

Captopril

5mg/mL Oral mixture

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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.

Dose and Indications

Moderate to severe Hypertension

Reduce afterload in patients with congestive heart failure

Oral

0.01 to 0.05 mg/kg/dose every 8 to 12 hours

Dose can be increased progressively as necessary to a maximum of 2mg/kg per day.

To be used in consultation with a Nephrologist or Cardiologist.



Captopril

5mg/mL Oral Solution

Preparation and Administration

Oral

There are TWO steps to this process.

The oral mixture contains 5mg/mL of captopril.

STEP ONE: Dilute 1mL of captopril (5mg/mL) mixture with 4mL of water for injection to make 1mg/mL solution.

STEP TWO: Dilute 1mL of 1mg/mL solution with 9mL of water for injection to make a 0.1mg/mL solution.

Dose	0.01mg	0.02mg	0.05mg	0.1mg	0.2mg	0.5mg
Volume	0.1mL	0.2mL	0.5mL	1mL	2mL	5mL

Discard remaining solution.

Adverse Effects

Common

Hypotension, hyperkalaemia, renal impairment, cough

Infrequent

Seizures, renal failure (usually associated with chronic or high dose therapy), angioedema (early or delayed), rash, palpitations, diarrhoea or constipation, elevated hepatic aminotransferases, bilirubin

Rare

Hepatitis (cholestatic or hepatocellular), proteinuria, hyponatraemia, pancreatitis

Monitoring

- > Blood pressure
- > Periodic assessment of renal function and serum potassium
- > Liver markers



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Practice Points

- > Use with extreme caution in neonates as they may develop profound hypotension even with small doses; a test-dose should be used initially and increased cautiously.
- > There is a concern that the use of ACE inhibitors in neonates may impair renal maturation.
- > Contraindicated in neonates with renovascular disease. Loss of adequate renal perfusion could precipitate acute renal failure.
- > Contraindicated in hypertension due to coarctation of the aorta.
- > Hyperkalaemia occurs primarily in patients receiving potassium sparing diuretics or potassium supplements.
- > Extremely unpalatable – mix well with part of a feed. Administer the rest of the feed one hour later.
- > In the event where captopril solution is unavailable, captopril tablets may be dispersed in water. Suggested method is to dissolve a 12.5mg tablet in 12.5mL of water (this 1mg/mL solution is stable in the refrigerator for 24 hours). This resultant 1mg/mL solution can then be diluted as in step 2 of “preparation and administration”.

Reference

1. Dionne JM, Abitbol CL, Flynn JT. 2012. Hypertension in infancy: diagnosis, management and outcome. *Pediatr Nephrol.* 27:17-32



Document Ownership & History

Developed by:	SA Maternal, Neonatal & Gynaecology Community of Practice
Contact:	Health.NeoMed@sa.gov.au
Endorsed by:	SA Health Safety and Quality Strategic Governance Committee
Next review due:	24 August 2023
ISBN number:	978-1-76083-006-9
PDS reference:	CG207
Policy history:	<p>Is this a new policy (V1)? N</p> <p>Does this policy amend or update an existing policy? Y</p> <p>If so, which version? V1.1</p> <p>Does this policy replace another policy with a different title? N</p> <p>If so, which policy (title)?</p>

Approval Date	Version	Who approved New/Revised Version	Reason for Change
24/08/18	V2	SA Health Safety and Quality Strategic Governance Committee	Formally reviewed in line with 5 year scheduled timeline for review.
9/03/2018	V1.1	SA Health Safety and Quality Strategic Governance Committee	Review date extended to 5 years following risk assessment. New template
05/2015	V1	SA Health Safety and Quality Strategic Governance Committee	Original SA Health Safety and Quality Strategic Governance Committee approved version

