PRESCRIBING INFORMATION

[Pr]SANDOZ CORTIMYXIN
Otic Solution

Neomycin and Polymyxin B Sulfates and Hydrocortisone Otic Solution USP

[Pr]SANDOZ CORTIMYXIN
Ophthalmic Ointment

**Neomycin and Polymyxin B Sulfates, Bacitracin Zinc,
and Hydrocortisone Ophthalmic Ointment USP**

Anti-inflammatory – Antibacterial

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Neomycin and Polymyxin B Sulfates and Hydrocortisone Otic Solution USP

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ACTION AND CLINICAL PHARMACOLOGY

Corticoids suppress the inflammatory response to a variety of agents and they may delay healing. Since corticoids may inhibit the body's defense mechanism against infection, a concomitant antimicrobial drug may be used when this inhibition is considered to be clinically significant in a particular case.

The anti-infective components in the combination are included to provide action against specific organisms susceptible to them. Polymyxin B sulfate and neomycin sulfate together are considered active against the following microorganisms: *S. aureus, E. coli, H. influenzæ, Klebsiella-Enterobacter* species, *Neisseria* species and *P. æruginosa*. This product does not provide adequate coverage against *S. marcescens* and *Streptococci*, including *S. pneumoniæ*

When used topically, polymyxin B, bacitracin and neomycin are rarely irritating and absorption from the intact skin or mucous membrane is insignificant. The incidence of skin sensitization to this combination has been shown to be low on normal skin. Since these antibiotics are seldom used systemically, the patient is spared sensitization to those antibiotics which might later be required systemically.

The relative potency of corticosteroids depends on the molecular structure, concentration, and release from the vehicle.

INDICATIONS AND CLINICAL USE

Otic Solution:
For the treatment of superficial bacterial infections of the external auditory canal caused by organisms susceptible to the action of the antibiotics.

Ophthalmic Ointment:

For the treatment of nonpurulent bacterial, allergic, vernal and phlyctenular conjunctivitis; nonpurulent blepharitis and episcleritis; interstitial, sclerosing, postoperative or acne rosacea keratitis, chemical and thermal burns of the cornea.

Sandoz Cortimyxin contains antibacterial ingredients: polymyxin B, bacitracin and neomycin. To reduce the development of drug-resistant bacteria and maintain the effectiveness of polymyxin B, bacitracin and neomycin, Sandoz Cortimyxin should only be used for the authorized indication and clinical use.

Pediatrics:
Safety of corticosteroids in children aged 2 years or younger has not been established.

CONTRAINDICATIONS

Otic Solution:
This product is contraindicated in tuberculous, fungal or viral lesions and in those individuals who have shown hypersensitivity to any of its components.

Ophthalmic Ointment:
This product is contraindicated in dendritic corneal ulcers (herpes cornea) or conditions involving the posterior segment of the eye. It is also contraindicated in acute superficial herpes simplex; viral diseases of the cornea and conjunctiva; mycobacterial and fungal diseases of the eye, including tuberculosis of the eye, and in persons with known hypersensitivity to any of the components.

Ointment not for use in the external ear canal if the eardrum is perforated.

WARNINGS AND PRECAUTIONS

When using neomycin-containing products to control secondary infection in the chronic dermatoses, such as chronic otitis externa or stasis dermatitis, it should be borne in mind that the skin in these conditions is more liable than is normal skin to become sensitized to many substances including neomycin.

The manifestation of sensitization to neomycin is usually a low-grade reddening with swelling, dry scaling and itching. It may be manifested simply as a failure to heal. Periodic examination for such signs is advisable, and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for the patient thereafter.

Neomycin may cause cutaneous sensitization. A precise incidence of hypersensitivity reactions (primarily skin rash) due to topical neomycin is not known.

Otic Solution:

Topical otic preparations containing aminoglycosides have been associated with reports of ototoxicity that may be irreversible. Animal data have shown that aminoglycosides may be absorbed directly across the round window, therefore, there may be an increased risk of ototoxicity in circumstances where there is a perforated tympanic membrane.

