Front

BACTCID™

(CIPROFLOXACIN)

Tablet

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COMPOSITION:

BACTCID Tablet 250 mg:
Each film coated tablet contains:
Ciprofloxacin HCl USP equivalent to
Ciprofloxacin ..... 250 mg.

Product Specs.: USP

BACTCID Tablet 500 mg:
Each film coated tablet contains:
Ciprofloxacin HCl USP equivalent to
Ciprofloxacin ..... 500 mg.

Product Specs.: USP

WARNING
SERIOUS ADVERSE REACTIONS INCLUDING TENDINITIS, TENDON RUPTURE, PERIPHERAL NEUROPATHY, CENTRAL NERVOUS SYSTEM EFFECTS AND EXACERBATION OF MYASTHENIA GRAVIS

- ***Fluoroquinolones, including Ciprofloxain, have been associated with disabling and potentially irreversible serious adverse reactions that have occurred together including:***
  - Tendinitis and tendon rupture
  - Peripheral neuropathy
  - Central nervous system effects
- **Discontinue Ciprofloxacin immediately and avoid the use of fluoroquinolones, including Ciprofloxacin, in patients who experience any of these serious adverse reactions. Fluoroquinolones, including Ciprofloxacin, may exacerbate muscle weakness in patients with myasthenia gravis. Avoid Ciprofloxacin in patients with known history of myasthenia gravis.**
- ***Because fluoroquinolones, including Ciprofloxacin, have been associated with serious adverse reactions, reserve Ciprofloxacin for use in patients who have no alternative treatment options for the following indications:***
  - Acute exacerbation of chronic bronchitis
  - Acute uncomplicated cystitis
  - Acute sinusitis

DESCRIPTION:
BACTCID (ciprofloxacin hydrochloride) Tablets are synthetic antimicrobial agents for oral administration. Ciprofloxacin hydrochloride, USP, a fluoroquinolone, with a molecular weight of 385.8. Its empirical formula is $C_{17}H_{18}FN_3O_3 \cdot HCl \cdot H_2O$.

