

Patient leaflet in accordance with the Pharmacists' Regulations (Preparations) - 1986

This medicine is dispensed with a doctor's prescription only

Penicillin G Sodium 5 MU Penicillin G Sodium 10 MU

Powder for reconstituting a solution for injection into a muscle or into a vein

Composition:

Each vial of Penicillin G Sodium 5 MU contains: Benzylpenicillin Sodium 5 MU

Each vial of Penicillin G Sodium 10 MU contains: Benzylpenicillin Sodium 10 MU

For information about inactive ingredients and allergens, see section 2 under 'Important information about some of this medicine's ingredients', and section 6 'Additional information'.

Read the entire leaflet carefully before you start using this medicine. This leaflet contains concise information about this medicine. If you have any further questions, consult your doctor or pharmacist. This medicine has been prescribed to treat your illness. Do not pass it on to others. It may harm them, even if it seems to you that their illness is similar to yours.

1. What is this medicine intended for?

This medicine is intended for treatment of infections caused by microorganisms that are sensitive to penicillin.

Therapeutic group: a semisynthetic beta-lactam antibiotic

2. Before using this medicine

Do not use this medicine if:

- You are sensitive (allergic) to the active ingredient benzylpenicillin sodium.
- You have ever been treated with a penicillin before and had a hypersensitivity reaction to penicillin (such as skin rash, itching, fever, shortness of breath, drop in blood pressure) as a result. In these cases, as there is a risk of life-threatening anaphylactic shock, you must stop taking this medicine.
- You have had severe hypersensitivity reactions (anaphylactic reactions) to other beta-lactams (cephalosporin, carbapenem, monobactam).

Special warnings about using this medicine
Before using Penicillin G Sodium tell your doctor if:

- You have ever experienced intolerance to other antibiotics (such as cephalosporins). In such cases, your doctor will decide whether to treat you with Penicillin G Sodium. Before the start of treatment, a hypersensitivity test should be carried out.
- You are prone to allergic reactions (such as hives or hay fever) or asthma. In such cases, there is an increased risk of a hypersensitivity reaction.
- You have heart problems or severe electrolyte imbalance (such as of sodium, calcium, potassium, and chloride). Your doctor will have to monitor your electrolyte level, especially your potassium level.
- You liver or kidney function is impaired. In such cases, your doctor will have to adjust your Penicillin G Sodium dosage or dosing interval.
- You have epilepsy, brain oedema or meningitis. Your will require careful monitoring by your doctor, as you may be at increased risk of seizures during therapy.
- You have kissing disease (mononucleosis). There may be an increased risk of skin reaction.
- You have acute lymphatic leukaemia (a type of blood cancer). There may be an increased risk of skin reaction.
- You have a fungal skin disease (dermatomycoses). You are at increased risk of developing an allergy-like reaction.
- You are being treated with anticoagulants. In rare cases, prolongation of the prothrombin time has been reported in patients receiving penicillin. Close monitoring is required, and adjustment of the anticoagulant dose may be necessary to obtain the desired degree of anticoagulation in the blood (see the section 'Interactions with other medicines').
- You have diabetes. With injection in a muscle, the absorpction of Penicillin G Sodium may be delayed.
- You have a sexually-transmitted disease. Syphilis should be ruled out before the start of therapy.
- You are being treated for Lyme disease or complications of syphilis. A temporary reaction, known as a Jarisch-Herxheimer reaction, may often occur due to the antibiotic effect of Penicillin G Sodium on the pathogen of this disease. This reaction may be characterised by sudden fever, chills, skin redness, headache, muscle and joint pain, tiredness and/or exhaustion. The symptoms may persist for several days. Tell your doctor who can help you to relieve these symptoms.
- You experience severe, persistent diarrhoea during treatment with Penicillin G Sodium. This could be a result of antibiotic-associated colitis (inflammation of the colon). The symptoms of this are bloody/mucous, watery diarrhoea; abdominal pain; fever or, occasionally, a constant and painful need to pass stools. Penicillin G Sodium must be stopped immediately and your doctor will put you on a suitable new treatment.
- You have diarrhoea, itchy rash on the skin, or spread of a fungus in your mucous membranes. Your doctor will order regular blood tests for electrolytes, kidney function, blood count, and others during prolonged treatment (more than 5 days). During long-term treatment (several weeks), any antibiotic therapy can cause overgrowth of certain resistant bacteria or yeast-like fungi.
- Severe local reactions can occur with intramuscular administration to infants. Wherever possible, intravenous therapy should be performed.
- When intravenously administering very high doses (over 10 mega IU a day), the administration site should be alternated every other day to avoid infections and blocked veins (thrombophlebitis).
- Due to possible electrolyte disturbances, Penicillin G Sodium should be administered slowly with infusions of more than 10 mega IU and, due to the possibility of seizures when administering more than