The otic solution should be used with care when the integrity of the tympanic membrane is in question because of the possibility of ototoxicity caused by neomycin. Stinging and burning may occur when this product gains access to the middle ear.

The otic solution contains potassium metabisulfite, a sulfite that may cause allergic-type reactions including anaphylactic symptoms and life-threatening or less severe asthmatic episodes in certain susceptible people. The overall prevalence of sulfite sensitivity in the general population is unknown and probably low. Sulfite sensitivity is seen more frequently in asthmatic than in nonasthmatic people.

Treatment with the otic solution should not be continued for longer than 10 days.

Ophthalmic Ointment:

Use of steroid medication in the treatment of herpes simplex requires great caution.

Because of the concern of nephrotoxicity and ototoxicity associated with neomycin, the ointment should not be used over a wide area or for extended periods of time.

Prolonged ophthalmic use may result in glaucoma, with damage to the optic nerve, defects in visual acuity and fields of vision and posterior subcapsular cataract formation.

Prolonged use may suppress the host response and thus increase the hazard of secondary ocular infections. In those diseases causing thinning of the cornea or sclera, perforations have been known to occur with the use of topical steroids. In acute purulent conditions of the eye, steroids may mask infection or enhance existing infection. If these products are used for 10 days or longer, intraocular pressure should be routinely monitored even though it may be difficult in children and uncooperative patients.

Signs and symptoms of exogenous hyperadrenocorticism can occur with the use of topical corticosteroids, including adrenal suppression. Systemic absorption of topically applied steroids will be increased if extensive body surface areas are treated or if occlusive dressings are used. Under these circumstances, suitable precautions should be taken when long-term use is anticipated.

Allergic cross-reactions may occur which could prevent the use of any or all of the following antibiotics for the treatment of future infections: kanamycin, paromomycin, streptomycin, and possibly gentamicin.

Monitoring Laboratory Tests

Systemic effects of excessive levels of hydrocortisone may include a reduction in the number of

circulating eosinophils and a decrease in urinary excretion of 17-hydroxycorticosteroids.

Carcinogenicity
Long-term studies in animals (rats, rabbits, mice) showed no evidence of carcinogenicity attributable to oral administration of corticosteroids.

Susceptibility/Resistance
Development of Drug Resistant Bacteria
Prescribing Sandoz Cortimyxin in the absence of the authorized indications is unlikely to provide benefit to the patient and risks the development of drug-resistant bacteria.

Potential for Microbial Overgrowth
As with any antibiotic preparation, prolonged use may result in the overgrowth of nonsusceptible organisms, including fungi. The possibility of persistent fungal infections of the ear should be considered after prolonged steroid dosing. Appropriate measures should be taken if this occurs. If the infection is not improved after 1 week, cultures and susceptibility tests should be repeated to verify the identity of the organism and to determine whether therapy should be changed.

Special Populations
Pregnant Women: Corticosteroids have been shown to be teratogenic in rabbits when applied topically at concentrations of 0.5% on days 6 to 18 of gestation and in mice when applied topically at a concentration of 15% on days 10 to 13 of gestation. There are no adequate and well-controlled studies in pregnant women. Corticosteroids should be used during pregnancy only if the potential benefit outweighs the potential risk to the fetus.

Nursing Women: Hydrocortisone appears in human milk following oral administration of the drug. Since systemic absorption of hydrocortisone may occur when applied topically, caution should be exercised when Sandoz Cortimyxin is used by a nursing woman.

Pediatrics: Safety of corticosteroids in children aged 2 years or younger has not been established. Sufficient absorption of hydrocortisone can occur in infants and children during prolonged use to cause cessation of growth, as well as other systemic signs and symptoms of hyperadrenocorticism.

Use of steroids on infected areas should be supervised with care as anti-inflammatory steroids may encourage spread of infection. If this occurs, steroid therapy should be stopped and appropriate antibacterial drugs used. Generalized dermatological conditions may require systemic corticosteroid therapy.

