PACKAGE LEAFLET

Package leaflet: Information for the user

Colistimethate sodium 1 million IU Powder for nebuliser solution
Colistimethate sodium 2 million IU Powder for nebuliser solution

Colistimethate sodium

Read all of this leaflet carefully before you start using this medicine because it contains important information for you.
- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or pharmacist.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What Colistimethate sodium is and what it is used for

This medicine contains the active substance colistimethate sodium. Colistimethate sodium is an antibiotic. It belongs to a group of antibiotics that are called polymyxins.

This medicine is given as an inhalation to treat chronic chest infections in patients with cystic fibrosis. Colistimethate sodium is used when these infections are caused by specific bacteria called *Pseudomonas aeruginosa*.

2. What you need to know before you use Colistimethate sodium

Do not use Colistimethate sodium
- If you are allergic to colistimethate sodium, colistin or to other polymyxins**.**

Warnings and precautions
Talk to your doctor, pharmacist or nurse before using Colistimethate sodium if:
- you have or have had kidney problems
- you suffer from myasthenia gravis (disease characterized by muscle weakness)
- you suffer from porphyria
- you suffer from asthma

Some people may experience a feeling of tightness in the chest due to narrowing of the airways when inhaling Colistimethate sodium. Your doctor may prescribe other medicines for inhalation directly before or after using Colistimethate sodium in order to prevent or treat this.

Children
In premature and new-born babies, special care should be taken when using Colistimethate sodium as their kidneys are not yet fully developed.

Other medicines and Colistimethate sodium
Tell your doctor if you are taking, have recently taken or might take any other medicines.

If you are taking any of the following medicines, you may or may not be able to take Colistimethate sodium. Sometimes the other medicines must be stopped (if only for a while) or you may need a lower dose of Colistimethate sodium or you may need to be monitored while you are taking this medicine. In some cases, the level of Colistimethate sodium in your blood may have to be measured from time to time to make sure that you are having the right dose.

- Medicines like antibiotics called aminoglycosides (which include gentamicin, tobramycin, amikacin and netilmicin) and cephalosporins which can affect how your kidneys function. Taking such medicines at the same time as Colistimethate sodium can increase the risk of damage to the kidneys (see section 4 of this leaflet).
- Medicines like antibiotics called aminoglycosides (which include gentamicin, tobramycin, amikacin and netilmicin) which can affect your nervous system. Taking such medicines at the same time as Colistimethate sodium can increase the risk of side effects in the ears and other parts of your nervous system (see section 4 of this leaflet).
- Medicines called muscle relaxants, often used during general anaesthesia. Colistimethate sodium can increase the effects of these medicines. If you have a general anaesthetic, let your anaesthetist know that you are having Colistimethate sodium.

If you suffer from myasthenia gravis (muscle weakness) and are also taking other antibiotics called macrolides (such as azithromycin, clarithromycin or erythromycin) or antibiotics called fluoroquinolones (such as ofloxacin, norfloxacin and ciprofloxacin), taking Colistimethate sodium further increases the risk of muscle weakness and breathing difficulties.

Having Colistimethate sodium as an infusion at the same time as receiving Colistimethate sodium as an inhalation can increase your risk of side effects.

Pregnancy, breast-feeding and fertility
If you are pregnant or breastfeeding, think you may be pregnant or are planning to have a baby, ask your doctor for advice before taking this medicine.
Small amounts of Colistimethate sodium pass into breast milk, hence, breast-feeding is not recommended. If you cannot stop breast-feeding while you take Colistimethate sodium, you should watch your baby carefully for any signs of illness and tell your doctor if you notice anything wrong.
Data on the possible impact of Colistimethate sodium on human fertility are not available.

Driving and using machines
Colistimethate sodium may make you feel dizzy, confused or have problems with your sight, such as blurred vision. If this happens to you, do not drive or use any tools or machines.

Colistimethate sodium contains sodium
This medicine contains less than 1 mmol sodium (23 mg) per vial, that is to say essentially 'sodium-free'.

3. How to use Colistimethate sodium

Always use this medicine exactly as your doctor or pharmacist has told you. Check with your doctor or pharmacist if you are not sure.

Colistimethate sodium is breathed into the lungs as a fine spray made using a machine called a nebuliser. The droplets of the spray produced by the nebuliser are small enough to enter the lungs so that Colistimethate sodium can reach the site of the bacterial infection.