CLINICAL PHARMACOLOGY:
Mechanism of action: Ciprofloxacin is a member of the fluoroquinolone class of antibacterial agents. The bactericidal action of ciprofloxacin results from inhibition of the enzymes topoisomerase II (DNA gyrase) and topoisomerase IV (both Type II topoisomerases), which are required for bacterial DNA replication, transcription, repair, and recombination.
Mechanism of resistance: Resistance to fluoroquinolones occurs primarily by either mutations in the DNA gyrases, decreased outer membrane permeability, or drug efflux. In vitro resistance to ciprofloxacin develops slowly by multiple step mutations.
Cross resistance: There is no known cross-resistance between ciprofloxacin and other classes of antimicrobials.
Gram-positive bacteria: *Bacillus anthracis, Enterococcus faecalis, Staphylococcus aureus* (methicillin-susceptible isolates only) *Staphylococcus epidermidis (methicillin-susceptible isolates only), Staphylococcus saprophyticus Streptococcus pneumoniae Streptococcus pyogenes.*
Gram-negative bacteria: *Campylobacter jejuni, Citrobacter koseri, Citrobacter freundii, Enterobacter cloacae, Escherichia coli, Haemophilus influenzae, Haemophilus parainfluenzae, Klebsiella pneumoniae, Moraxella catarrhalis Morganella morganii, Neisseria gonorrhoeae, Proteus mirabilis, Proteus vulgaris, Providencia rettgeri Providencia stuartii, Pseudomonas aeruginosa, Salmonella typhi, Serratia marcescens, Shigella boydii Shigella dysenteriae, Shigella flexneri, Shigella sonnei, Yersinia pestis.*
Pharmacokinetics:
Absorption: The absolute bioavailability of ciprofloxacin when given as an oral tablet is approximately 70% with no substantial loss by first pass metabolism. Maximum serum concentrations are attained 1 to 2 hours after oral dosing. The serum elimination half-life in subjects with normal renal function is approximately 4 hours.
Food: When Ciprofloxacin Tablet is given concomitantly with food, there is a delay in the absorption of the drug, resulting in peak concentrations that occur closer to 2 hours after dosing rather than 1 hour. Avoid concomitant administration of Ciprofloxacin with dairy products (like milk or yogurt) or calcium-fortified juices alone since decreased absorption is possible; however, Ciprofloxacin may be taken with a meal that contains these products.
Distribution: The binding of ciprofloxacin to serum proteins is 20% to 40% which is not likely to be high enough to cause significant protein binding interactions with other drugs. After oral administration, ciprofloxacin is widely distributed throughout the body. Tissue concentrations often exceed serum concentrations in both men and women, particularly in genital tissue including the prostate. Ciprofloxacin is present in active form in the saliva, nasal and bronchial secretions, mucosa of the sinuses, sputum, skin blister fluid, lymph, peritoneal fluid, bile, and prostatic secretions. Ciprofloxacin has also been detected in lung, skin, fat, muscle, cartilage, and bone. The drug diffuses into the cerebrospinal fluid (CSF); however, CSF concentrations are generally less than 10% of peak serum concentrations. Low levels of the drug have been detected in the aqueous and vitreous humors of the eye.
Metabolism: Four metabolites have been identified in human urine which together account for approximately 15% of an oral dose. The metabolites have antimicrobial activity, but are less active than unchanged ciprofloxacin. Ciprofloxacin is an inhibitor of human cytochrome P450 1A2 (CYP1A2) mediated metabolism. Co-administration of ciprofloxacin with other drugs primarily metabolized by CYP1A2 results in increased plasma concentrations of these drugs and could lead to clinically significant adverse events of the co-administered drug.
Excretion: The serum elimination half-life in subjects with normal renal function is approximately 4 hours. Approximately 40 to 50% of an orally administered dose is excreted in the urine as unchanged drug. The urinary excretion of ciprofloxacin is virtually complete within 24 hours after dosing. Although bile concentrations of ciprofloxacin are several fold higher than serum concentrations after oral dosing, only a small amount of the dose administered is recovered from the bile as unchanged drug. An additional 1% to 2% of the dose is recovered from the bile in the form of metabolites. Approximately 20% to 35% of an oral dose is recovered from the feces within 5 days after dosing. This may arise from either biliary clearance or transintestinal elimination.
Specific Populations:
Elderly: Pharmacokinetic studies of ciprofloxacin indicate that plasma concentrations of ciprofloxacin are higher in elderly subjects (older than 65 years) as compared to young adults. Although the C_{max} is increased 16% to 40%, the increase in mean AUC is approximately 30%, and can be at least partially attributed to decreased renal clearance in the elderly. Elimination half-life is only slightly (~20%) prolonged in the elderly. These differences are not considered clinically significant.
Renal impairment: In patients with reduced renal function, the half-life of ciprofloxacin is slightly prolonged. Dosage adjustments may be required.
Hepatic impairment: In preliminary studies in patients with stable chronic liver cirrhosis, no significant changes in Ciprofloxacin pharmacokinetics have been observed. The kinetics of ciprofloxacin in patients with acute hepatic insufficiency, have not been fully studied.