The initial prescription and renewal of the ophthalmic ointment beyond 7 g should be made by a physician only after examination of the patient; with the aid of magnification, such as slit lamp biomicroscopy and, where appropriate, fluorescein staining.

Information for the Patient

Otic Solution:

Avoid contaminating the dropper with material from the ear, fingers or other source. This caution is necessary if the sterility of the drops is to be preserved. If sensitization or irritation occurs, discontinue use immediately and contact your physician.

Do not use in the eyes.

If redness, irritation, swelling or pain persists or increases, discontinue use and notify physician.

ADVERSE REACTIONS

Neomycin occasionally causes skin sensitization. In otic use ototoxicity and nephrotoxicity have also been reported (see WARNINGS AND PRECAUTIONS). Exact incidence figures are not available since no denominator of treated patients is available. The reaction occurring most often is allergic sensitization. In one clinical study, using a 20% neomycin patch, neomycin-induced allergic skin reactions occurred in 2 of 2 175 (0.09%) individuals in the general population. In another study, the incidence was found to be approximately 1%. When steroid preparations are used for long periods of time in intertriginous areas or over extensive body areas, with or without occlusive nonpermeable dressings, striæ may occur; also there exists the possibility of systemic adverse effects when steroid preparations are used over larger areas or for a long period of time.

The following local adverse reactions have been reported with topical corticosteroids, especially under occlusive dressings: burning, itching, irritation, dryness, folliculitis, hypertrichosis, acneiform eruptions, hypopigmentation, perioral dermatitis, allergic contact dermatitis, maceration of the skin, secondary infection, skin atrophy and miliaria.

Otic Solution:
Stinging and burning have been reported when this product has gained access to the middle ear.

Secondary Infection: The development of secondary infection has occurred after use of combinations containing steroids and antimicrobials. Fungal infections of the cornea are particularly prone to develop coincidentally with long-term applications of steroid. The possibility of fungal invasion must be considered in any persistent corneal ulceration where steroid treatment has been used.

Secondary bacterial infection following suppression of host responses also occurs.

OVERDOSAGE

Treatment: Symptomatic.

For management of a suspected drug overdose, contact your regional Poison Control Centre.

DOSAGE AND ADMINISTRATION

Otic Solution:
Adults: 4 drops of the solution should be instilled into the affected ear 3 or 4 times daily.

Infants and Children: 3 drops are suggested because of the small capacity of the ear canal.

The patient should lie with the affected ear upward and then the drops should be instilled. This position should be maintained for 5 minutes to facilitate penetration of the drops into the ear canal. Repeat, if necessary for the opposite ear.
If preferred, a cotton wick may be inserted into the canal and then the cotton may be saturated with the solution. This wick should be kept moist by adding further solution every 4 hours. The wick should be replaced at least once every 24 hours.

Ophthalmic Ointment:
Apply in the affected eye 2 to 4 times daily.

STORAGE AND STABILITY

Otic Solution:
Store between 15 and 30°C.

Ophthalmic Ointment:
Store between 15 and 25°C.

DOSAGE FORMS, COMPOSITION AND PACKAGING

Otic Solution:
Each mL contains: polymyxin B sulfate 10 000 units, neomycin sulfate equivalent to 3.5 mg neomycin base, and hydrocortisone 10 mg (1%). Bottles of 10 mL.

Ophthalmic Ointment:
Each g of sterile ophthalmic ointment contains: polymyxin B sulfate 10 000 units, bacitracin zinc 400 units, neomycin sulfate equivalent to 3.5 mg neomycin base, hydrocortisone 10 mg in a petrolatum base. Tubes of 3.5 g.

READ THIS FOR SAFE AND EFFECTIVE USE OF YOUR MEDICINE

PATIENT MEDICATION INFORMATION

[Pr]SANDOZ CORTIMYXIN
Otic Solution

Read this carefully before you start taking **Sandoz Cortimyxin** and each time you get a refill. This leaflet is a summary and will not tell you everything about this drug. Talk to your healthcare professional about your medical condition and treatment and ask if there is any new information about **Sandoz Cortimyxin**.