The usual dose for adults, adolescents and children aged 2 years or older is 1-2 million units two to three times per day (maximum 6 million units per day).

The usual dose for children less than 2 years old is 0.5-1 million units twice daily (maximum 2 million units per day).
Your doctor may decide to adjust the dose depending on your circumstances. If you also take other inhaled medicines, your doctor will tell you which order to taken them in.

Method of administration
Inhalation use.
If you are treating yourself at home, your doctor or nurse will show you how to use Colistimethate sodium in your nebuliser when you first start the treatment. You should sit upright and breathe normally during inhalation. The following are general instructions.

Preparation for inhalation treatment
Before Colistimethate sodium can be used it must be dissolved in **isotonic saline solution** (salt water).

To start your treatment, you will need the following:
- One clear-glass vial of Colistimethate sodium 1 million IU
- The solvent for dissolving the powder (3 ml of isotonic saline solution)
- A nebuliser appropriate for the inhalation of Colistimethate sodium 1 million IU (such as PARI LC PLUS, PARI LC SPRINT, or eFlow rapid)

To start your treatment, you will need the following:
- One clear-glass vial of Colistimethate sodium 2 million IU
- The solvent for dissolving the powder (4 ml of isotonic saline solution)
- A nebuliser appropriate for the inhalation of Colistimethate sodium 2 million IU (such as PARI LC PLUS, PARI LC SPRINT, or eFlow rapid)

It is important that your nebuliser system functions properly before starting your treatment with Colistimethate sodium. Read carefully the instructions for use of the nebuliser for further information on handling the nebuliser system.
Place the components of your nebuliser on a clean flat surface and follow the manufacturer's instructions for use.

Preparing your Colistimethate sodium for inhalation
Colistimethate sodium must be used immediately after dissolution. Do not dissolve Colistimethate sodium until ready to administer a dose (see also section 5).

Step 1: Take one vial of Colistimethate sodium and gently tap the glass vial so that the powder settles to the bottom. This helps ensure you get the proper dose of medication.
Step 2: Colistimethate sodium 1 million IU: Add the solvent **(3 ml of isotonic saline solution)** to the corresponding vial to dissolve the powder.
Colistimethate sodium 2 million IU: Add the solvent **(4 ml of isotonic saline solution)** to the corresponding vial to dissolve the powder.

In order to avoid foaming, shake the vial gently until all powder is dissolved. Pour the solution into the nebuliser. Do not use Colistimethate sodium if you notice visible particles in the solution after dissolution.
Once prepared Colistimethate sodium should be used immediately. Any unused solution should be disposed of.

Using your Colistimethate sodium
Colistimethate sodium is for inhalation use with an appropriate nebuliser (such as. PARI LC PLUS, PARI LC SPRINT or eFlow rapid). For more detailed information on correct use of the selected nebuliser follow the instruction manual of the nebuliser. Inhalation should take place in a well ventilated room.

After inhalation of Colistimethate sodium
Please refer to the manufacturer's instructions for use of the nebuliser for cleaning and disinfecting instructions.

IMPORTANT: Do not mix Colistimethate sodium with any other product for nebulisation at the same time.

Duration of treatment
For nebulised use your doctor will advise on the course of the treatment.

If you use more Colistimethate sodium than you should
If you think that you have given yourself too much Colistimethate sodium, you should contact your doctor or nurse immediately for advice or, if they are not available, contact or go to your nearest hospital accident and emergency department.
If too much Colistimethate sodium is accidentally given, the side effects can be serious and can include kidney problems, muscle weakness and difficulty (or even stopping) breathing.
If you are being treated in hospital or at home by a doctor or nurse and think that you may have missed a dose or been given too much Colistimethate sodium, please ask your doctor, nurse or pharmacist about this.

If you forget to use Colistimethate sodium
If you are treating yourself and have missed any doses, you should give the missed dose as soon as you remember and then give the next dose 8 hours later if using Colistimethate sodium three times a day, or 12 hours later if using Colistimethate sodium twice a day. Carry on from there as instructed. Do not take a double dose to make up forgotten dose.

If you stop using Colistimethate sodium
Do not stop your treatment early unless your doctor says you can. Your doctor will decide how long your treatment should last.