INDICATIONS AND USAGE:
Skin and skin structure infections: Ciprofloxacin is indicated in adult patients for treatment of skin and skin structure infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Proteus vulgaris, Providencia stuartii, Morganella morganii, Citrobacter freundii, Pseudomonas aeruginosa,* methicillin susceptible *Staphylococcus aureus,* methicillin-susceptible *Staphylococcus epidermidis,* or *Streptococcus pyogenes*.
Bone and joint infections: Ciprofloxacin is indicated in adult patients for treatment of bone and joint infections caused by *Enterobacter cloacae, Serratia marcescens, or Pseudomonas aeruginosa.*
Complicated intra-abdominal infections: Ciprofloxacin is indicated in adult patients for treatment of complicated intra-abdominal infections (used in combination with metronidazole) caused by *Escherichia coli, Pseudomonas aeruginosa, Proteus mirabilis, Klebsiella pneumoniae, or Bacteroides fragilis.*
Infectious diarrhea: Ciprofloxacin is indicated in adult patients for treatment of infectious diarrhea caused by *Escherichia coli* (enterotoxigenic isolates), *Campylobacter jejuni, Shigella boydii*†, *Shigella dysenteriae, Shigella flexneri or Shigella sonnei*† when antibacterial therapy is indicated.
†Although treatment of infections due to this organism in this organ system demonstrated a clinically significant outcome, efficacy was studied in fewer than 10 patients.
Typhoid fever (Enteric Fever): Ciprofloxacin is indicated in adult patients for treatment of typhoid fever (enteric fever) caused by *Salmonella typhi*. The efficacy of ciprofloxacin in the eradication of the chronic typhoid carrier state has not been demonstrated.
Uncomplicated cervical and urethral gonorrhea: Ciprofloxacin is indicated in adult patients for treatment of uncomplicated cervical and urethral gonorrhea due to *Neisseria gonorrhoeae*.
Inhalational anthrax (Post-Exposure): Ciprofloxacin is indicated in adults and pediatric patients from birth to 17 years of age for inhalational anthrax (post-exposure) to reduce the incidence or progression of disease following exposure to aerosolized *Bacillus anthracis*.
Plague: Ciprofloxacin is indicated for treatment of plague, including pneumonic and septicemic plague, due to *Yersinia pestis (Y. pestis)* and prophylaxis for plague in adults and pediatric patients from birth to 17 years of age.
Chronic bacterial prostatitis: Ciprofloxacin is indicated in adult patients for treatment of chronic bacterial prostatitis caused by Escherichia coli or *Proteus mirabilis*.
Lower respiratory tract infections: Ciprofloxacin is indicated in adult patients for treatment of lower respiratory tract infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Pseudomonas aeruginosa, Haemophilus influenzae, Haemophilus parainfluenzae,* or *Streptococcus pneumoniae*. Ciprofloxacin is indicated for the treatment of acute exacerbations of chronic bronchitis (AECB) caused by *Moraxella catarrhalis*.
Urinary Tract Infections:
Urinary tract infections in adults: Ciprofloxacin is indicated in adult patients for treatment of urinary tract infections caused by Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Serratia marcescens, Proteus mirabilis, Providencia rettgeri, Morganella morganii, Citrobacter koseri, Citrobacter freundii, Pseudomonas aeruginosa, methicillin-susceptible Staphylococcus epidermidis, Staphylococcus saprophyticus, or *Enterococcus faecalis*.
Acute uncomplicated cystitis: Ciprofloxacin is indicated in adult female patients for treatment of acute uncomplicated cystitis caused by *Escherichia coli* or *Staphylococcus saprophyticus*.
Complicated urinary tract infection and pyelonephritis in pediatric patients: Ciprofloxacin is indicated in pediatric patients aged one to 17 years of age for treatment of complicated urinary tract infections (cUTI) and pyelonephritis due to Escherichia coli. Please consult and follow your HCP.
Acute sinusitis: Ciprofloxacin is indicated in adult patients for treatment of acute sinusitis caused by *Haemophilus influenzae, Streptococcus pneumoniae,* or *Moraxella catarrhalis*.

DOSAGE AND ADMINISTRATION:
Dosage in adults:
The determination of dosage and duration for any particular patient must take into consideration the severity and nature of the infection, the susceptibility of the causative microorganism, the integrity of the patient's host-defense mechanisms, and the status of renal and hepatic function.
Adult dosage guidelines:

