

Lentocilin® (benzathine benzylpenicillin) for syphilis treatment in adults

Background

- Due to a critical shortage of penicillin G benzathine (Bicillin® L-A), Health Canada has permitted the temporary importation of Lentocilin® S 1200.¹
- Lentocilin® has the same active ingredient, strength and route of administration as Bicillin® L-A, but has a **different formulation, dosage form, reconstitution requirement and presentation.**¹⁻³
- Refer to the drug monographs and product summary for more details.¹⁻⁴

Contraindications

- Lentocilin® contains soy phospholipids and may cause hypersensitivity reactions in patients with a history of **allergy to soybeans**. It's contraindicated in patients with previous hypersensitivity reactions to **penicillins, cephalosporins and other beta-lactam antibiotics.**^{1,3}
- Lidocaine is contraindicated in patients with **hypersensitivity to lidocaine** or its inactive ingredients; hypersensitivity to other amide-type local anesthetics (i.e., BUPivacaine, ROPivacaine).⁴

Reconstituting Lentocilin®

1. **Reconstitute immediately prior to administration.**
2. Draw up 4 mL of lidocaine into syringe as per medication administration standards.
3. Disinfect the rubber stopper of the Lentocilin® vial and insert the needle through the center.
4. Inject the lidocaine towards the side of the vial and not directly into the powder.
5. Rotate the vial between hands for 20 seconds to homogenize the medication, then transfer immediately to the syringe. Label the syringe.
6. Repeat above steps with the second prepackaged box to prepare the second syringe.
7. Proceed with **standard bilateral VG IM administration**, using a hypodermic needle with a **minimum internal diameter of 0.8 mm** (caliber: 18 gauge).

Notes

1. Government of Canada [Internet]. Importation of Portuguese-authorized Lentocilin S 1200 1 200 000 / 4 mL, due to the current shortage of Canadian-authorized Bicillin L-A 1 200 000 IU / 2 mL; 2026 Feb 18 [cited 2026 Feb 25]. Available from: [Importation of Portuguese-authorized Lentocilin S](#)
2. Pfizer Canada. Bicillin L-A (penicillin G benzathine) [Product Monograph]. Canada: Pfizer Canada ULC; 2024.
3. Septa Pharmaceuticals. Lentocilin: Summary of Product Characteristics. Portugal: Septa Pharmaceuticals; 2024.
4. Alberta Health Services [Internet]. AHS Provincial Parenteral Manual: Lidocaine for local use (version 3); 2022 Nov 7 [cited 2026 Feb 26]. Available from: [lidocaine for local use](#)
5. Lippincott Solutions [Internet]. Mixing drugs in a syringe using a multidose vial and ampule; 2025 Sept 14 [cited 2026 Feb 25]. Available from: [Lippincott@ Solutions](#)
6. Lippincott Solutions [Internet]. Intramuscular injection, ambulatory care; 2025 May 18 [cited 2026 Feb 25]. Available from: [Lippincott@ Solutions](#)

About Lentocilin®

- Lentocilin® is supplied as a prepackaged box consisting of a vial containing 1.2 million units (mu) of benzathine benzylpenicillin as a white powder and a glass ampule containing lidocaine hydrochloride 1.5% for reconstitution.¹
- **Storage:** Lentocilin® should be stored at room temperature in its original package to protect from light and moisture.¹

Administration of Lentocilin®

- **The final volume of reconstituted Lentocilin® is ~4 mL per syringe.**
- A complete dose of 2.4 mu/8mL requires **2 syringes**, each containing 1.2 mu/4 mL of Lentocilin® administered into **each ventrogluteal (VG) site by deep intramuscular (IM) administration.**



Additional resources:

Syphilis outbreak information for health professionals



Administration of Lentocilin® at ventrogluteal (VG) sites for adults

Caution: Only inject into the VG site.

- Injection into smaller muscles increases the risk of an abscess.
- Injection near nerves may cause permanent nerve damage and is considerably more painful. This may potentially lead to refusal of the second injection or subsequent treatment.
- Use a minimum 18-gauge hypodermic needle for administration. Do not use a blunt filter needle for the injection.
- If the needle clogs, replace it with a new needle.