If you have any further questions on the use of this medicine, ask your doctor or pharmacist.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Allergic reactions
When Colistimethate sodium is given by inhalation, an allergic reaction is possible. Serious allergic reactions can happen even with the very first dose and can include rapid development of rashes, swelling of the face, tongue and neck, inability to breathe due to narrowing of the airways and loss of consciousness.

If you experience signs of an allergic reaction you should stop using Colistimethate sodium and seek urgent medical attention.

Less severe allergic reactions include skin rashes that appear later during treatment.

The risk of side effects is usually much less when colistimethate is given by inhalation because very little Colistimethate sodium usually reaches the bloodstream when it is given this way. Possible side effects include coughing, a feeling of tightness in the chest due to narrowing of the airways, sore mouth or throat and thrush (Candida) infections of the mouth or throat.

Reporting of side effects
If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via HPRA Pharmacovigilance, Website: www.hpra.ie. By reporting side effects you can help provide more information on the safety

of this medicine.

5. How to store Colistimethate sodium

Keep this medicine out of the sight and reach of children.

Do not use this medicine after the expiry date which is stated on the vial and carton after "EXP". The expiry date refers to the last day of that month.

This medicine does not require any special storage conditions.

Reconstituted solution:
Hydrolysis of colistimethate is significantly increased when reconstituted and diluted below its critical micelle concentration of about 80,000 IU per ml.
Solutions below this concentration should be used immediately.

The chemical and physical in-use stability of reconstituted solution in the original vial, with a concentration ≥ 80,000 IU/ml, has been demonstrated for:

- 1 million IU for 3 hours at 2-8°C when dissolved in 3 ml of sodium chloride 9 mg/ml (0.9%) solution for injection or water for injection.
- 2 million IU for 3 hours at 2-8°C when dissolved in 4 ml of sodium chloride 9 mg/ml (0.9%) solution for injection or water for injection.

From a microbiological point of view, unless the method of opening/ reconstitution/ dilution precludes the risk of microbial contamination, the medicinal product should be used immediately.
If not used immediately, in-use storage times and conditions are the responsibility of user.

Any remaining solution should be discarded.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. Contents of the pack and other information

What Colistimethate sodium contains
The active substance is colistimethate sodium.
Each vial contains 1 million IU colistimethate sodium.
Each vial contains 2 million IU colistimethate sodium.
There are no other ingredients.

What Colistimethate sodium looks like and contents of the pack
Colistimethate sodium powder for nebuliser solution, is supplied as a white to off-white powder in single dose vials.

1 million IU: Clear type I glass vials closed with type I bromobutyl rubber stopper 20 mm and sealed with 20 mm aluminum cap (white pull off or grey tear-off).

2 million IU: Clear type I glass vials closed with type I bromobutyl rubber stopper 20 mm and sealed with 20 mm aluminum cap (orange pull-off or lilac tear-off).

Pack sizes: 1, 10 and 30 vials.

Not all pack sizes may be marketed.

Marketing Authorisation Holder
Noridem Enterprises Ltd.
Evagorou & Makariou,
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This medicine is authorised in the Member States of the European Economic Area under the following names:

Germany	Colistimethat-Natrium Noridem 1 Million I.E. Pulver zur Herstellung einer Lösung für einen Vernebler Colistimethat-Natrium Noridem 2 Millionen I.E. Pulver zur Herstellung einer Lösung für einen Vernebler
Ireland	Colistimethate sodium 1 million IU Powder for nebuliser solution Colistimethate sodium 2 million IU Powder for nebuliser solution
Czech Republic	Colistimethate Noridem Colistimethate Noridem
Greece	KOLELANG 1 MIU Κόνις για διάλυμα για εισπνοή με εκνεφωτή KOLELANG 2 MIU Κόνις για διάλυμα για εισπνοή με εκνεφωτή
Austria	Colistimethat-Natrium DEMO 1 Mio. I.E. Pulver zur Herstellung einer Lösung für einen Vernebler Colistimethat-Natrium DEMO 2 Mio. I.E. Pulver zur Herstellung einer Lösung für einen Vernebler
Italy	Colistimetato sodico Noridem Colistimetato sodico Noridem
Poland	Colistimethatum natricum Noridem Colistimethatum natricum Noridem
Slovakia	Colistimethate Noridem 1 MIU Prášok na roztok pre rozprašovač Colistimethate Noridem 2 MIU Prášok na roztok pre rozprašovač

This leaflet was last revised in 25th May 2023.