Infection	Dose	Frequency	Usual Durations[1]
Skin and Skin Structure	500–750 mg	every 12 hours	7 to 14 days
Bone and Joint	500–750 mg	every 12 hours	4 to 8 weeks
Complicated Intra–Abdominal[2]	500 mg	every 12 hours	7 to 14 days
Infectious Diarrhea	500 mg	every 12 hours	5 to 7 days
Typhoid Fever	500 mg	every 12 hours	10 days
Uncomplicated Urethral and Cervical Gonococcal Infections	250 mg	single dose	single dose
Inhalational anthrax (postexposure)[3]	500 mg	every 12 hours	60 days
Plague[3]	500–750 mg	every 12 hours	14 days
Chronic Bacterial Prostatitis	500 mg	every 12 hours	28 days
Lower Respiratory Tract Infections	500–750 mg	every 12 hours	7 to 14 days
Urinary Tract Infections	250–500 mg	every 12 hours	7 to 14 days
Acute Uncomplicated Cystitis	250 mg	every 12 hours	3 days
Acute Sinusitis	500 mg	every 12 hours	10 days

1. Generally ciprofloxacin should be continued for at least 2 days after the signs and symptoms of infection have disappeared, except for inhalational anthrax (post-exposure).
2. Used in conjunction with metronidazole.
3. Begin drug administration as soon as possible after suspected or confirmed exposure.

Dosage in pediatric patients: Dosing and initial route of therapy (that is, IV or oral) for cUTI or pyelonephritis should be determined by the severity of the infection.
Pediatric dosage guidelines:

Infection	Dose	Frequency	Usual Durations[1]
Complicated Urinary Tract or Pyelonephritis (patients from 1 to 17 years of age)	10 mg/kg to 20 mg/kg (maximum 750 mg per dose; not to be exceeded even in patients weighing more than 51 kg)	Every 12 hours	10-21 days[1]
Inhalational Anthrax (Post Exposure)[2]	15 mg/kg (maximum 500 mg per dose)	Every 12 hours	60 days
Plague[2,3]	15 mg/kg (maximum 500 mg per dose)	Every 8 to 12 hours	10-21 days

1. The total duration of therapy for cUTI and pyelonephritis in the clinical trial was determined by the physician. The mean duration of treatment was 11 days (range 10 to 21 days).
2. Begin drug administration as soon as possible after suspected or confirmed exposure.
3. Begin drug administration as soon as possible after suspected or confirmed exposure to *Y. pestis*.

DOSAGE MODIFICATIONS IN PATIENTS WITH RENAL IMPAIRMENT:
Ciprofloxacin is eliminated primarily by renal excretion; however, the drug is also metabolized and partially cleared through the biliary system of the liver and through the intestine. Some modification of dosage is recommended, particularly for patients with severe renal dysfunction.
Recommended starting and maintenance doses for adult patients with impaired renal function:

Creatinine Clearance (mL/min)	Dosage
> 50	See Usual Dosage.
30–50	250–500 mg every12 hours
5–29	250–500 mg every 18 hours
Patients on hemodialysis or Peritoneal dialysis	250–500 mg every 24 hours (after dialysis)

When only the serum creatinine concentration is known, the following formulas may be used to estimate creatinine clearance:

Men - Creatinine clearance (mL/min) = $\frac{\text{Weight (kg)} \times (140 - \text{age})}{72 \times \text{serum creatinine (mg/dL)}}$

Women - 0.85 x the value calculated for men.

The serum creatinine should represent a steady state of renal function. In patients with severe infections and severe renal impairment, a unit dose of 750 mg may be administered at the intervals noted above. Patients should be carefully monitored.

IMPORTANT ADMINISTRATION INSTRUCTIONS:
With multivalent cations: Administer Ciprofloxacin at least 2 hours before or 6 hours after magnesium/aluminum antacids; polymeric phosphate binders (for example, sevelamer, lanthanum carbonate) or sucralfate; didanosine chewable/buffered tablets or pediatric powder for oral solution; other highly buffered drugs; or other products containing calcium, iron or zinc.
With dairy products: Concomitant administration of Ciprofloxacin with dairy products (like milk or yogurt) or calcium-fortified juices alone should be avoided since decreased absorption is possible; however, Ciprofloxacin may be taken with a meal that contains these products.
Hydration of patients receiving ciprofloxacin: Assure adequate hydration of patients receiving Ciprofloxacin to prevent the formation of highly concentrated urine. Crystalluria has been reported with quinolones.

