Preparation and Dosing of Long-acting Benzathine Benzylpenicillin BENZETACIL® Product

CAUTION: Seek medical advice before using either product in people with soya bean or peanut allergies.

This guideline has been prepared in collaboration with NT Health, Menzies School of Health Research
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There is a national shortage of Bicillin LA® premix syringes provided by Pfizer (600,000 Units per 1.17 mL and 1,200,000 Units per 2.3 mL benzathine benzylpenicillin G (BPG)).[1,2] Benzetacil® is an alternative long-acting BPG product from Laboratorio Reig Jofre in Spain supplied in Australia by Orspec Pharma®. The 1,200,000 IU product is available for use in Australia via the Special Access Scheme (SAS) pathway.

BENZETACIL® vial of powder for suspension

Each box of BENZETACIL® contains:

- 1 vial of benzathine benzylpenicillin G powder (1,200,000 units)
- 1 ampoule of Water for Injection (4 mL)

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PREPARATION OF THE BENZETACIL® POWDER FOR SUSPENSION[3-5]

4mL of Lidocaine 1% OR 4mL of water for injection should be used to dilute the powder.

- The Australian ARF-RHD provide guidance on the use lidocaine hydrochloride as a diluent does not change the concentration of benzathine benzylpenicillin G and may reduce the pain of injection.[3,4]
- Reconstitute the powder into a suspension with either 4 mL of Lidocaine 1% **OR** 4 mL of water for injection and carefully shake until a smooth suspension is obtained. After reconstitution, a milky white or almost white suspension is obtained. Note that the solution may appear off-yellow with the addition of lidocaine.[3,5]
- The final total volume is 4.8 mL, containing 1,200,000 units of benzathine benzylpenicillin.
- The product should be administered as a deep intramuscular injection immediately after reconstituting the suspension. The suspension for injection is intended for single use only. The injection should be administered slowly with gentle pressure.
- A total volume of 5 mL is the maximum that can be injected into a muscle in a single injection.
  - BENZETACIL® 1,200,000 units of powder for suspension reconstituted with 4 mL of diluent will give a total approximate volume of 4.8 mL and therefore can be injected into a single injection site (where clinically appropriate).
  - In general, administration using a 21 gauge needle is recommended.[3]

DO NOT INJECT INTO THE DELTOID MUSCLE AS PER ACCEPTED AUSTRALIAN PRACTICE

KEY MESSAGES ABOUT THE BENZETACIL® PRODUCT

Patient treatment contains the same medication and dose as the Pfizer Bicillin LA® premix syringe product.

The volume administered will be different than the Bicillin LA® product.

It does not need to be stored in the fridge (so does not need to be warmed prior to administration).

Patients with acute rheumatic fever and rheumatic heart disease still require injections every 21 to 28 days.

Patients receiving this product should be reassured about the following:

- it is safe for people of all ages.
- it is safe to use during pregnancy and breastfeeding.
- although this this product is not registered in Australia, it is registered in Spain and has been assessed by the World Health Organization (WHO) and used by United Nation (UN) agencies

Bicillin LA® and BENZETACIL® both contain soy lecithin. Seek medical advice before commencing, or continuing, treatment with either product in patients with a peanut or soy allergy.

For administration of any intramuscular injection, it is recommended that patients are monitored for immediate adverse reactions, for example, fever, rash, vomiting or shortness of breath.

For more information about managing intramuscular injection pain and distress visit
https://www.rhdaustralia.org.au/arf-rhd-guidelines

BENZETACIL® is from Spain. The following information is available in English:

- BENZETACIL® Product Information
- BENZETACIL® Consumer Information

REQUIREMENTS FOR USING A SPECIAL ACCESS SCHEME (SAS) BENZETACIL® PRODUCT

The SAS allows Australian medical practitioners to prescribe or supply therapeutic goods that are not included in the Australian Register of Therapeutic Goods (ARTG) to individual patients. It is a pathway for accessing unapproved goods, ensuring that patients receive the necessary treatment while adhering to regulatory guidelines. The Therapeutic Goods Administration manages the scheme and assesses applications on a case-by-case basis.

BENZETACIL® is not currently included on the ARTG and therefore only available via the SAS pathway. To comply with TGA requirements, patients should be informed of the brand, and have documented consent to treatment. A separate SAS form is to be submitted for ***each patient*** receiving BENZETACIL® brand benzathine benzylepenicillin. For patients on long-term treatment, The SAS Category A notification will remain valid as long as the patient continues to meet the Category A definition.

As this product is not registered for use in Australia, the health practitioner is required to obtain informed consent from the patient or the patient's legal guardian prior to providing any treatment. Consent must be freely given by a person on the basis of information concerning the potential risks and benefits of the treatment that is sufficient information to allow the person to make an informed decision whether to consent to the treatment. This should include detail on benefits, risks (including that unknown risks and side effects are possible) and alternative treatment options available. A person can give consent expressly (in writing or verbally) or it can be implied. It is expected professional practice to have informed consent documented in writing by way of a signed consent form, or notes in the healthcare record.[6]

BENZETACIL® can be submitted via a Category A form as they are considered *patients who are seriously ill and where death or premature death is reasonably likely without early treatment.* Category A is a notification pathway, meaning the prescriber (or delegate) notifies the TGA of their intention to use or use of the unapproved good. Stock can be utilised prior to an SAS form submission if clinically required but a form must be submitted with 28 days of supply to a health service.[7]

Submission of SAS forms can be completed via the SAS Online Portal.