What is Sandoz Cortimyxin used for?
Sandoz Cortimyxin is used to treat bacterial infections of the auditory canal (ear).

Sandoz Cortimyxin contains antibacterial ingredients called polymyxin B, bacitracin and neomycin and it should be used exactly as directed by your healthcare professional.

How does Sandoz Cortimyxin work?
Sandoz Cortimyxin contains two types of medicines:

- Hydrocortisone to reduce inflammation.
- Antimicrobials to kill bacteria and reduce infections.

What are the ingredients in Sandoz Cortimyxin?
Medicinal ingredients: polymyxin B (as sulfate), neomycin (as sulfate), and hydrocortisone.
Non-medicinal ingredients: none.

Sandoz Cortimyxin comes in the following dosage forms:
Bottles of 10 mL.

Do not use Sandoz Cortimyxin if you:

- you have tuberculous, fungal or viral lesions.
- are allergic to any of the ingredients in Sandoz Cortimyxin.

To help avoid side effects and ensure proper use, talk to your healthcare professional before you take Sandoz Cortimyxin. Talk about any health conditions or problems you may have, including if you:

- have a damaged eardrum (tympanic membrane);
- have asthma or allergies;

- are pregnant or planning to become pregnant;
- are breastfeeding or planning to breastfeed.

Tell your healthcare professional about all the medicines you take, including any drugs, vitamins, minerals, natural supplements or alternative medicines.

How to take Sandoz Cortimyxin:

- You should lie with the affected ear upward and then the drops should be instilled. This position should be maintained for 5 minutes to facilitate penetration of the drops into the ear canal. Repeat, if necessary for the opposite ear.
- If preferred, a cotton wick may be inserted into the canal and then the cotton may be saturated with the solution. This wick should be kept moist by adding further solution every 4 hours. The wick should be replaced at least once every 24 hours.
- Avoid touching the dropper with your ear or fingers to prevent contamination.
- Misuse or overuse of Sandoz Cortimyxin could lead to the growth of bacteria that will not be killed by polymyxin B or neomycin (resistance). This means that Sandoz Cortimyxin or other medicines that contain polymyxin B, bacitracin or neomycin may not work for you in the future.
- Do not share your medicine.
- Do not use for longer than 10 days.

Usual dose:
Adults: Instill 4 drops into the affected ear 3 or 4 times daily.
Infants and Children: 3 drops are suggested because of the small capacity of the ear canal.

Overdose:

If you think you have taken too much Sandoz Cortimyxin, contact your healthcare professional, hospital emergency department or regional poison control centre immediately, even if there are no symptoms.

What are possible side effects from using Sandoz Cortimyxin?
These are not all the possible side effects you may feel when taking Sandoz Cortimyxin. If you experience any side effects not listed here, contact your healthcare professional.

The reaction occurring most often is allergic sensitization. The following local adverse reactions have been reported with topical corticosteroids, especially under occlusive dressings:

- dryness;
- sensitivity around hair follicles;
- excessive hair growth;
- acne breakouts;
- bleaching of skin;
- rash around mouth, eyes or nose;
- weakening of the skin;
- secondary infection;
- thinning of the skin;
- heat rash.

Serious side effects and what to do about them		
Symptom / effect	Talk to your healthcare professional	Stop taking drug

	Only if severe	In all cases	and get immediate medical help
Burning, redness, irritation, swelling or pain			✓
Allergic skin reaction			✓

If you have a troublesome symptom or side effect that is not listed here or becomes bad enough to interfere with your daily activities, talk to your healthcare professional.

Reporting Side Effects

You can report any suspected side effects associated with the use of health products to Health Canada by:

- Visiting the Web page on Adverse Reaction Reporting (https://www.canada.ca/en/health-canada/services/drugs-health-products/medeffect-canada/adverse-reaction-reporting.html) for information on how to report online, by mail or by fax; or
- Calling toll-free at 1-866-234-2345.

