

SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT

Cefalexin Capsules 500mg

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each capsule contains Cefalexin monohydrate equivalent to 500 mg Cefalexin

For a full list of excipients, see section 6.1

3 PHARMACEUTICAL FORM

Capsules, hard

Size 0 grey/orange capsule containing white powder printed CHX 500.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Cefalexin is indicated in the treatment of the following infections due to susceptible micro-organisms: respiratory tract infections; otitis media; skin and soft tissue infections; bone and joint infections; genito-urinary infections, including acute prostatitis; dental infections.

Cefalexin is active against the following organisms in vitro: beta-haemolytic streptococci; staphylococci, including coagulase-positive, coagulase-negative and penicillinase-producing strains; streptococcus pneumoniae; escherichia coli; proteus mirabilis; klebsiella species, haemophilus influenzae; branhamella catarrhalis.

Most strains of enterococci (streptococcus faecalis) and a few strains of staphylococci are resistant to cefalexin. It is not active against most strains of enterobacter species, morganella morganii and pr. Vulgaris. It has no activity against pseudomonas or herellea species. When tested by in vitro methods,

staphylococci exhibit cross- resistance between cefalexin and methicillin-type antibiotics.

4.2 Posology and method of administration

Adults

The adult dosage ranges from 1-4g daily in divided doses; most infections will respond to a dosage of 500mg every 8 hours. For skin and soft tissue infections, streptococcal pharyngitis and mild, uncomplicated urinary tract infections, the usual dosage is 250mg every 6 hours, or 500mg every 12 hours.

For more severe infections or those caused by less susceptible organisms, larger doses may be needed. If daily doses of cefalexin greater than 4g are required parenteral cephalosporins, in appropriate doses, should be considered.

Elderly

As for adults. Reduce dosage if renal function is markedly impaired (see section 4.4).

Children

The usual recommended daily dosage for children is 25-50mg/kg (10-20mg/lb) in divided doses. For skin and soft tissue infections, streptococcal pharyngitis and mild, uncomplicated urinary tract infections, the total daily dose may be divided and administered every 12 hours. For most infections the following schedule is suggested:

Children under 5 years: 125mg every 8

hours. Children 5 years and over: 250mg every

8 hours.

In severe infections, the dosage may be doubled. In the therapy of otitis media, clinical studies have shown that a dosage of 75-100mg/kg/day in 4 divided doses is required. In the treatment of beta-haemolytic streptococcal infections, a therapeutic dose should be administered for at least 10 days.

Route of administration

Oral

4.3 Contraindications

Cefalexin is contraindicated in patients with known allergy to the cephalosporins group of antibiotics.

Cefalexin should be given cautiously to patients who have shown hypersensitivity to other drugs. Cephalosporins should be given with caution to penicillin-sensitive patients, as there is some evidence of partial cross-allergenicity between the penicillins and the cephalosporins. Patients have had severe reactions (including anaphylaxis) to both drugs.

Cefalexin is contraindicated in patients with porphyria.

4.4 Special warnings and precautions for use

Before instituting therapy with cefalexin, every effort should be made to determine whether the patient has had previous hypersensitivity reactions to the cephalosporins, penicillins or other drugs. Cefalexin should be given cautiously to penicillin-sensitive patients. There is some clinical and laboratory evidence of partial cross-allergenicity of the penicillins and cephalosporins. Patients have had severe reactions (including anaphylaxis) to both drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics, including macrolides, semisynthetic penicillins and cephalosporins. It is important, therefore, to consider its diagnosis in patients who develop diarrhoea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening. Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, appropriate measures should be taken.

If an allergic reaction to cefalexin occurs the drug should be discontinued and the patient treated with the appropriate agents.

Prolonged use of cefalexin may result in the overgrowth of non-susceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Reports of neurotoxicity have been identified in association with cephalosporin treatment. Symptoms may include encephalopathy, myoclonus and seizures. Elderly patients, patients with severe renal impairment or central nervous system disorders are particularly at risk. Cefalexin should be administered with caution in the presence of markedly impaired renal function. Careful clinical and laboratory studies should be made because safe dosage may be lower than that usually recommended. If dialysis is required for renal failure, the daily dose of cefalexin should not exceed 500mg. If cefalexin associated neurotoxicity is suspected, discontinuation of cefalexin should be considered.

Concurrent administration with certain other drug substances, such as aminoglycosides, other cephalosporins, or furosemide, (frusemide) and similar

potent diuretics, may increase the risk of nephrotoxicity.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In haematological studies, or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side, or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognised that a positive Coombs' test may be due to the drug.