ADRVERSE REACTION:
Disabling and potentially irreversible serious adverse reactions:
- Tendinitis and Tendon Rupture
- Peripheral Neuropathy
- Central Nervous System Effects
- Exacerbation of Myasthenia Gravis

Other serious and sometimes fatal adverse reactions:
- Hypersensitivity Reactions
- Hepatotoxicity
- Serious Adverse Reactions with Concomitant Theophylline
- Clostridium difficile-Associated Diarrhea
- Prolongation of the QT Interval
- Musculoskeletal Disorders in Pediatric Patients
- Photosensitivity/Phototoxicity
- Development of Drug Resistant Bacteria

Medically important adverse reactions that occurred in less than 1% of ciprofloxacin patients:

System Organ Class	Adverse Reactions
Body as a Whole	Headache Abdominal Pain/Discomfort Pain
Cardiovascular	Syncope Angina Pectoris Myocardial Infarction Cardiopulmonary Arrest Tachycardia Hypotension
Central Nervous System	Restlessness Dizziness Insomnia Nightmares Hallucinations Paranoia Psychosis (toxic) Manic Reaction Irritability Tremor Ataxia Seizures (including Status Epilepticus) Malaise Anorexia Phobia Depersonalization Depression (potentially culminating in selfinjurious behavior (such as suicidal ideations/thoughts and attempted or completed suicide) Paresthesia Abnormal Gait Migraine
Gastrointestinal	Intestinal Perforation Gastrointestinal Bleeding Cholestatic Jaundice Hepatitis Pancreatitis
Hemic/Lymphatic	Petechia
Metabolic/Nutritional	Hyperglycemia Hypoglycemia
Musculoskeletal	Arthralgia Joint Stiffness Muscle Weakness
Renal/Urogenital	Interstitial Nephritis Renal Failure

System Organ Class	Adverse Reactions
Respiratory	Dyspnea Laryngeal Edema Hemoptysis Bronchospasm
Skin/Hypersensitivity	Anaphylactic Reactions including lifethreatening anaphylactic shock Erythema Multiforme/Stevens-Johnson Syndrome Exfoliative Dermatitis Toxic Epidermal Necrolysis Pruritus Urticaria Photosensitivity/Phototoxicity reaction Flushing Fever Angioedema Erythema Nodosum Sweating
Special Senses	Blurred Vision Disturbed Vision (chromatopsia and photopsia) Decreased Visual Acuity Diplopia Tinnitus Hearing Loss Bad Taste

Post marketing reports of adverse drug reactions:

System Organ Class	Adverse Reactions
Body as a Whole	Headache Abdominal Pain/Discomfort Pain
Cardiovascular	QT prolongation Torsade de Pointes Vasculitis and ventricular arrhythmia
Central Nervous System	Hypertonia Myasthenia Exacerbation of myasthenia gravis Peripheral neuropathy Polyneuropathy Twitching
Eye Disorders	Nystagmus
Gastrointestinal	Pseudomembranous colitis
Hemic/Lymphatic	Pancytopenia (life threatening or fatal outcome)
Hepatobiliary	Hepatic failure (including fatal cases)
Infections and Infestations	Candidiasis (oral, gastrointestinal, vaginal)
Investigations	Prothrombin time prolongation or decrease Cholesterol elevation (serum) Potassium elevation (serum)
Musculoskeletal	Myalgia Myoclonus Tendinitis Tendon rupture
Psychiatric Disorders	Agitation Confusion Delirium
Skin/Hypersensitivity	Acute generalize exanthematous pustulosis (AGEP) Fixed eruption Serum sickness-like reaction
Special Senses	Anosmia Hyperesthesia Hypesthesia Taste loss

Laboratory Changes:
Changes in laboratory parameters while on Ciprofloxacin are listed below: Hepatic–Elevations of ALT (SGPT), AST (SGOT), alkaline phosphatase, LDH, serum bilirubin. Hematologic– Eosinophilia, leukopenia, decreased blood platelets, elevated blood platelets, pancytopenia. Renal–Elevations of serum creatinine, BUN, crystalluria, cylindruria, and hematuria have been reported. Other changes occurring were: elevation of serum gammaglutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

DRUG INTERACTIONS:
Ciprofloxacin is an inhibitor of human cytochrome P450 1A2 (CYP1A2) mediated metabolism.
Co- administration of CIPRO with other drugs primarily metabolized by CYP1A2 results in increased plasma concentrations of these drugs and could lead to clinically significant adverse events of the co- administered drug.

