

# Nebulised (inhaled) Gentamicin

## What is Nebulised Gentamicin

It is an antibiotic given via a nebuliser so you can inhale it into your lungs.

It is used to treat lung infections caused by certain types of bacteria (e.g. Pseudomonas etc). These bacteria can damage the lungs if left uncontrolled.

Gentamicin works by killing the bacteria causing the infection. It is not well-absorbed by the body if it is taken by mouth, so instead it is given by injection or breathed into the lungs (inhaled).

Gentamicin, if prescribed, should be used twice a day (10 to 12 hours apart) every day for a few months as determined by your doctors. After a period, your doctor will review if it needs to be continued.

**Do NOT stop Gentamicin without your doctor's instruction.**

## Preparing Gentamicin ampoule (80 mg/2mL, PRESERVATIVE-FREE solution) for Nebulisation

### Equipment needed

- Gentamicin ampoule (80 mg/2mL, **preservative-free** solution)
- Sodium chloride 0.9% (saline) 20mL for injection (plastic ampoule)
- 3mL syringe for injection (BD®/Terumo® brand) and gauze
- Nebulizing equipment

### Steps on preparing the Gentamicin for Nebulisation

1) Wash your hands with soap and water, and dry thoroughly.

2) Hold the ampoule upright and gently tap or swirl the ampoule until all the solution is at the bottom.

3) Cover the top of the ampoule with a gauze before holding the top using the thumb and first (index) finger of one hand. Hold the bottom part of the ampoule with your other hand.

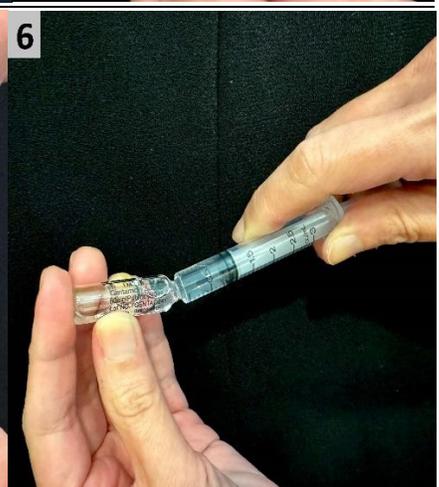
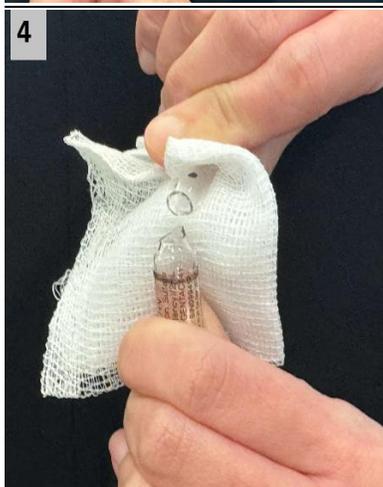
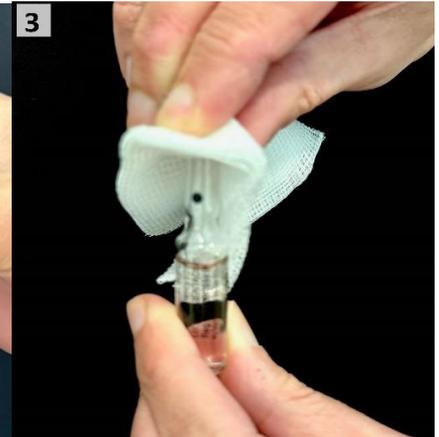
4) Push the neck of the ampoule away from you firmly, to snap the top off.

5) Inspect the solution in the opened ampoule for any particles or glass pieces.

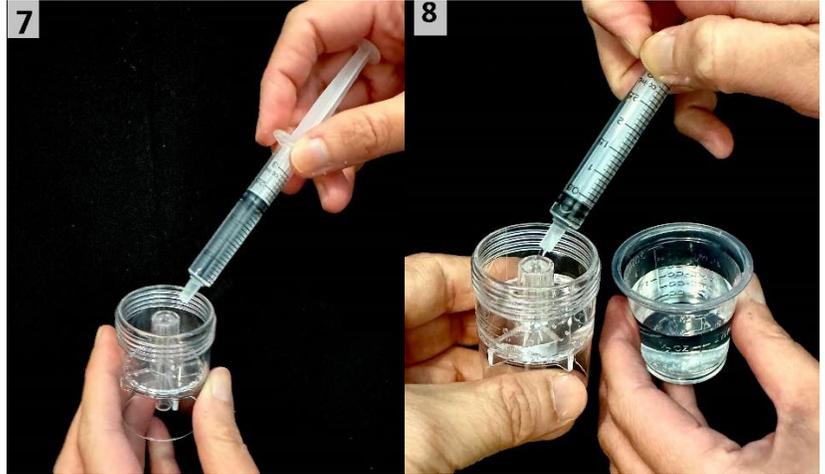
6) Using the 3mL plastic syringe, draw out the required volume from the ampoule, taking care not to syringe out any particles or glass pieces.

Concentration of Gentamicin = 40 mg/mL.

**Volume to be syringe out: \_\_\_\_\_ mL**



- 7) Transfer the volume from the syringe into the nebulizing cup. Discard the glass ampoule.
- 8) Top up the nebulizing cup to a total of 4mL with Sodium chloride 0.9% solution.
- 9) Attach the nebulizing cup to the nebulizer and switch on the nebulizer.



### **Cleaning of the nebulizing cup**

- 1) Immediately after use, rinse the cup with remaining Sodium chloride 0.9% (saline) and pour away the solution.
- 2) Add a few drops of Sodium chloride 0.9% (saline) into the cup and switch on the nebulizer to let it run to dry the cup.
- 3) Refer to the nebulizer manual or “General Information On Nebuliser Cleaning” for instructions on the cleaning and sterilization of nebuliser parts.

### **Side effects**

Like many medications, nebulised (inhaled) gentamicin can cause some side effects, but these are rare because very little of the drug is absorbed into the bloodstream.

Occasionally, nebulized gentamicin can cause your chest to feel tight/wheezy or you may become breathless and cough. If this occurs, you may use Salbutamol via nebuliser/inhaler 15 minutes prior to Gentamicin nebulisation. If symptoms continue, you may have to stop using Gentamicin and inform your doctor.

You may experience a sore mouth/ throat after using your nebuliser - rinsing your mouth and gargling after use may help.

**If you experience an allergic reaction, such as a skin rash or severe breathlessness, stop taking your Gentamicin and inform your doctor.** Rarely, your kidneys or hearing could be affected.

### **References:**

- NHS Foundation Trust The Newcastle upon Tyne Hospital. Nebulised (inhaled) Gentamicin: Information for Patients reviewed September 2024