

MUPIROS OINTMENT

Composition

Mupirocin I.P.	2.0% w/w
In a non-greasy base	q.s

DESCRIPTION :

Mupirocin is a naturally antibiotic isolated from *Pseudomonas fluorescens*. It is bacteriostatic at low concentrations and bactericidal at high concentrations. It is used topically and is effective against Gram-positive bacteria, including MRSA and some gram-negative bacteria. Mupirocin is a mixture of several pseudomonic acids, with pseudomonic acid A (PA-A) constituting greater than 90% of the mixture. Also present in mupirocin are pseudomonic acid B with an additional hydroxyl group at C8, pseudomonic acid C with a double bond between C10 and C11, instead of the epoxide of PA-A, and pseudomonic acid D with a double bond at C4' and C5' in the 9-hydroxy-nonanoic acid portion of mupirocin. Chemical formula of Mupirocin is C₂₆H₄₄O₉.

MECHANISM OF ACTION :

Mupirocin exerts its action by reversibly binding to isoleucyl transfer RNA synthetase and inhibits the enzyme activity. This enzyme is necessary for the synthesis of proteins in the bacteria. Inhibition of isoleucyl transfer RNA synthetase results in inhibition of protein synthesis and produce microbicidal action. It is more active against gram positive bacteria as compared to gram negative bacteria.

Mupirocin is inactive for most anaerobic bacteria, mycobacteria, mycoplasma, chlamydia, yeast and fungi.

PHARMACOKINETICS :

Absorption	: Minimal systemic absorption through intact skin (<0.3%).
Distribution	: N/A
Protein-binding	: 95%
Metabolism	: Hepatic, converted to monic acid.
Excretion	: Urine
Elimination half-life	: 17-36 minutes.

MEDICAL USES :

Mupirocin is an antibiotic that works by stopping the growth of certain bacteria. It is used as a topical treatment for bacterial skin infections, for example, furuncle, impetigo, open wounds, etc. It is also useful in the treatment of methicillin - resistant *Staphylococcus aureus* (MRSA), which is a significant cause of death in hospitalized patients having received systemic antibiotic therapy. It is suggested, however, that mupirocin cannot be used for extended periods of time, or indiscriminately, as resistance does develop, and could, if it becomes widespread, destroy mupirocin's value as a treatment for MRSA. It may also result in overgrowth of non-susceptible organisms. Mupirocin is used to treat certain skin infections (such as impetigo). It is an antibiotic. It works by stopping the growth of certain bacteria.

DIRECTION TO USE :

Use this medication only on the skin. Clean and dry the affected area first. Use a cotton wool pad to apply a small amount to the infected area 3 times a day, or as directed by your doctor. Do not use it for longer than ten days. It may sting a little when you first apply it but this should soon pass. You may cover the treated area with a bandage. Use this medication regularly in order to get the most benefit from it. Continue to use it for the full amount of time prescribed. Stopping the medication too early may allow bacteria to continue to grow, which may result in a relapse of the infection. Avoid using this medication around the eyes, nose, mouth, or on large areas of damaged or broken skin unless otherwise directed by the doctor. Inform to the doctor if the condition does not improve in 3-5 days.

BEFORE USING MUPIROCIN :

- To make sure that this is the right treatment for the patient, before start using mupirocin it is important that know:
- If the patient is pregnant or breast-feeding - although mupirocin is not known to be harmful to babies, it is still important that whether the patient is pregnant.
- If the patient have kidney function.
- If the patient have ever had an allergic reaction to a medicine, or to any skin preparation.

DOSAGE :

Adult: Apply a 2% ointment three times a day for 10 days. If no improvement is seen after 3-5 days, consider alternative treatment.

Child: Apply a 2% ointment three times a day for 10 days. If no improvement is seen after 3-5 days, consider alternative treatment.

OVERDOSE :

If overdose is suspected, contact a poison control center or emergency room immediately. This medicine may be harmful if swallowed.

MISSED DOSE :

If you miss a dose, use it as soon as you remember. If it is near the time of the next dose, skip the missed dose and resume your usual dosing schedule. Do not double the dose to catch up.

CONTRAINDICATIONS :

Mupirocin and Pregnancy: Caution when used during pregnancy.

Category B: Either animal-reproduction studies have not demonstrated a foetal risk but there are no controlled studies in pregnant women or animal-reproduction studies have shown an adverse effect (other than a decrease in fertility) that was not confirmed in controlled studies in women in the 1st trimester (and there is no evidence of a risk in later trimesters).

Mupirocin and Lactation: Caution when used during lactation.

Mupirocin and Other Contraindications: Hypersensitivity to mupirocin or polyethylene glycol.

SIDE EFFECTS :

Many people using this medication do not have serious side effects. Although uncommon, mild burning or stinging after using this medication may occur. If you have severe burning, stinging, or irritation, stop using this medication and consult to your doctor right away.

This medication may rarely cause a severe intestinal condition (Clostridium difficile-associated diarrhea) due to a type of resistant bacteria. This condition may occur during treatment or a week to months after treatment has stopped. Medical care must be taken right away if patient develop diarrhea that doesn't stop, abdominal or stomach pain/cramping, blood/mucus in the stool.

Use of anti-diarrhea products or narcotic pain medications is prohibited if patient have any of these symptoms because these products may make them worse.

Use of this medication for prolonged or repeated periods may result in a new skin infection caused by fungus or yeast. Consult to the doctor if patient notice signs of a new infection, or if current infection does not get better or if it gets worse.

A very serious allergic reaction to this drug is rare. However, get medical help right away if patient notice any symptoms of a serious allergic reaction, including: rash, itching/swelling (especially of the face/tongue/throat), severe dizziness, trouble breathing.

PRECAUTIONS :

Before using mupirocin, tell your doctor or pharmacist if you are allergic to it; or if you have any other allergies. This product may contain inactive ingredients (such as polyethylene glycol found in some brands), which can cause allergic reactions or other problems.

Before using this medication, tell your doctor or pharmacist your medical history, especially of kidney disease.

During pregnancy, this medication should be used only when clearly needed. Discuss the risks and benefits with your doctor.

It is unknown if this drug passes through breast milk. Consult your doctor before breast-feeding.

SPECIAL PRECAUTIONS :

Mucosal surfaces of eye; renal impairment; extensive burns or open wounds. Pregnancy, lactation, children <3 months.

INTERACTIONS :

Doctor or pharmacist may already be aware of any possible drug interactions and may be monitoring for them. It is not suggested to stop, or change the dosage of any medicine before checking with them first. Before using this medication, patient must consult to the doctor or pharmacist of all prescription and nonprescription/herbal products that patient may use, especially of chloramphenicol. This document does not contain all possible interactions. Therefore, before using this product, patients are suggested to inform to the doctor or pharmacist of all the products they are using.

STORAGE :

Store at room temperature between 20-25° C. Do not freeze. Keep all medicines away from children and pets.

PACKAGING INFORMATION :

Mupiros Oint. is available in a tube of 5gm.