Drugs	Recommendation	Comments
Oral antidiabetic drugs	Use with caution Glucose-lowering effect potentiated	Hypoglycemia sometimes severe has been reported when Ciprofloxacin and oral antidiabetic agents, mainly sulfonylureas (for example, glyburide, glimepiride), were co-administered, presumably by intensifying the action of the oral antidiabetic agent. Fatalities have been reported. Monitor blood glucose when Ciprofloxacin is co-administered with oral antidiabetic drugs.
Phenytoin	Use with caution Altered serum levels of phenytoin (increased and decreased)	To avoid the loss of seizure control associated with decreased phenytoin levels and to prevent phenytoin overdose-related adverse reactions upon Ciprofloxacin discontinuation in patients receiving both agents, monitor phenytoin therapy, including phenytoin serum concentration during and shortly after co-administration of Ciprofloxacin with phenytoin.
Cyclosporine	Use with caution (transient elevations in serum creatinine)	Monitor renal function (in particular serum creatinine) when Ciprofloxacin is co-administered with cyclosporine.
Anti-coagulant drugs	Use with caution (Increase in anticoagulant effect)	The risk may vary with the underlying infection, age and general status of the patient so that the contribution of Ciprofloxacin to the increase in INR (international normalized ratio) is difficult to assess. Monitor prothrombin time and INR frequently during and shortly after co-administration of Ciprofloxacin with an oral anti-coagulant (for example, warfarin).
Methotrexate	Use with caution Inhibition of methotrexate renal tubular transport potentially leading to increased methotrexate plasma levels	Potential increase in the risk of methotrexate associated toxic reactions. Therefore, carefully monitor patients under methotrexate therapy when concomitant Ciprofloxacin therapy is indicated.
Ropinirole	Use with caution	Monitoring for ropinirole-related adverse reactions and appropriate dose adjustment of ropinirole is recommended during and shortly after co-administration with Ciprofloxacin.
Clozapine	Use with caution	Careful monitoring of clozapine associated adverse reactions and appropriate adjustment of clozapine dosage during and shortly after co-administration with Ciprofloxacin are advised.
NSAIDs	Use with caution	Non-steroidal anti-inflammatory drugs (but not acetyl salicylic acid) in combination of very high doses of quinolones have been shown to provoke convulsions in pre-clinical studies and in postmarketing.
Sildenafil	Use with caution Two-fold increase in exposure	Monitor for sildenafil toxicity.
Duloxetine	Avoid Use Five-fold increase in duloxetine exposure	If unavoidable, monitor for duloxetine toxicity
Caffeine/Xanthine Derivatives	Use with caution Reduced clearance resulting in elevated levels and prolongation of serum half-life	Ciprofloxacin inhibits the formation of paraxanthine after caffeine administration (or pentoxifylline containing products). Monitor for xanthine toxicity and adjust dose as necessary.

Drug(s) Affecting Pharmacokinetics of Ciprofloxacin		
Antacids, Sucralfate, Multivitamins and Other Products Containing Multivalent Cations (magnesium/aluminum antacids; polymeric phosphate binders (for example, sevelamer, lanthanum carbonate); sucralfate; didanosine) chewable/buffered tablets or pediatric powder; other highly buffered drugs; or products containing calcium, iron, or zinc and dairy products)	Ciprofloxacin should be taken at least two hours before or six hours after Multivalent cation-containing products administration.	Ciprofloxacin inhibits the formation of paraxanthine after caffeine administration (or pentoxifylline containing products). Monitor for xanthine toxicity and adjust dose as necessary.
Probenecid	Use with caution (interferes with renal tubular secretion of Ciprofloxacin and increases Ciprofloxacin serum levels)	Potentiation of Ciprofloxacin toxicity may occur.

