

Fact sheet

Benzathine benzylpenicillin is not 'BenPen'

Situation

Recent incidents highlight the ongoing need for awareness regarding the differences between **benzathine benzylpenicillin** and **benzylpenicillin**.

Background

Benzathine benzylpenicillin and benzylpenicillin are not therapeutically interchangeable (see [Table 1](#) which highlights important differences).

Benzathine benzylpenicillin

A long-acting antibiotic formulation that is typically used for treatment of uncomplicated syphilis; and prevention of rheumatic heart disease.

Benzylpenicillin

A short-acting antibiotic that should not be used in a therapeutically equivalent manner to benzathine benzylpenicillin.

When used at the same dosing schedule as benzathine benzylpenicillin (i.e. stat or weekly doses) it will not treat or prevent further transmission of syphilis.

It does not prevent vertical transmission of syphilis in pregnancy.

Benzyllpenicillin is used to treat a baby with congenital syphilis (refer to [Neonatal medicine: Benzylpenicillin \(health.qld.gov.au\)](#) and [Guideline: Syphilis in pregnancy \(health.qld.gov.au\)](#)).

Assessment

There are several factors that may increase the risk of medicine errors when prescribing, supplying, and administering benzathine benzylpenicillin:

- Similarity of the names benzathine benzylpenicillin, benzylpenicillin and the trade name 'BenPen' (benzylpenicillin) may lead to confusion.
- Penicillin G is a synonym for benzylpenicillin that has been used historically further complicating correct product selection.


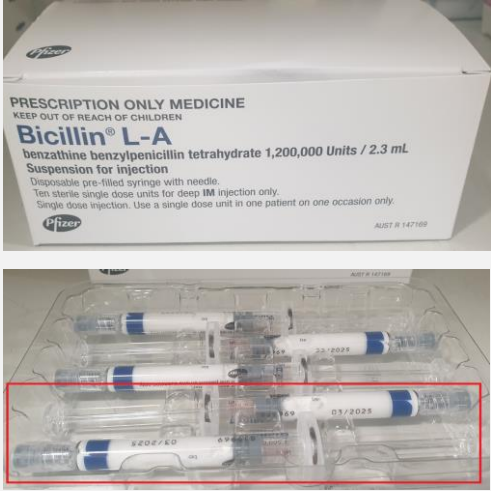
- Benzathine benzylpenicillin underwent a change in representation of strength in 2019 for Therapeutic Goods Administration (TGA) labelling purposes and is now expressed in units rather than weight.
- Limited availability of certain strengths of Australian Registered Products as well as a potential lack of local inventory holdings may result in the substitution of an inappropriate product.
- Due to a worldwide disruption to benzathine benzylpenicillin supplies, the importation and supply of an alternative product has been approved under Section 19A of the *Therapeutic Goods Act 1989* - see [About the shortage of Bicillin L-A \(benzathine benzylpenicillin tetrahydrate\) prefilled syringe for injection | Therapeutic Goods Administration \(TGA\)](#). With the introduction of the S19A product, the risk of medicine errors increases further.
- Important safety considerations regarding the S19A benzathine benzylpenicillin product are outlined by the Australian Commission on Safety and Quality in Health Care in the [Fact Sheet: Benzathine benzylpenicillin \(Bicillin L-A\) disruption to supply – Dec 2023 \(safetyandquality.gov.au\)](#).
- Detailed clinical information on preparation and dosing for the S19A product is available at [S19A benzathine benzylpenicillin - Clinical guide for use | Rheumatic Heart Disease Australia \(rhdaustralia.org.au\)](#) and in the Australian Injectable Drugs Handbook.
- As there are differences in the excipients between the S19A product and the Australian registered products, clinicians are reminded to review for potential allergies.
Note: both benzathine benzylpenicillin products contain soy lecithin.
- Additionally, injectable medicines with long dosing intervals such as benzathine benzylpenicillin present a challenge for documenting and scheduling of appropriate follow up. Similar issues are apparent with long-acting antipsychotics.

