Pulvilox Tablets

(Levofloxacin)

250 mg & 500 mg Tablets

Composition:
Pulvilox 250 mg Tablet: Each film coated tablet contains 256.23 mg of levofloxacin hemihydrate equivalent to 250 mg of levofloxacin.
Pulvilox 500 mg Tablet: Each film coated tablet contains 512.45 mg of levofloxacin hemihydrate equivalent to 500 mg of levofloxacin.

Description:
Pulvilox (levofloxacin) is a synthetic broad-spectrum antibacterial agent. Chemically, levofloxacin, a chiral fluorinated carboxyquinolone, is the pure (-)-(S)-enantiomer of the racemic drug substance ofloxacin with a chemical name of (-)-(S)-9-fluoro-2,3-dihydro-3-methyl-10-(4-methyl- piperazinyl)-7-oxo-7H-pyrido[1,2,3-de]-[1,4] benzoxazine-6-carboxylic acid hemihydrate.

Clinical Pharmacology:
Mechanism of Action:
Levofloxacin is the L-isomer of the racemate, ofloxacin, a quinolone antimicrobial agent. The antibacterial activity of ofloxacin resides primarily in the L-isomer. The main mechanism of action of levofloxacin involves the inhibition of bacterial topoisomerase IV and DNA gyrase (both of which are type II topoisomerases), enzymes required for DNA replication, transcription, repair and recombination. Levofloxacin has *in-vitro* activity against the following gram-negative and gram-positive micro-organisms. It is often bactericidal at concentrations equal to or slightly greater than inhibitory concentration. It is generally considered to be about twice as active as its isomer, ofloxacin.

Antibacterial Activity:
Pulvilox (levofloxacin) is a wide-spectrum antibacterial agent against gram-positive and gram-negative bacteria, including anaerobes. Pulvilox (Levofloxacin) has shown strong antibacterial activities against Staphylococcus spp., Streptococcus Pneumoniae, Streptococcus Pyogones, Streptococcus hemolyticus, Enterobacter spp, Escherichia coli, Klebsiella spp., Serratia spp., Enterococcus spp., Proteus spp., and other glucose non-fermentative gram-negative rods, Pseudomonas aeruginosa, Haemophilus influenzae and Neisseria gonorrhoeae. Moreover, Pulvilox (Levofloxacin) has shown antibacterial activity against Chlamydia trachomatis.

Pharmacokinetics:
Absorption:
Orally administered levofloxacin is rapidly and almost completely absorbed with peak plasma concentrations being obtained within 1 hour. The absolute bio-availability is approximately 100%. Food has little affect on the absorption of levofloxacin.
Distribution in plasma:
Approximately 30-40% of levofloxacin is bound to serum protein. 500 mg once daily multiple dosing with levofloxacin showed negligible accumulation. There is modest but predictable accumulation of levofloxacin after doses of 500 mg twice daily. Steady state is achieved within 3 days.
Penetration into tissues and body fluids:
Maximum levofloxacin concentrations in bronchial mucosa and epithelial lining fluid were 8.3 µg/ml and 10.8 µg/ml respectively. These were reached approximately one hour after administration.
Penetration into lung tissues:
Maximum levofloxacin concentrations in lung tissues were approximately 11.3 µg/ml and were reached between 4 and 6 hours after administration.

Metabolism:
Levofloxacin is metabolised to a very small extent, the metabolites being desmethyl-levofloxacin and levofloxacin N-oxide. These metabolites account for <5% of the dose excreted in urine. Levofloxacin is stereochemically stable and does not undergo chiral inversion.

Elimination:
Following oral administration, levofloxacin is eliminated relatively slowly from the plasma (t ½ 6–8 h). Excretion is primarily by the renal route (>85% of the administered dose).