NOTE: Contact your health professional if you need information about how to manage your side effects. The Canada Vigilance Program does not provide medical advice.

Storage:
Store between 15 and 30°C.

Keep out of reach and sight of children.

If you want more information about Sandoz Cortimyxin:

- Talk to your healthcare professional
- Find the full product monograph that is prepared for healthcare professionals and includes this Patient Medication Information by visiting the Health Canada website (https://www.canada.ca/en/health-canada.html); the manufacturer's website www.sandoz.ca, or by calling 1-800-361-3062.

This leaflet was prepared by Sandoz Canada Inc.

Last Revised: January 29, 2019

READ THIS FOR SAFE AND EFFECTIVE USE OF YOUR MEDICINE

PATIENT MEDICATION INFORMATION

[Pr]SANDOZ CORTIMYXIN
Ophthalmic Ointment

Read this carefully before you start taking **Sandoz Cortimyxin** and each time you get a refill. This leaflet is a summary and will not tell you everything about this drug. Talk to your healthcare professional about your medical condition and treatment and ask if there is any new information about **Sandoz Cortimyxin**.

What is Sandoz Cortimyxin used for?
Sandoz Cortimyxin is used to treat certain bacterial infections in the eye.

Sandoz Cortimyxin contains antibacterial ingredients called polymyxin B, bacitracin and neomycin and it should be used exactly as directed by your healthcare professional.

How does Sandoz Cortimyxin work?
Sandoz Cortimyxin contains two types of medicines:

- Hydrocortisone to reduce inflammation.
- Antimicrobials to kill bacteria and reduce infections.

What are the ingredients in Sandoz Cortimyxin?
Medicinal ingredients: polymyxin B (as sulfate), bacitracin (as zinc), neomycin (as sulfate) and hydrocortisone.
Non-medicinal ingredients: petrolatum.

Sandoz Cortimyxin comes in the following dosage forms:
Tubes of 3.5 g.

Do not use Sandoz Cortimyxin if:

- you have herpes cornea or conditions involving the back of the eye;
- you have acute superficial herpes simplex;
- you have viral diseases of the cornea and conjunctiva;
- you have bacterial and/or fungal diseases of the eye, including tuberculosis of the eye;
- are allergic to any of the ingredients in Sandoz Cortimyxin.

Sandoz Cortimyxin ointment is not for use in the ear if the eardrum is perforated

To help avoid side effects and ensure proper use, talk to your healthcare professional before you take Sandoz Cortimyxin. Talk about any health conditions or problems you may have, including if you:

- have been using topical steroids for a while;
- have allergies;
- are pregnant or planning to become pregnant;

- are breastfeeding or planning to breastfeed**.**

Tell your healthcare professional about all the medicines you take, including any drugs, vitamins, minerals, natural supplements or alternative medicines.

How to take Sandoz Cortimyxin:

- Do not use for more than 10 days, unless directed by your doctor.
- Misuse or overuse of Sandoz Cortimyxin could lead to the growth of bacteria that will not be killed by polymyxin B, bacitracin or neomycin (resistance). This means that Sandoz Cortimyxin or other medicines that contain polymyxin B, bacitracin or neomycin may not work for you in the future.
- Do not share your medicine.

Usual dose:
Apply in the affected eye 2 to 4 times daily.

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- secondary infection;
- thinning of the skin;
- heat rash.

The development of secondary infection has occurred after use of combinations containing steroids and antimicrobials.

Serious side effects and what to do about them			
Symptom / effect	Talk to your healthcare professional		Stop taking drug and get immediate medical help
	Only if severe	In all cases	
Burning, redness, irritation, swelling or pain			✓
Allergic skin reaction			✓
Glaucoma: Hazy or blurred vision, severe eye and head pain, nausea or vomiting (accompanying severe eye pain), sudden sight loss		✓	

If you have a troublesome symptom or side effect that is not listed here or becomes bad enough to interfere with your daily activities, talk to your healthcare professional.

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