Points for consideration by medical centres

1. Table this fact sheet at clinical meetings and distribute to all clinicians and clinical areas where benzathine benzylpenicillin is used, stored, or distributed.
2. Review stock holdings and audit storage conditions of both benzathine benzylpenicillin and benzylpenicillin.
3. At storage locations, apply signposting and provide information regarding the differences between benzathine benzylpenicillin and benzylpenicillin.
4. Support a culture where clinicians refer to these products by their approved full active ingredient generic names and avoid using the term 'BenPen' and are aware of differences in unit of measure.
5. Inform relevant clinicians that the Queensland Syphilis Surveillance Service can be contacted (phone: 1800 032 238) for information regarding a patient's previous testing and treatment of syphilis.

Table 1: Differences between Australian registered Benzylpenicillin and Benzathine benzylpenicillin products

	Benzylpenicillin	Benzathine benzylpenicillin*
Also known as	Penicillin G	Benzathine penicillin, Benzathine penicillin G
Trade name	BenPen	Bicillin L-A
Typical dosing	<p>Prescribed in grams.</p> <p>Adult: 1.2 to 2.4 grams IV every 4 to 6 hours.</p> <p>Paediatric: refer to Children's Health Queensland Paediatric Antibocard: Empirical Antibiotic Guidelines.</p> <p>Neonate/Infant: refer to Neonatal medicine: Benzylpenicillin (health.qld.gov.au) or ANMF consensus group guidelines (anmfonline.org).</p>	<p>Prescribed in units.</p> <p><u>Rheumatic fever prevention</u></p> <p>Adult: 1,200,000 units IM every 3 to 4 weeks.</p> <p>Paediatric: refer to ARF RHD Guidelines 3rd Edition (rhdaustralia.org.au).</p> <p><u>Syphilis</u></p> <p>Late latent or unknown duration: 2,400,000 units IM once each week for 3 weeks.</p> <p>Infectious (known acquired in past 2 years e.g. primary, secondary early latent): 2,400,000 units IM as a single dose.</p> <p>Paediatric: refer to Australasian Society for Infectious Diseases (ASID) Management of Perinatal infections (3rd edition) guidelines and contact a paediatric infectious diseases specialist for advice.</p> <p>Neonate/Infant: 50,000 units/kg IM as a single dose.</p>
Storage	Shelf	Fridge

	Benzylpenicillin	Benzathine benzylpenicillin*
Product presentation	 <p>Also comes in 600 mg</p>	 <p>2 syringes needed to give typical 2,400,000-unit dose for syphilis</p>
Allergy considerations	<p>Belongs to class of medicines known as “penicillins”</p>	<p>Belongs to class of medicines known as “penicillins”</p> <p>AND</p> <p>The presence of excipients such as soy lecithin should be considered, especially for consumers with a soy or peanut allergy.</p>
Example indications	<p>Complicated syphilis (e.g. evidence of neurosyphilis early or late, or clinical presentations associated with tertiary syphilis).</p> <p>Congenital syphilis.</p> <p>Bacterial endocarditis.</p> <p>Meningitis.</p> <p>Aspiration pneumonia, lung abscess.</p> <p>Community acquired pneumonia.</p> <p>Septicaemia in children.</p>	<p>Rheumatic fever treatment and prevention.</p> <p><i>S. pyogenes</i> tonsillitis, pharyngitis or impetigo.</p> <p>Infections susceptible to prolonged concentrations of benzylpenicillin (e.g. early or late syphilis).</p> <p>Congenital syphilis risk for neonate or infant when there is concern of the likelihood for serological follow up.</p>

*Note: refer also to the important safety considerations regarding the S19A benzathine benzylpenicillin product outlined by the Australian Commission on Safety and Quality in Health Care in the [Fact Sheet: Benzathine benzylpenicillin \(Bicillin L-A\) disruption to supply – Dec 2023 \(safetyandquality.gov.au\)](https://www.safetyandquality.gov.au/fact-sheet/benzathine-benzylpenicillin-bicillin-l-a-disruption-to-supply-dec-2023).

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