Indications:
Pulvilox (Levofloxacin) tablet is used for the treatment of mild to moderate bacterial infections in adults when caused by levofloxacin sensitive bacteria:
Acute sinusitis (inflammation of one or more paranasal sinuses), inflammation of the lower airways: acute exacerbation of chronic bronchitis, community acquired pneumonia, complicated urinary tract infections including pyelonephritis, uncomplicated urinary tract infections, chronic bacterial prostatitis, skin and soft tissue infections.

Contraindications
Pulvilox (Levofloxacin) tablets must not be administered if any of the following conditions applies to any of the following patients group:
Hypersensitivity to Pulvilox (Levofloxacin), or other quinolone antibiotic, patients who suffer from epilepsy, patients with a history of tendon disorders related to treatment with an antibiotic of the fluoroquinolone class, children or growing adolescents.
Use in Pregnancy and Lactation: There are no adequate and well controlled studies in pregnant women. Pulvilox (Levofloxacin) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. Because of the potential for serious adverse reactions from Pulvilox (Levofloxacin) in nursing infants a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.
Pulvilox (Levofloxacin) must not be administered to children and adolescents.
If elderly patients are to be considered, then these patients have more often a reduced renal function.

Precautions:
In cases of severest pneumococcal pneumonia Pulvilox (Levofloxacin) may not be the optimal therapy. Hospital acquired infections due to certain pathogens (P. aeruginosa) may require combination therapy. The risk of getting convulsions during the treatment with Pulvilox (Levofloxacin) may be increased if in the past the brain was damaged for example by a stroke or severe brain injury. Therefore inform the doctor completely about former diseases. You must not be treated with Pulvilox (Levofloxacin) if you suffer from epilepsy, the risk of getting convulsions may also be increased by concomitant treatment with fenbufen or comparable nonsteroidal antiphlogistics or with theophylline.
Although photosensitisation (hypersensitivity to light with sunburn-like reactions) is very rare with administration of Pulvilox (Levofloxacin), it is recommended that patients should not expose themselves unnecessarily to strong sunlight or to artificial UV rays (e.g., Sunray lamp, solarium), in order to prevent photosensitisation.
The doctor has to be immediately informed, if severe, persistent and/or bloody diarrhoea occur during or after treatment with Pulvilox (Levofloxacin). These may be symptomatic of a severe inflammation of the intestine (enterocolitis), induced by the antibiotic treatment. If pseudomembranous colitis is suspected, the treatment with Pulvilox (Levofloxacin) must be stopped immediately and an appropriate therapy must be initiated without delay. Products inhibiting the peristalsis must not be administered in these cases. Tendinitis, rarely observed with quinolones, may occasionally lead to rupture, involving Achilles tendon in particular. Elderly patients are more prone to tendinitis. The risk of tendon rupture may be increased by coadministration of corticosteriods. If tendinitis is suspected, medical advice is to be asked for immediately, treatment with Pulvilox (Levofloxacin) must be halted, and the affected tendon must be treated appropriately, e.g., immobilization.
Patients with glucose-6 phosphate dehydrogenase deficiency (a hereditary disease) may be prone to destruction of red blood cells (hemolysis) when treated with quinolone antibacterial agents, and so Pulvilox (Levofloxacin) should be used with caution in these patients.
Some side-effects of Pulvilox (Levofloxacin) like vertigo, dizziness, drowsiness, visual disturbances may impair ability to concentrate and react. This may constitute a risk in situations where these abilities are of special importance (e.g., driving a car or operating machinery, working without secure hold). This especially applies to the combination with alcohol.

Overdosage:
In the event of an acute overdosage, the stomach should be emptied. The patient should be observed and appropriate hydration maintained. Pulvilox (Levofloxacin) is not efficiently removed by hemodialysis or peritoneal dialysis.