20 mega IU (see the section 'Side effects').

Interactions with other medicines

If you are taking or have recently taken other medicines, including non-prescription medications and dietary supplements, tell your doctor or pharmacist. Particularly if you are taking:

- Probenecid to treat gout
- Indomethacin, phenylbutazone, acetic acid, salicylates (medicines for reducing fever and inflammation, as well as for rheumatism and other pain)

These medicines can lead to increased concentrations of Penicillin G Sodium and increase the time that the medicine remains in the body.

Other antibiotics

As penicillins only affect certain bacteria, Penicillin G Sodium should be combined with certain antibiotics to have effective results. Your doctor will decide which combinations are effective.

Digoxin (heart medicine)

If given at the same time as Penicillin G Sodium, the heartbeat may become slower (bradycardia).

Methotrexate (chemotherapy agent used in cancer treatment)

When taken at the same time as Penicillin G Sodium, the excretion of methotrexate may be slowed down. Combined use of methotrexate and Penicillin G Sodium must be avoided wherever possible. If this combination cannot be avoided, a reduction in the methotrexate dose should be considered and methotrexate blood levels should be monitored. The patient should be monitored for the possible additional side effects of methotrexate use, including leukopenia (reduced white blood cell count), thrombocytopenia (reduced platelet count) and pus accumulation under the skin.

Oral anticoagulants

The combination of penicillin and oral anticoagulants and has been used extensively without interactions. However, in the literature, there have been reports of an increased number of patients who were given the anticoagulant acenocoumarol or warfarin at the same time as penicillin. If combined use is required, the prothrombin time or any other suitable blood-clotting parameter should be carefully monitored when co-administering or discontinuing penicillin. Furthermore, an adjustment of the oral anticoagulant dose may be necessary.

Effect on laboratory tests

Tell your doctor before you have any laboratory test. These tests may produce false results due to treatment with Penicillin G Sodium (see the section 'Side effects').

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 taking this medicine.

Pregnancy

Benzylpenicillin crosses the placenta and enters the circulation of your unborn baby. Both experience with pregnant women and animal studies have not shown harm to unborn babies. Penicillin G Sodium may be used throughout pregnancy if your doctor believes that using the medicine is necessary.

Do not use Penicillin G Sodium in case of syphilis during pregnancy.

Breast-feeding

Penicillins pass into breast milk in small amounts.

Although no side effects have been reported in breast-fed infants to date, the risk of sensitisation or an adverse effect on the infant's intestinal flora must be considered. In case of diarrhoea, candidiasis, or rash in the infant, consult your doctor immediately because these effects could be due to Penicillin G Sodium.

In infants also fed on baby food, mothers should express and discard their breast milk during treatment with Penicillin G Sodium. Breast-feeding can be started again 24 hours after the end of treatment.

Driving and using machines

No effect on the ability to drive or use machines has been observed. Due to the occurrence of serious side effects (such as anaphylactic shock with collapse and anaphylactoid reactions, see section 4), Penicillin G Sodium can have an influence on the ability to drive and use machines.

Important information about some of this medicine's ingredients

Each vial of Penicillin G Sodium 5 MU contains 193 mg sodium. Each vial of Penicillin G Sodium 10 MU contains 386 mg sodium. 1 MU contains about 39 mg sodium which is equivalent to 2% of the maximum daily intake recommended by the World Health Organization (WHO). Penicillin G Sodium is considered a high-sodium medicine. Tell your doctor or pharmacist if you receive more than 10 MU per day for a long period, especially if a low-salt (sodium) diet has been recommended to you.