A false positive reaction for glucose in the urine may occur with Benedict's or Fehling's solutions or with copper sulphate test tablets.

Acute generalised exanthematous pustulosis (AGEP) has been reported in association with cefalexin treatment. At the time of prescription patients should be advised of the signs and symptoms and monitored closely for skin reactions. If signs and symptoms suggestive of these reactions appear, cefalexin should be withdrawn immediately and an alternative treatment considered. Most of these reactions occurred most likely in the first week during treatment.

Excipients

Cefalexin capsules contains lactose and therefore should not be used in patients with rare hereditary problems of fructose intolerance, galactose intolerance, galactosaemia or glucose-galactose malabsorption should not take this medicine.

4.5 Interaction with other medicinal products and other forms of interaction

Probenecid causes reduced excretion of cefalexin, leading to increased plasma concentration.

In a single study of 12 healthy subjects given single 500 mg doses of cefalexin and metformin, plasma metformin C_{max} and AUC increased by an average of 34% and 24%, respectively, and metformin renal clearance decreased by an average of 14%. No side-effects were reported in the 12 healthy subjects in this study. No information is available about the interaction of cefalexin and metformin following multiple dose administration. The clinical significance of this study is unclear, particularly as no cases of "lactic acidosis" have been reported in association with concomitant metformin and cefalexin treatment.

Hypokalaemia has been described in patient taking cytotoxic drugs for leukaemia when they were given gentamicin and cephalixin.

4.6 Fertility, pregnancy and lactation

Pregnancy:

Although laboratory and clinical studies have shown no evidence of

teratogenicity, caution should be exercised when prescribing for the pregnant patient.

Breast-feeding

The excretion of cefalexin in human breast milk increased up to 4 hours following a 500mg dose. The drug reached a maximum level of 4 micrograms/ml then decreased gradually and had disappeared 8 hours after administration. Caution should be exercised when cefalexin is administered to a nursing woman, woman, since the neonate is presented with the risk of candidiasis and CNS toxicity due to immaturity of the blood-brain barrier. There is a theoretical possibility of later sensitisation.

4.7 Effects on ability to drive and use machines

Not applicable.

4.8 Undesirable effects

Gastro-intestinal-nausea, vomiting, dyspepsia, and abdominal pain have occurred. Diarrhoea has been reported infrequently. It is rarely severe enough to warrant cessation of therapy. Colitis, including rare instances of pseudomembranous colitis, has been reported.

Hypersensitivity - Allergies (in the form of rash, urticaria and angio-oedema), and rarely erythema multiforme, Stevens-Johnson syndrome and toxic epidermal necrolysis have been observed. These reactions usually subside upon discontinuation of the drug, although in some cases supportive therapy may be necessary. Anaphylaxis has also been reported.

Haemic and Lymphatic System: - eosinophilia, neutropenia, thrombocytopenia and haemolytic anaemia have been reported.

Hepatic - slight elevations of AST and ALT have been observed. As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.

Skin and subcutaneous tissue disorders: Acute generalised exanthematous pustulosis (AGEP) has been reported with unknown frequency.

Other: - other reactions have included genital and anal pruritus, genital moniliasis, vaginitis and vaginal discharge, dizziness, fatigue, headache, agitation, confusion, hallucinations, arthralgia, arthritis and joint disorder. Reversible interstitial nephritis has been reported rarely. There have been reports of neurological sequelae including tremor, myoclonia, convulsions, encephalopathy with drugs belonging to the class of cephalosporins. Most cases occurred in patients with renal impairment who received doses that exceeded the recommended dose and resolved following discontinuation of treatment.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product, Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme: www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store.

4.9 Overdose

Symptoms of overdosage may include nausea, vomiting, epigastric distress, diarrhoea and haematuria.

Treatment of overdosage - serum levels can be considerably reduced by haemodialysis or peritoneal dialysis.

In the event of severe overdosage, general supportive care is recommended including close clinical and laboratory monitoring of haematological, renal and hepatic functions and coagulation status until the patient is stable. Forced diuresis, peritoneal dialysis, haemodialysis, or charcoal haemoperfusion have not been established as beneficial for an overdose of cefalexin. It would be extremely unlikely that one of these procedures would be indicated.

Unless 5 - 10 times the normal total daily dose has been ingested, gastro- intestinal decontamination should not be necessary.