Drug Interactions:
If you take concomitantly other drugs, ask your doctor or pharmacist, whether they are one of the here mentioned drugs. This also applies to drugs, which were not prescribed by your doctor.
There are indications of a pronounced lowering of the cerebral seizure threshold when quinolones are given concurrently with other agents which lower the seizure threshold (e.g., theophylline). This applies also to the concomitant administration of quinolones and fenbufen or non-steroidal antiphlogistics.
The affect of Pulvilox (Levofloxacin) is significantly reduced when administered together with sucralfate. This also applies to concomitant administration of magnesium or aluminium containing antacids or of iron salts. Pulvilox (Levofloxacin) tablets should be taken at least 2 hours before or after administrating of these preparations.
The elimination (renal clearance) of Pulvilox (Levofloxacin) was slightly reduced by cimetidine and probenicid. However, these interactions are unlikely to be of clinical relevance. Pulvilox (Levofloxacin) should be given carefully when it is coadministered with drugs that affect a certain mode of elimination (tubular secretion) such as probenicid and cimetidine. This applies especially to patients with impaired renal function. The half-life of cyclosporin was slightly increased when coadministered with Pulvilox (Levofloxacin).

Dosage and Administration:
Pulvilox (Levofloxacin) 250 mg, 500 mg tablets are administered orally every 24 hours. The dosage depends on the type and severity of the infection and the sensitivity of the suspected causative pathogens.

The following dose recommendation can be given for Pulvilox (Levofloxacin) tablets.

Dosage in Patients with Impaired Hepatic Functions: No dose reduction is required, because Pulvilox (Levofloxacin) is not significantly metabolized by the liver.
Dose in Elderly: No adjustment of dosage is required in the elderly, other than imposed by consideration of renal function.

Dosage in patients with normal Renal function (Creatinine Clearance > 50 ml/min)

Indications	Daily Dose (mg)	Duration (Days)
Acute bacterial sinusitis	250 mg bid or 500 mg od	10 - 14
Acute bacterial exacerbation of Chronic bronchitis	250 mg bid or 500 mg od	7
Community-acquired Pneumonia	250 mg bid or 500 mg od	7 - 14
Nosocomial pneumonia	750 mg od	7 - 14
Typhoid and Paratyphoid fever	250 mg bid or 500 mg od	10 - 14
Uncomplicated skin and soft tissue infections	250 mg bid or 500 mg od	7 - 10
Complicated skin and soft tissue infections	750 mg od	7 - 14
Uncomplicated urinary tract infections	250 mg od	3
Complicated urinary tract infections	250 mg od	10
Acute Pyelonephritis	250 mg od	10

Dosage in patients with Impaired Renal function (Creatinine Clearance < 50 ml/min)

Creatinine Clearance	Dosage Regimens		
	Initial Dose 250 mg/24 hour	Initial Dose 500 mg/24 hour	Initial Dose 750 mg/24 hour
50-20 ml/min	No adjustment	250 mg/48 hour	500 mg/48 hour
19-10 ml/min	250 mg/48 hour	250 mg/48 hour	500 mg/48 hour
Haemodialysis & CAPD	250 mg/48 hour	250 mg/48 hour	500 mg/48 hour

NOTE: No additional doses are required after hemodialysis or continuous ambulatory peritoneal dialysis (CAPD).

Method of Administration
Pulvilox (Levofloxacin) tablets should be swallowed without crushing with sufficient amount of liquid. The tablets may be taken during meals or between meals.

Duration of Treatment
The duration of treatment is determined according to the course of the disease. As with antibiotic therapy in general, administration of Pulvilox (Levofloxacin) tablets should be continued for a minimum of 48 to 72 hours after the patient has become afebrile or evidence of bacterial eradication has been obtained.