Drugs that are affected by and affecting ciprofloxacin:

Drugs That are Affected by Ciprofloxacin		
Drugs	**Recommendation**	**Comments**
Tizanidine	Contraindicated	Concomitant administration of tizanidine and Ciprofloxacin is contraindicated due to the potentiation of hypotensive and sedative effects of tizanidine.
Theophylline	Avoid Use (Plasma Exposure Likely to be Increased and Prolonged)	Concurrent administration of Ciprofloxacin with theophylline may result in increased risk of a patient developing central nervous system (CNS) or other adverse reactions. If concomitant use cannot be avoided, monitor serum levels of theophylline and adjust dosage as appropriate.
Drugs Known to Prolong QT Interval	Avoid Use	Ciprofloxacin may further prolong the QT interval in patients receiving drugs known to prolong the QT interval (for example, class IA or III antiarrhythmics, tricyclic antidepressants, macrolides, antipsychotics) and Use in

CONTRAINDICATIONS:
Hypersensitivity:
Ciprofloxacin is contraindicated in persons with a history of hypersensitivity to ciprofloxacin, any member of the quinolone class of antibacterials, or any of the product components. **Tizanidine** Concomitant administration with tizanidine is contraindicated.

WARNINGS AND PRECAUTIONS:
Disabling and potentially irreversible serious adverse reactions including tendinitis and tendon rupture, peripheral neuropathy, and central nervous system effects:
Fluoroquinolones, including Ciprofloxacin, have been associated with disabling and potentially irreversible serious adverse reactions that include tendinitis, tendon rupture, arthralgia, myalgia, peripheral neuropathy, and central nervous system effects (hallucinations, anxiety, depression, insomnia, severe headaches, and confusion). These reactions can occur within hours to weeks after starting Ciprofloxacin. Discontinue Ciprofloxacin immediately at the first signs or symptoms of any serious adverse reaction.
Tendinitis and tendon rupture:
Fluoroquinolones, including Ciprofloxacin, have been associated with an increased risk of tendinitis and tendon rupture, most frequently involves the Achilles tendon, and has also been reported with the rotator cuff (the shoulder), the hand, the biceps, the thumb, and other tendons. Tendinitis or tendon rupture can occur, within hours or days of starting Ciprofloxacin, or as long as several months after completion of fluoroquinolone therapy. The risk of developing fluoroquinolone-associated tendinitis and tendon rupture is increased in patients over 60 years of age, in patients taking corticosteroid drugs, and in patients with kidney, heart or lung transplants.
Peripheral neuropathy:
Fluoroquinolones, including Ciprofloxacin, have been associated with an increased risk of peripheral neuropathy. Cases of sensory or sensorimotor axonal polyneuropathy affecting small and/or large axons resulting in paresthesias, hypoesthesias, dysesthesias and weakness have been reported in patients receiving fluoroquinolones.
Central nervous system effects:
Fluoroquinolones have been associated with an increased risk of central nervous system (CNS) effects, including.Convulsions, increased intracranial pressure (including pseudotumor cerebri), and toxic psychosis. Ciprofloxacin may also cause central nervous system (CNS) events including: nervousness, agitation, insomnia, anxiety, nightmares, paranoia, dizziness, confusion, tremors, hallucinations, depression, and psychotic reactions have progressed to suicidal ideations/thoughts and self-injurious behavior such as attempted or completed suicide. Use with caution in epileptic patients and patients with known or suspected CNS disorders that may predispose to seizures or lower the seizure threshold. Use Ciprofloxacin when the benefits of treatment exceed the risks, since these patients are endangered because of possible undesirable CNS side effects.
Exacerbation of myasthenia gravis:
Fluoroquinolones have neuromuscular blocking activity and may exacerbate muscle weakness in patients with myasthenia gravis. Postmarketing serious adverse reactions, including deaths and requirement for ventilatory support, have been associated with fluoroquinolone use in patients with myasthenia gravis. Avoid ciprofloxacin in patients with known history of myasthenia gravis.
Other serious and sometimes fatal adverse reactions:
Other serious and sometimes fatal adverse reactions, some due to hypersensitivity, and some due to uncertain etiology, have been reported in patients receiving therapy with quinolones.
Clinical manifestations may include one or more of the following:
- Fever, rash, or severe dermatologic reactions (for example, toxic epidermal necrolysis, Stevens- Johnson syndrome);
- Vasculitis; arthralgia; myalgia; serum sickness;
- Allergic pneumonitis;
- Interstitial nephritis; acute renal insufficiency or failure;
- Hepatitis; jaundice; acute hepatic necrosis or failure; Anemia, including hemolytic and aplastic; thrombocytopenia, including thrombotic thrombocytopenic purpura; leukopenia; agranulocytosis; pancytopenia; and/or other hematologic abnormalities. Discontinue ciprofloxacin immediately at the first appearance of a skin rash, jaundice, or any other sign of hypersensitivity and supportive measures instituted.