A complete dose of 2.4 million units IM requires 2 syringes, each containing 4 mL of Lentocilin®.

FIGURE 1

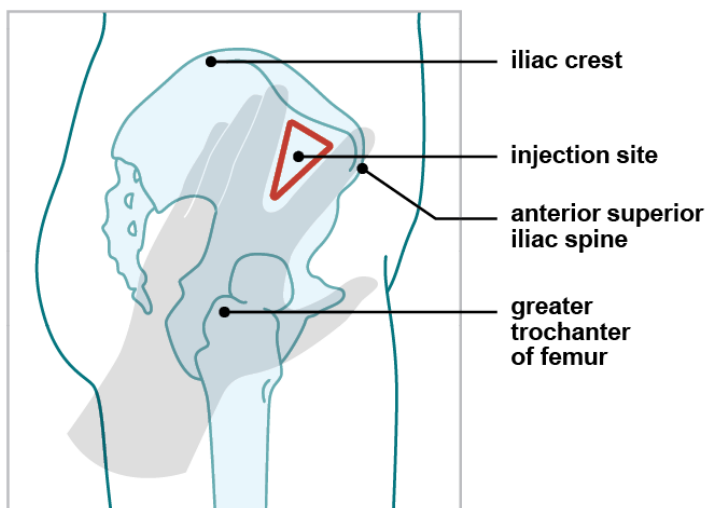
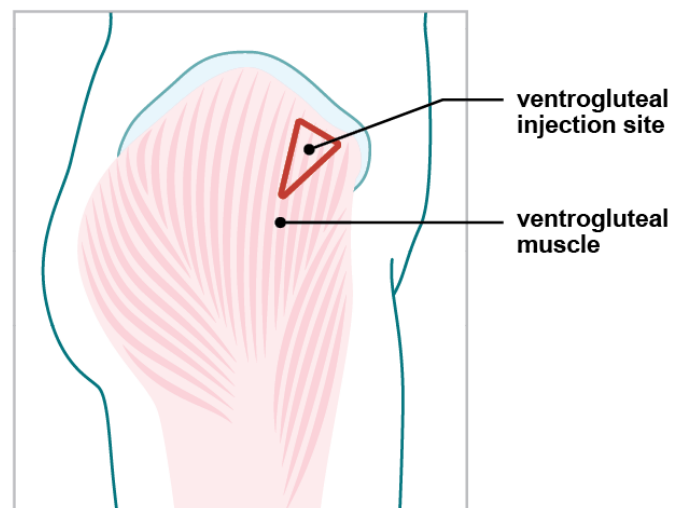


FIGURE 2



1. Follow above steps to reconstitute the Lentocilin®.

2. **Position the patient either:**

- a. **Lateral (side-lying)** with the upper leg flexed and slightly in front of the lower leg.
- b. **Prone (face down)** allows you to administer the second injection without the patient having to change positions and decreases discomfort for the patient by not having to rest on a new injection site. If a second provider is available, both injections may be given at the same time. This muscle is on the **side** of the patient's hip area.

3. **Place the heel of your hand over the greater trochanter of the femur** (Figure 1). Use the hand that positions your thumb in alignment with the patient's anterior (front) aspect, (e.g., your left hand on the patient's right hip).

4. **Palpate the anterior superior iliac spine** with your index finger, then move your middle finger across the **iliac crest** to form a "V" (Figure 1). The center of the formed triangle or "V" is the **VG site**.
5. **Clean the injection site** in outward concentric circles. Leave the alcohol swab on the skin with the corner pointing to the area where the injection will be given.
6. **Move the hand** that made the "V" before injecting and pull the skin taut, in one direction (**Z-track method**).
7. **Insert the needle at a right angle** to the skin (90°) and inject medication **slowly and steadily to avoid clogging** (about 1 mL per 10 seconds to allow the muscle to accommodate the fluid).
8. Withdraw the needle slowly at a 90° angle. Release the skin to trap the medication in the muscle.
9. **Repeat on the other side** with the second syringe.