3. How to use this medicine?

Always use this medicine according to your doctor's instructions. Check with your doctor or pharmacist if you are not sure about your dose or about how to take this medicine. Only your doctor will determine your dose and how you should take this medicine. Penicillin G Sodium is best administered into a muscle. However, when large doses of this medicine are required, it is advisable to administer Penicillin G Sodium by means of a continuous intravenous drip. **Do not exceed the recommended dose.**

If you have taken an overdose, or if a child has accidentally swallowed some medicine

In case of overdose, increased neuromuscular hyperexcitability or cerebral seizures can be expected: stop the medicine. If necessary, clinical monitoring and symptomatic treatment will be provided.

Penicillin G Sodium can be removed by dialysis.

Immediately see a doctor or go to a hospital emergency room and bring the medicine package with you.

If you forget to take the medicine

If you think you have not received a dose of this medicine, talk to your doctor immediately.

Adhere to the treatment as recommended by your doctor.

Do not take medicines in the dark! Check the label and dose every time you take medicine. Wear glasses if you need them. If you have any further questions about using this medicine, consult your doctor or pharmacist.

4. Side effects

Like with all medicines, using Penicillin G Sodium may cause side effects in some users. Do not be alarmed by this list of side effects; you may not experience any of them.

Usually, the following frequencies are used for evaluating side effects:
Very common affect more than 1 in 10 patients
Common affect up to 1 in 10 patients
Uncommon affect up to 1 in 100 patients
Rare affect up to 1 in 1,000 patients
Very rare affect up to 1 in 10,000 patients
Unknown frequency the frequency of these effects has not been established yet.

Blood and lymphatic system

Very rare - Effects on blood and blood components: eosinophilia, leucopenia, neutropenia, granulocytopenia, thrombocytopenia, agranulocytosis, pancytopenia, haemolytic anaemia (a specific type of anaemia), blood-clotting disorders.

Unknown frequency - Prolongation of the bleeding time and prothrombin time (see the section 'Special warnings').

Immune system

Uncommon - Allergic reaction: hives with or without itching (urticaria); swelling of the skin and mucous membranes, especially in the facial region, mouth, neck, and throat (angioedema); severe skin reaction; fever; joint pain; severe hypersensitivity reaction (asthma, skin bleeding, gastrointestinal disorders).

Unknown frequency - Serum sickness (hypersensitivity reactions such as fever, lymph node swelling, local redness at the injection site, itching), Jarisch-Herxheimer reaction (characterised by sudden fever, chills, skin redness, headache, muscle and joint pain, tiredness and/or exhaustion).

Metabolism and nutrition effects

Rare - Electrolyte imbalances may occur as a result of rapid infusion with high doses.

Nervous system effects

Rare - Nerve disorders. Seizures may occur due to infusion of high doses (in adults, more than 20 mega IU); this must be borne in mind in patients with severely impaired renal function, epilepsy, meningitis, cerebral oedema, or during cardiopulmonary bypass.

Gastrointestinal effects

Uncommon - Inflammation of the mouth lining (stomatitis), inflammation of the tongue (glossitis), black hairy tongue syndrome, nausea, vomiting. If the patient develops diarrhoea during treatment, this is likely to be an inflammation of the colon (pseudomembranous colitis) (see the section 'Special warnings about using this medicine').

Liver and biliary effects

Unknown frequency - Liver inflammation (hepatitis), gallbladder inflammation (cholestasis).

Skin and subcutaneous tissue effects

Unknown frequency - Skin problems with blistering (pemphigoid).

Urinary tract and kidney effects

Rare - Kidney disease, excretion of protein or blood in the urine, sediment in the urine (cylindruria). Reduced urine output or inability to pass urine (mostly clears up within 48 hours after stopping treatment).

General conditions

Rare - Severe local reactions can occur with intramuscular administration to infants.

Effect on laboratory tests

Common effect on the following laboratory methods:

- Direct Coomb's test-test for antibodies
- Folin-Ciocalteu-Lowry method, Biuret method for determining urinary protein
- Ninhydrin method for determining amino acids
- Electrophoresis methods to determine albumin
- Non-enzymatic urinary glucose detection and urobilinogen detection
- Zimmermann reaction to detect steroids in the urine.

