Package leaflet: Information for the user
Renapime 1000 mg powder for solution for injection/infusion
Cefepime

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, pharmacist or nurse.
- 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, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What Renapime is and what it is used for
Renapime is indicated in the treatment of infections caused by bacteria susceptible to cefepime, namely:
- lower respiratory tract infections, including nosocomial pneumonia and community acquired pneumonia, acute bacterial exacerbation of chronic bronchitis and secondary bacterial infection of acute bronchitis;
- uncomplicated and complicated urinary tract infections, including pyelonephritis;
- skin and subcutaneous tissue infection;
- intrabdominal infection, including peritonitis, and biliary tract infections;
- gynecological infections;
- bacterial meningitis in infants and children;
- in combination with other antibacterial agents in the management of neutropenic patients with fever that is suspected to be due to a bacterial infection;
- treatment of patients with bacteraemia that occurs in association with, or is suspected to be associated with, any of the infections listed above.
Consideration should be given to official guidance on the appropriate use of antibacterial agents.

2. What you need to know before you use Renapime
Do not use Renapime:
- if you are allergic to cefepime, any other cephalosporin antibiotics or any of the other ingredients of this medicine (listed in section 6).
- if you have history of severe allergic reaction any other type of beta-lactam antibiotics (penicillins, monobactams and carbapenems).

Warnings and precautions
Talk to your doctor, pharmacist or nurse before using Renapime.
Particular care should be taken when using Renapime:
– Severe and occasionally fatal allergic reactions were reported. Please tell your doctor if you have a history of asthma or allergic reactions (skin rash,
itching…). Severe allergic reactions may need epinephrine and other support therapy.
– Cefepime is not adequate for the treatment of certain types of infections. Your doctor has prescribed you this antibiotic because it is the best option for
your illness.
– if you have kidney problems (such as reduced renal function) as the elimination of this medicine may be affected.
– if you suffer from persistent diarrhoea during or after using this medicine. Tell your doctor immediately so he can investigate whether the diarrhoea is the
result of an intestinal inflammation caused by the use of the antibiotic; treatment with this medicine may need to be discontinued.
– If you suffer from allergies (such as hay fever, nettle rash) or have had an allergic reaction to medicines in the past.
Cefepime must be discontinued on the appearance of any kind of hypersensitivity reaction and appropriate therapeutic measures initiated.
– Dosages for elderly patients should be chosen carefully and should take renal function into account, as there is a greater possibility to develop kidney
disease.

Other medicines and Renapime
Tell your doctor or pharmacist if you are using, have recently used or might use any other medicines, including medicines obtained without prescription.
Renal function should be carefully monitored when Renapime is combined with drugs that may affect the kidneys (such as aminoglycosides and powerful
diuretics).
The cephalosporins may enhance the effect of coumarin anticoagulants.
Interaction with diagnostic tests
Cefepime may produce a false positive reaction in some laboratory tests (urine glucose and Coombs test results).

Pregnancy and breast-feeding
If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor or pharmacist for advice before using this medicine.
Do not use this medicine during pregnancy, unless absolutely necessary and specifically directed by your doctor. If you get pregnant during treatment with Renapime tell your doctor.
Renapime can be transferred to breast milk, therefore this medicine should be used during breast-feeding with great care and only after discussing with your doctor.

Driving and using machines
There have been no studies on the effects on the ability to drive and use machines.
However, you may experience disturbed consciousness, dizziness, confusion and hallucination, which may compromise the ability to drive and use machines.

3. How to use Renapime
Always use this medicine exactly as your doctor or pharmacist has told you. Check with your doctor or pharmacist if you are not sure.
Renapime can be administered via intravenous use or intramuscular use.
After reconstitution the solution is yellow to yellow-brown.
The usual dose and the route of administration vary in accordance with the severity of the infection, the renal function and the general conditions of the patient.
The IV route of administration is preferable in the patients with severe infections or in a life-threatening situation, particularly if there is the possibility of shock.

For adult patients and children with a body weight > 40 kg, with normal renal function:

Severity of the infection	Dosage and route of administration	Interval between doses
Mild to moderate urinary tract infections (UTI)	500 mg to 1 g	every 12 h
Other mild to moderate infections (non UTI)	IV or IM	every 12 h
Severe infections	1 g	every 12 h
Very severe infection or life-threatening infections	IV or IM	every 8 h

The usual duration of treatment is 7 to 10 days; more serious infections may require a longer treatment. In the empiric treatment of febrile neutropenia, the usual treatment duration should not be less than 7 days or until the resolution of the neutropenia.
In patients with a body weight ≤ 40 kg, the recommended dosage for children applies.

Use in children
For children with normal renal function:
In children the recommended dose is:
– *Pneumonia, urinary tract infections, skin and subcutaneous tissue infection:*
• Children aged more than 2 months and weighing ≤ 40 kg: 50 mg/kg every 12 hours for 10 days; in more severe infections, the 8 hours interval between the intakes should be done.
– *Bacteraemia that occurs in association with, or is suspected to be associated infections, bacterial meningitis and empirical treatment of febrile neutropenia:*
• Children aged more than 2 months and weighing ≤ 40 kg: 50 mg/kg every 8 hours during 7 to 10 days.
Experience in children under 2 months of age is limited. Children of this age should be monitored carefully during administration of Renapime.
In children with body weight > 40 kg, the adult dosage is recommended.
Do not exceed the maximum recommended adult dose (2 g every 8 hours). Experience with the intramuscular route in children is limited.

Elderly, patients with renal dysfunction, dialysis patients and children with renal dysfunction:
The doctor will determine the dose to be administered.

