## Indications
- To provide analgesia and sedation post cardiac surgery.
- To control hypertension.
- As an adjunct in weaning patients who are withdrawing from opiates and/or benzodiazepines.

## Dose & Prescription
### Dose
- Clonidine can be given orally, intravenously, or by transdermal patch. This guideline only covers transdermal use – for information on clonidine dosing via other routes please refer to the Royal Children’s Hospital Pharmacopeia via Reference viewer.
- Transdermal patches are preferred as they release a controlled amount continuously for a week.
- Clonidine transdermal patches should only be initiated by PICU medical personal, anaesthetics or by the pain service.

## Dosing for Clonidine transdermal patches
[Note that there is no published data on transdermal dosing in infants and young children. The doses below are based on current practice which is extrapolated from IV and oral dosing.]

### For children under 8 Kg:
- Clonidine transdermal patches are not to be used outside of the PICU setting for patients less than 8kg. They can be used in PICU at the discretion of the PICU consultant.
- If used for patients < 8 kg the clonidine patch is to be removed at discharge from PICU and is not to be re-charted on the ward drug chart.

### For children greater than 8 Kg
- Maximum daily dose is between 15-18 mcg/kg/day
- Patients 8-20 kg use a TTS1 patch
- Patients >20kg use a TTS2 patch
- Can grade up after 1-2 weeks to the next dose size if required (this will be very unlikely in the ward situation)
## Transdermal Clonidine - paediatrics

For use in PICU and Ward 23B

<table>
<thead>
<tr>
<th>Prescription</th>
</tr>
</thead>
<tbody>
<tr>
<td>• To be charted on the ward <strong>medication chart</strong> with a date and time noted when applied in PICU.</td>
</tr>
<tr>
<td>• The ward medical staff will not initiate a clonidine patch in the ward setting.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Apply to dry hairless skin on the upper arm or chest. If replacing apply at a new site</td>
</tr>
<tr>
<td>• Be very careful not to damage the under side membrane during application.</td>
</tr>
<tr>
<td>• Patches are supplied with an optional extra adhesive backing. It is not necessary to apply this unless the patch begins to peel off during the week. However, care must be taken to ensure the active medicated side of the patch is applied, rather than the non-medicated backing adhesive.</td>
</tr>
<tr>
<td>• The patches all last for 7 days and come in 3 different doses - TTS1, TTS2, and TTS3</td>
</tr>
<tr>
<td>- TTS1 releases 100mcg/day clonidine</td>
</tr>
<tr>
<td>- TTS2 releases 200mcg/day clonidine</td>
</tr>
<tr>
<td>- TTS3 releases 300mcg/day clonidine</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Observation &amp; Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Document heart rate and blood pressure at least 4 hourly, or as specified by the prescriber</td>
</tr>
<tr>
<td>2. Document sedation level at least 4 hourly</td>
</tr>
<tr>
<td>3. Observe skin site daily for irritation</td>
</tr>
<tr>
<td>4. Monitor for adverse reactions</td>
</tr>
</tbody>
</table>

Service: Paediatric Cardiology  
Date last updated: September 2013  
To be reviewed: September 2014  
Author(s): Marion Hamer, David Buckley, Liz Oliphant  
Please note: The electronic version of these guidelines is the version currently in use. Any printed copy cannot be assumed to be current. www.adhb.govt.nz
### Contraindications & Precautions

#### Contraindications

1. Heart block or severe bradyarrhythmia
2. Hypotension (use with caution in combination with other antihypertensives)
3. Overly sedated patient

#### Precautions

1. Hypovolaemia – makes hypotension more likely
2. Bradycardia – can exacerbate this
3. Renal failure – avoid or reduce dose
4. Constipation – can exacerbate this

#### Drug interactions

1. The hypotensive effects of other antihypertensive medications (diuretics, vasodilators, beta-receptor blockers, calcium antagonists or ACE-inhibitors) may be potentiated by the addition of clonidine

2. Concomitant administration of other medications which can slow heart rate (e.g. beta blockers or digoxin) can cause or potentiate bradycardic rhythm disturbances.

For detailed information about this drug including clinical pharmacology, please see Medsafe data sheet for Clonidine in [Reference viewer](#).

### Possible adverse effects

- Excessive sedation
- Dry mouth/eyes

---

**Service:** Paediatric Cardiology  
**Date last updated:** September 2013  
**To be reviewed:** September 2014  
**Author(s):** Marion Hamer, David Buckley, Liz Oliphant  
Please note: The electronic version of these guidelines is the version currently in use.  
Any printed copy cannot be assumed to be current. [www.adhb.govt.nz](http://www.adhb.govt.nz)
Transdermal Clonidine - paediatrics

For use in PICU and Ward 23B

- Hypotension
- Rash / Itch
- Skin irritation at site of patch

This list is not exhaustive, for detailed information about this drug including side effects, please see Medsafe data sheet for Clonidine in Reference viewer

Special considerations

- Clonidine patches contain aluminium, and should be removed prior to MRI to prevent skin burns, or before defibrillation or cardioversion as the alteration in electrical conductivity may increase the risk of arcing.

- Handover between staff is important: discussion with medical staff needs to take place at both morning and evening handover and also between nursing staff at each shift change.

- In the event of excessive sedation, bradycardia, or hypotension remove the patch and notify medical staff.

References