If you experience any side effect, if any side effect gets worse, or if you experience a side effect not mentioned in this leaflet, consult your doctor.

Reporting side effects

You can report side effects to the Ministry of Health by following the link 'Reporting Side Effects of Drug Treatment' on the Ministry of

Health home page (www.health.gov.il) which links to an online form for reporting side effects. You can also use this link: <http://sideeffects.health.gov.il>

5. How to store the medicine?

- Prevent poisoning! To prevent poisoning, keep this, and all other medicines, in a closed place, out of the reach and sight of children and/or infants. Do not induce vomiting unless explicitly instructed to do so by a doctor.
- Do not use the medicine after the expiry date (exp. date) which is stated on the package. The expiry date refers to the last day of that month.
- Store below 25°C.**
- From a microbiological point of view, the medicine should be used immediately. If not used immediately, storage times and conditions are the responsibility of the user and would normally not be longer than 24 hours at 2°C to 8°C.
- Storage conditions for reconstituted product** used for IM injection are 48 hours at 2°C to 8°C and 8 hours below 25°C.
- Storage conditions for the diluted product** used for IV injection or infusion are 24 hours at 2°C to 8°C and 4 hours below 25°C.
- Do not throw away medicines in the trash. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. Additional information

This medicine does not contain any inactive ingredients.

What the medicine looks like and contents of the pack:

Penicillin G Sodium 5 MU: Each 15 ml glass vial contains 5 MU benzylpenicillin sodium, a white to off-white powder for reconstituting a solution for injection.

Penicillin G Sodium 10 MU: Each 30 ml glass vial contains 10 MU benzylpenicillin sodium, a white to off-white powder for reconstituting a solution for injection.

Each pack of Penicillin G Sodium contains 1, 10, or 25 vials. Not all pack sizes may be marketed.

Registration holder's name and address:

Teva Israel Ltd., 124 Dvora Hanevi'a St., Tel Aviv 6944020

Manufacturer's name and address:

Sandoz GmbH Austria
Biochemiestrasse 10, A-6250 KUNDL, Austria

This leaflet was revised in June 2022 according to MOH guidelines.

Registration number of the medicine in the Ministry of Health's National Drug Registry:

Penicillin G Sodium 5 MU: 024.73.21066

Penicillin G Sodium 10 MU: 137.28.21065

THE FOLLOWING INFORMATION IS INTENDED FOR HEALTHCARE PROFESSIONALS ONLY:

Incompatibilities

The contents of the vial should only be used in a solution with water for injections, 5% glucose solution or 0.9% sodium chloride, in order to avoid incompatibilities.

In order to avoid undesirable chemical reactions or undesirable effects, the already dissolved vials should not be mixed with other mixed injections or infusions (e.g. Ringer's lactate solution, etc.). Oxidizing and reducing substances, alcohol, glycerol, macrogols and other hydroxy-compounds can inactivate benzylpenicillin. Benzylpenicillin solutions are most stable in the pH range of 6–7 (optimum at pH 6.8). Benzylpenicillin is incompatible in solution with the following:

- cimetidine
- cytarabine
- chlorpromazine HCl
- dopamine HCl
- heparin
- hydroxyzine HCl
- lactate
- lincomycin HCl
- metaraminol
- sodium hydrogen carbonate
- oxytetracycline
- pentobarbital
- tetracycline HCl
- thiopental Na
- vancomycin

Benzylpenicillin is not compatible with vitamin B complex and ascorbic acid in mixed solutions.

Special precautions for disposal and other handling

Constitute as follows:

Penicillin G Sodium 5 MU: add 3.5 ml Water for Injection to provide a concentration of 1 MU/ml.

Penicillin G Sodium 10 MU: add 7 ml Water for Injection to provide a concentration of 1 MU/ml.

Preparation for IV infusion solution:

Penicillin G sodium 5 MU: dissolve in 50 ml Water for Injection.

Penicillin G sodium 10 MU: dissolve in 100 ml Water for Injection.

If this ratio is observed, an approximately isotonic solution is obtained.

The product should be used immediately after dissolution.

Reconstitution and dissolution should take place in controlled and validated aseptic conditions.