If you use more Renapime than you should
Contact your doctor or other healthcare professionals immediately, as you may experience more severe side effects under certain situations.
If you have any further questions on the use of this medicine, ask your doctor, pharmacist or nurse.

4. Possible side effects
Like all medicines, this medicine can cause side effects, although not everybody gets them.
Renapime may present one or more of the following side effects:
Very common (can affect more than 1 user in 10):
- Positive Coombs test without hemolysis (method of determining antibody levels);
Common (can affect up to 1 user in 10):
- Increased blood coagulation time (increased prothrombin or thromboplastin time);
- anaemia;
- an elevated level of certain blood cells (eosinophilia);
- infusion site phlebitis;
- diarrhoea;
- rashes;
- infusion site reaction;
- pain and inflammation on the injection site;

- an elevated level in certain blood counts (alanine aminotransferase, aspartate aminotransferase, bilirubin, alkaline phosphatase).

Uncommon (can affect up to 1 user in 100)
- fungal infections of the mouth with white coating (oral candidiasis);
- vaginal infection;
- reduced levels of certain blood cells (thrombocytopenia, leukopenia, neutropenia)
- headaches;
- colitis (inflammation of the large intestine);
- pseudomembranous colitis;
- nausea;
- vomiting;
- erythema (reddening of the skin);
- urticaria;
- itching;
- elevated blood urea;
- elevated serum creatinine;
- fever;
- inflammation on the infusion site.

Rare (can affect up to 1 user in 1,000):
- fungal infections (candidiasis);
- allergic reactions;
- angioedema (sudden swelling of the skin, subcutaneous tissue, mucosa or submucosa);
- convulsions;
- tingling;
- taste changes;
- dizziness;
- vascular dilation;
- shortness of breath;
- abdominal pain;
- constipation;
- genital itching;
- chills.

Not known (unknown frequency)
- aplastic anaemia, haemolytic anaemia e agranulocytosis;
- confusion;
- hallucinations;
- coma;
- torpidity;
- encephalopathy (non-inflammatory brain disease)
- disturbed consciousness;
- myoclonus (muscle twitching);
- bleeding;
- gastrointestinal disease;
- severe skin reactions (as toxic epidermal necrolysis, Stevens-Johnson syndrome and erythema multiforme);
- renal failure;
- toxic nephropathy (kidney damage);
- false positive urine glucose test results.

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 the national reporting at: www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App.

5. How to store Renapime
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 packaging and the container, after 'EXP.'. The expiry date refers to the last day of that
month.
This medicinal product does not require any special temperature storage conditions. Keep the container in the outer carton.
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 Renapime contains
- The active substance is cefepime dihydrochloride monohydrate.
Each vial of Renapime 2000 mg, powder for solution for injection or infusion contains 2 g of cefepime (as dihydrochloride monohydrate).
- The other ingredient is L-arginine.

What Renapime looks like and contents of pack
Renapime 1000 mg is a white to pale yellow powder for solution for injection/infusion, packaged in a 20 ml glass vial closed with a flip-off cap. The vials are packed in carton boxes.
Pack size: 1, 5, 10, 20, 25, 50 and 100 vials.
Not all pack sizes may be marketed.

Marketing Authorization Holder and Manufacturer
Marketing Authorization Holder
Renascience Pharma Ltd
11 George Street West, Luton
Bedfordshire
LU1 2BJ
United Kingdom

Manufacturer
RENASCIENCE PHARMA LIMITED
11 George Street West
Luton LU1 2BJ
United Kingdom

This medicinal product is authorised in the Member States of the EEA under the following names:
Portugal: Cefepima LDP Laboratorios TORLAN
Belgium: Cefepime LDP-Laboratorios TORLAN 1000 mg | 2000 mg, Poudre pour solution injectable/pour perfusion
Spain: Cefepima LDP-Laboratorios TORLAN 1g | 2g, Polvo para solución inyectable y para perfusión EFG

This leaflet was last revised in 11/2017

The following information is intended for healthcare professionals only:
Any unused medicinal product or waste material should be disposed of in accordance with local requirements.
Preparation and administration of the reconstituted solution:
Renapime, powder for solution for injection/infusion should be dissolved in:

a) water for injections
   or in one of the solutions listed in b) below for intravenous administration
b) sodium chloride 0.9% solution
   sodium chloride 0.9% with glucose 5% solution
   glucose 5% or 10% solution
   Ringer lactate solution
   Ringer lactate with glucose 5% solution
   sodium lactate 1/6 M solution.

For Intravenous Injection, the volume of the solvent to be added to each vial and the resulting concentration of cefepime are presented in the following table:

Quantity of cefepime per vial	Volume of solvent added (ml)	Approximate final volume (ml)	Approximate concentration of cefepime (mg/ml)
1.0 g I.V.	10.0	11.4	90
2.0 g I.V.	10.0	12.8	160

For Intravenous Infusion, the volume of the solvent for infusion (solution listed in b)) to be used for reconstitution and the resulting concentration of cefepime are presented in the following table:
The volume of the solvent for infusion to be used for each vial and the resulting concentration of cefepime are presented in the following table:

Quantity of cefepime per vial	Volume of solvent added (ml)	Approximate final volume (ml)	Approximate concentration of cefepime (mg/ml)
1.0 g I.V.	50.0	51.4	19
2.0 g I.V.	50.0	52.8	38

The resulting solution should be administered over approximately 30 minutes.

For Intramuscular Injection, reconstitute the 1 g vial by using 3.0 ml of water for injections.
Note:
The *reconstituted* solutions, which are prepared correctly, can present a yellow to yellow-brown colour. This does not mean that efficacy of Renapime may be compromised.
The content of the vial is meant for a single usage. The remaining *reconstituted* solution should be discarded.
Inspect the vial before using. It can only be used if the solution does not present particles.