For more information regarding unapproved products for individual patients (Special Access Scheme) visit Unapproved products for individual patients (Special Access Scheme) | Therapeutic Goods Administration (TGA).

For more information regarding the SAS Online System Information (including registration for the SAS online portal) visit SAS and AP Online System Information | Therapeutic Goods Administration (TGA).

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DOSING AND FREQUENCY – BENZETACIL® PRODUCT

RECOMMENDED DOSING AND FREQUENCY FOR THE FOLLOWING CONDITIONS HAVE NOT CHANGED.

Dilute with 4mL of 1% Lidocaine **OR** 4 mL of water for injection

INDICATION	DOSE REQUIRED	VOLUME REQUIRED	FREQUENCY
PRIMARY PREVENTION OF ACUTE RHEUMATIC FEVER[4](treatment of skin sores and sore throat in high-risk people)			
Child: Less than 10kg	450,000 units	Administer **1.8mL** of the total reconstituted volume	Once
10kg to less than 20kg	600,000 units	Administer **2.4mL** of the total reconstituted volume	
20kg or more	1,200,000 units	Administer the **total** reconstituted volume **(4.8mL)**	
Adult: 20kg or more	1,200,000 units	Administer the **total** reconstituted volume **(4.8mL)**	
NOTE: The Australian ARF-RHD Guideline (2025) recommends that oral penicillin can be used to treat sore throat and skin sores in high risk individuals during interruptions to benzathine benzylpenicillin supply, but other oral options are also available[8] (see Chapter 5. Primary prevention for primary prevention oral dosing guidelines page 54-55)[4]			
SECONDARY PREVENTION OF ACUTE RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE[4]			
All people: Less than 20 kg	600,000 units	Administer **2.4mL** of the total reconstituted volume.	Every 21 to 28 days
20kg or more	1,200,000 units	Administer the **total** reconstituted volume **(4.8mL)**	
TREATMENT FOR SYPHILIS (Adults)[5,6]			
Infectious phase If known to be less than 2 years (adult)	2,400,000 units	Administer **two** reconstituted vials across two injection sites (Administer the **total** reconstituted volume of each vial)	Once
Latent or unknown phase If unknown duration or known to be more than 2 years (adult)	2,400,000 units	Administer **two** reconstituted vials across two injection sites (Administer the **total** reconstituted volume of each vial)	Once a week for 3 weeks
TREATMENT FOR SYPHILIS (Only for low risk/asymptomatic neonates, as per State/Territory guidelines) NOTE: For babies born with congenital syphilis (who require intravenous benzyl penicillin) and for older babies, consult a specialist in Paediatrics or Infectious Diseases.			
All neonates	50,000 units/kg	Administration volume must be calculated based on weight of child and the total reconstituted volume measured.	Once

INTRAMUSULAR INJECTIONS SHOULD BE ADMINISTERED IN LINE WITH LOCAL INJECTION PROCEDURES AND PROTOCOLS

For more information about managing intramuscular injection pain and distress visit
https://www.rhdaustralia.org.au/arf-rhd-guidelines

REFERENCES

1. Therapeutic Goods Administration. About the shortage of Bicillin L-A (benzathine benzylpenicillin tetrahydrate) prefilled syringe for injection (Updated 25 July 2025).
2. Fact Sheet: Benzathine benzylpenicillin (Bicillin L-A) disruption to supply – April 2024. Australian Commission on Safety and Quality in Health Care.
3. Amir et al. Lidocaine as a diluent for administration of benzathine penicillin G. The Pediatric Infectious Disease Journal. 1998;17(10): 890-893.
4. Menzies School of Health Research (ARF/RHD writing group). Australian guideline for the prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease (Edition 3.3) 2025
5. World Health Organization. (2023). *WHOPAR: RH103 Part 4 v.1* – Annex I Summary of Product Characteristics. WHO Prequalification Team: Medicines Accessed 6 Aug. 2025.
6. Australian Commission on Safety and Quality in Health Care (2020). Fact sheet: Informed consent in health care – NSQHS Standard 8.9a (SQ20-030), Accessed: 6 August 2025.
7. Therapeutic Goods Administration (2025) Unapproved products for individual patients (Special Access Scheme), Accessed: 6 August 2025.
8. Remote Primary Health Care Manuals. (2022). CARPA Standard Treatment Manual (8th edition). Alice Springs, NT: Flinders University
9. Queensland Health, Royal Flying Doctor Service (Queensland Section). Primary Clinical Care Manual. 11th ed. Cairns (AU): Office of Rural and Remote Health, Queensland Government; 2022.