

Benzylpenicillin

600 mg & 1.2 g injection

© Department for Health and Wellbeing, Government of South Australia. All rights reserved.

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.

SA Health does not accept responsibility for the quality or accuracy of material on websites linked from this site and does not sponsor, approve or endorse materials on such links.

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

Synonyms

Penicillin, penicillin G

Dose and Indications

600 mg is equivalent to 1 million units

Infection Due To Susceptible Organisms

Empiric Treatment Of Group B Streptococcus

> Intravenous, Intramuscular:

- 60 mg/kg/dose

Corrected Gestational Age (weeks) [Gestational Age PLUS Postnatal Age]	Postnatal Age (days)	Frequency (hours)
< 30	≤ 28	Every 12 hours
	> 28	Every 8 hours
30 – 36	≤ 14	Every 12 hours
	> 14	Every 8 hours
37 – 44	≤ 7	Every 12 hours
	> 7	Every 8 hours



Benzylpenicillin

600 mg & 1.2 g injection

Meningitis

> Intravenous:

- 90 mg/kg/dose

Corrected Gestational Age (weeks) [Gestational Age PLUS Postnatal Age]	Postnatal Age (days)	Frequency (hours)
< 37	0–7	Every 12 hours
	>8	Every 8 hours
≥ 37	All	Every 8 hours

- Length of treatment should be guided by the Infectious Diseases team

Congenital Syphilis

> Intravenous:

- 30 mg/kg/dose

Note: If also treating for empirical sepsis, consider standard sepsis treatment doses as this will cover for congenital syphilis.

Note: IV benzylpenicillin is different to long-acting benzathine penicillin. Long acting benzathine penicillin should only be used for congenital syphilis in consultation with Infectious Diseases team

Postnatal Age (days)	Frequency (hours)
≤ 7	Every 12 hours
> 7	Every 8 hours

- Usual recommendation is for 10 day treatment, or as otherwise indicated by Infectious Disease team



Benzylpenicillin

600 mg & 1.2 g injection

Preparation and Administration

Intravenous

Preparation Table:

Vial Strength (mg)	Volume of Water for Injection to add (mL)	Final Concentration of benzylpenicillin (mg/mL)
600 mg	5.6 mL	100 mg/mL
1.2 g	11.2 mL	100 mg/mL

Benzylpenicillin 100 mg/mL intravenous:

Dose	30 mg	60 mg	90 mg	120 mg	150 mg	180 mg	210 mg	180 mg
Volume	0.3 mL	0.6 mL	0.9 mL	1.2 mL	1.5 mL	1.8 mL	2.1 mL	1.8 mL

- > Administer as slow push over 5 minutes for doses of 60 mg/kg.
- > Administer as an intravenous infusion over 30 minutes for doses of 90 mg/kg.
- > Discard remaining solution.

Intramuscular

Preparation Table:

Vial Strength (mg)	Volume of Water for Injection to add (mL)	Final Concentration of benzylpenicillin (mg/mL)
600 mg	1.6 mL	300 mg/mL
1.2 g	3.2 mL	300 mg/mL

Benzylpenicillin 300 mg/mL intramuscular:

Dose	30 mg	60 mg	90 mg	120 mg	150 mg	180 mg
Volume	0.1 mL	0.2 mL	0.3 mL	0.4 mL	0.5 mL	0.6 mL

- > Discard remaining solution

Compatible Fluids

Glucose 5%, sodium chloride 0.9%

Adverse Effects

Diarrhoea, vomiting, *Clostridium difficile*-associated disease, electrolyte disturbances, neurotoxicity (seizures), bleeding, blood dyscrasias

Jarisch-Herxheimer reaction can occur in neonates with congenital syphilis after treatment commencement.

Anaphylactic shock has not been observed in neonates



Benzylpenicillin

600 mg & 1.2 g injection

Practice Points

- > IV penicillins and cephalosporins can inactivate IV aminoglycoside antibiotics (eg. gentamicin). Flush the line well with sodium chloride 0.9%, before and after giving each medication.
- > Consider the sodium and potassium content of benzylpenicillin, particularly in patients with renal dysfunction. For example, the BenPen® brand contains approximately 0.28 mmol per 100 mg of benzylpenicillin
- > Significant CNS toxicity including seizures may occur with high doses and rapid infusions.

Suggested citation:

Neonatal Community of Practice. Benzylpenicillin NMG083 [Internet]. South Australian Neonatal Medication Guideline. SA Health, Government of South Australia. 2026 [updated 13/04/2026, version 4.0]. Available from: <http://www.sahealth.sa.gov.au/neonatal>.

OFFICE USE ONLY

Document Ownership & History

Developed by:	SA Maternal, Neonatal & Gynaecology Strategic Executive Leadership Committee
Contact:	Health.NeoMed@sa.gov.au
Approved by:	Clinical System Support and Improvement
Next review due:	13/04/2031
CGSQ number:	NMG083
Guideline history:	Is this a new Neonatal Medication Guideline (V1)? N Does this Neonatal Medication Guideline amend or update and existing Neonatal Medication Guideline? Y If so, which version? 3.0 Does this Neonatal Medication Guideline replace another Neonatal Medication Guideline with a different title? N If so, which Neonatal Medication Guideline (title)?

Approval Date	Version	Who approved New/Revised Version	Reason for Change
13/04/2026	V4	Domain Custodian, Clinical Governance, Safety and Quality	Formal review
02/03/2018	V3	SA Safety and Quality Strategic Governance Committee	Formally reviewed to include 1.2 g formulation
28/04/2017	V2	SA Safety and Quality Strategic Governance Committee	Formally reviewed in line with 1-5 year scheduled timeline for review
01/11/2012	V1	SA Maternal and Neonatal Clinical Network	Original SA Maternal and Neonatal Clinical Network approved version

