuscitation (excluding haemorrhagic causes)

<table>
<thead>
<tr>
<th>Route</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV INF</td>
<td></td>
</tr>
</tbody>
</table>

Commence infusion at 5 microg/minute (5 mL/hour) and increase by 1–2 microg/minute every 3–5 minutes as determined by MAP.

Syringe preparation: Mix 3 mg of noradrenaline (norepinephrine) with sodium chloride 0.9% to achieve a final concentration of 3 mg/50 mL (60 microg/mL). Ensure all syringes are appropriately labelled. Administer via syringe driver.

Paediatric dosages

Note: QAS officers are NOT authorised to administer noradrenaline (norepinephrine) to paediatric patients.