Side Effects:
Skin reactions and general allergic reactions: Itching and rash. General allergic reactions (anaphylactic /anaphylactoid reaction) with symptoms such as urticaria, cramping of the bronchi and possibly severe breathing problems, as well as in very rare cases swelling of the skin and mucous membranes. **Gastrointestinal Tract / Metabolism:** Nausea and diarrhoea, loss of appetite, vomiting, pain in the abdominal region, dyspepsia, bloody diarrhoea which in very rare cases may be indicative of enterocolitis, including pseudomembranous colitis. **Effects on the nervous system:** Headache, vertigo / dizziness, drowsiness, sleeping problems, paraesthesia, e.g., like tingling in the hands, trembling, restlessness, anxiety, convulsions and confusions. **Effects on cardiovascular system:** Abnormally rapid beating of the heart, drop of blood pressure and circulatory (shock like) collapse. **Effects on muscles, tendon and bones:** Tendon pain including inflammation, joint pain or muscle pain. Tendon rupture (Achilles Tendone). This side effect may occur within 48 hours after starting treatment and may be bilateral. Muscular weakness, which may be of special importance in patients with myasthenia gravis (a rare disease of nervous system). **Effects on liver and kidney:** Increased levels of enzymes, (e.g., ALT, AST) increased levels of bilirubin and serum creatinin. Inflammation of the liver, disturbance of kidney function up to kidney failure. **Effects on the blood:** Increase of certain blood cells, (eosinophilia) decrease in the number of white blood cells (Leukopenia). **Other Reactions:** General weakness, fever, allergic inflammation of the lung (allergic pneumonitis) or of small blood vessels (vasculitis). Any antibacterial treatment may lead to a disturbance of the micro-organisms that are normally found in humans.

Storage:
Store at room temperature (15- 30°C). Protect from heat, sunlight and moisture.

Do not use the drug after the expiry date indicated on the package. This date refers to the product correctly stored in its unopened package.

Packaging:
Pulvilox 250 mg film coated tablets available in Alu Alu pack of 10 tablets.
Pulvilox 500 mg film coated tablets available in Alu Alu pack of 10 tablets.

Keep out of the reach of children.

پلوی لوکس گولیاں

(لیوفلاکساسن)

اجزائے ترکیبی اور وضاحت:

پلوی لوکس (250 اور 500 ملی گرام) گولیوں میں لیوفلاکساسن بطور عامل جز شامل ہے۔

علامات:

پلوی لوکس درمیانی اور شدید قسم کے بیکٹیریل انفیکشن کے علاج میں موثر ہے۔ جس میں نچلی سانس کی نالیوں کی سوزش (Inflammation of the lower airways) شدید دائمی برونکائی کی سوزش (Acute exacerbation of chronic bronchitis) سائینس کی شدید سوزش (Acute sinusitus) وبائی نمونیہ (Community acquired pneumonia) جلد اور نرم بافتوں کے انفیکشن وغیرہ شامل ہیں۔

خوراک:

پلوی لوکس 250 ملی گرام اور 500 ملی گرام کی خوراک 24 گھنٹے میں ایک مرتبہ۔
خوراک کا انحصار انفیکشن کی شدت پر ہے۔
پلوی لوکس گولی بغیر چبائے زیادہ پانی (Liquid) کے ساتھ نگل لیں۔

ممانعت برائے علاج:

لیوفلاکساسن یا کسی دوسرے کینولون (Quinolones) سے ذو حسی (Hypersensitivity) ہو۔ مرگی کے مریض، بچے، حاملہ اور دودھ پلانے والی خواتین ڈاکٹر کے مشورہ سے استعمال کریں۔

منفی و مضر اثرات:

جلد پر نشانات، متلی، دست، بھوک کا نہ لگنا، الٹی، سر درد یا چکر آنا۔

پیکنگ:

پلوی لوکس 250 ملی گرام کا پیک 10 گولیوں پر مشتمل ہے۔
پلوی لوکس 500 ملی گرام کا پیک 10 گولیوں پر مشتمل ہے۔

خوراک ڈاکٹر کی ہدایت کے مطابق استعمال کریں۔
صرف مستند ڈاکٹر کے نسخہ پر دوا فروخت کی جائے۔
تمام ادویات بچوں کی پہنچ سے دور رکھیں۔
دوا کو کمرہ کے درجہ حرارت ۱۵ سے ۳۰ ڈگری سینٹی گریڈ پر رکھیں۔
گرمی، نمی اور دھوپ سے بچائیں۔

Manufactured by:
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Marketed by:
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Chiesi