There have been reports of haematuria without impairment of renal function in children accidentally ingesting more than 3.5g of cefalexin in a day. Treatment has been supportive (fluids) and no sequence have been reported.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

ATC Code: J01DB01

Cefalexin is bactericidal and has antimicrobial activity similar to that of cephaloridine or cephalothin against both gram-positive and gram-negative organisms.

In vitro tests demonstrate that cephalosporins are bactericidal because of their inhibition of cell-wall synthesis.

Cefalexin is active against the following organisms in vitro:

Beta-haemolytic streptococci

Staphylococci, including coagulase-positive, coagulase-negative and penicillinase-producing strains.

Streptococcus pneumoniae

Escherichia coli
Proteus mirabilis
Klebsiella species
Haemophilus influenzae
Branhamella catarrhalis

Most strains of enterococci (*Streptococcus faecalis*) and a few strains of staphylococci are resistant to cefalexin. It is not active against most strains of *Enterobacter species*, *Morganella morganii* and *Pr. vulgaris*. It has no activity against *Pseudomonas* or *Herellea species* or *Acinetobacter calcoaeticus*. Penicillin-resistant *Streptococcus pneumoniae* is usually cross-resistant to beta-lactam antibiotics. When tested by in-vitro methods, staphylococci exhibit cross-resistance between cefalexin and methicillin-type antibiotics.

5.2 Pharmacokinetic properties

Absorption

Human pharmacology - cefalexin is acid stable and may be given without regard to meals.

It is rapidly absorbed after oral administration. Following doses of 250 mg, 500 mg and 1g, average peak serum levels of approximately 9, 18 and 32 mg/L respectively were obtained at 1 hour. Measurable levels were present 6 hours after administration.

Cefalexin is almost completely absorbed from the gastro-intestinal tract, and 75-100% is rapidly excreted in active form in the urine. Absorption is slightly reduced if the drug is administered with food.

The half-life is approximately 60 minutes in patients with normal renal function. Haemodialysis and peritoneal dialysis will remove cefalexin from the blood.

Distribution

Peak blood levels are achieved one hour after administration, and therapeutic levels are maintained for 6-8 hours. Approximately 80% of the active drug is excreted in the urine within 6 hours. No accumulation is seen with dosages above the therapeutic maximum of 4 g/day.

The half-life may be increased in neonates due to their renal immaturity, but there is no accumulation when given at up to 50 mg/kg/day.

Elimination

Cefalexin is excreted in the urine by glomerular filtration and tubular secretion. Studies showed that over 90% of the drug was excreted unchanged in the urine within 8 hours. During this period peak urine concentrations following the 250 mg, 500 mg and 1 g doses were approximately 1000, 2200 and 5000 mg/L respectively.

5.3 Preclinical safety data

The daily oral administration of cefalexin to rats in doses of 250 or 500mg/kg prior to and during pregnancy, or to rats and mice during the period of organogenesis only, had no adverse effect on fertility, foetal viability, foetal weight, or litter size.

Cefalexin showed no enhanced toxicity in weanling and newborn rats as compared with adult animals.

The oral LD50 of cefalexin in rats is 5,000mg/kg.

6.1 List of excipients

Lactose
Magnesium stearate E 572

Capsule shell
Black iron oxide (E172)
Titanium dioxide (E171)
Yellow iron Oxide
(E172) Red Iron Oxide
(E172)
Gelatin (E 441)

6.2 Incompatibilities

None known.

6.3 Shelf life

36 months.

6.4 Special precautions for storage

Do not store above 25°C.
Keep the container tightly closed (for bottles).
Store in the original package (for blisters).

6.5 Nature and contents of container

Each container consists of a polypropylene tubular container with an open end equipped to accept a polyethylene closure, with a tamper-evident tear strip, or PVC/aluminium blisters, or PVDC coated PVC/ Aluminium blisters (60g/m² PVDC on 250µm PVC/20µm Al) of an appropriate size to accommodate 7, 14, 20, 21, 28, 30, 50, 56, 60, 100, or 500 capsules. Not all pack sizes may be marketed.

6.6 Special precautions for disposal

No special instructions

7 MARKETING AUTHORISATION HOLDER

Rudipharm Limited
Unit 6
Salbrook Road Industrial Estate
Salbrook Road
Redhill
Surrey RH1 5GJ, UK

8 MARKETING AUTHORISATION NUMBER(S)

PL 49565/0024

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

13/06/2025

10 DATE OF REVISION OF THE TEXT

21/02/2025