Hypersensitivity reactions: Serious and occasionally fatal hypersensitivity (anaphylactic) reactions, some following the first dose, have been reported in patients receiving fluoroquinolone therapy. Serious anaphylactic reactions require immediate emergency treatment with epinephrine and other resuscitation measures, including oxygen, intravenous fluids, intravenous antihistamines, corticosteroids, pressor amines, and airway management, including intubation, as indicated.
Hepatotoxicity: Cases of severe hepatotoxicity, including hepatic necrosis, life-threatening hepatic failure, and fatal events. Acute liver injury is rapid in onset (range 1–39 days), and is often associated with hypersensitivity. The pattern of injury can be hepatocellular, cholestatic, or mixed. Most patients with fatal outcomes were older than 55 years old. In the event of any signs and symptoms of hepatitis (such as anorexia, jaundice, dark urine, pruritus, or tender abdomen), discontinue treatment immediately. There can be a temporary increase in transaminases, alkaline phosphatase, or cholestatic jaundice, especially in patients with previous liver damage, who are treated with ciprofloxacin.
Serious adverse reactions with concomitant theophylline: Serious and fatal reactions have been reported in patients receiving concurrent administration of Ciprofloxacin and theophylline. These reactions have included cardiac arrest, seizure, status epilepticus, and respiratory failure. Instances of nausea, vomiting, tremor, irritability, or palpitation have also occurred.
Clostridium difficile-associated diarrhea: Clostridium difficile©. difficile)-associated diarrhea (CDAD) has been reported with use of nearly all antibacterial agents, including Ciprofloxacin, and may range in severity from mild diarrhea to fatal colitis.
Prolongation of the qt interval: Some fluoroquinolones, including Ciprofloxacin, have been associated with prolongation of the QT interval on the electrocardiogram and cases of arrhythmia. Cases of torsade de pointes have been reported during post marketing surveillance in patients receiving fluoroquinolones. Avoid Ciprofloxacin in patients with known prolongation of the QT interval, risk factors for QT prolongation or torsade de pointes (for example, congenital long QT syndrome, uncorrected electrolyte imbalance, such as hypokalemia or hypomagnesemia and cardiac disease, such as heart failure, myocardial infarction, or bradycardia), and patients receiving Class IA antiarrhythmic agents (quinidine, procainamide), or Class III antiarrhythmic agents (amiodarone, sotalol), tricyclic antidepressants, macrolides, and antipsychotics. Elderly patients may also be more susceptible to drug-associated effects on the QT interval.
Musculoskeletal disorders in pediatric patients and arthropathic effects in animals: Ciprofloxacin is indicated in pediatric patients (less than 18 years of age) only for cUTI, prevention of inhalational anthrax (post exposure), and plague. An increased incidence of adverse reactions compared to controls, including reactions related to joints and/or surrounding tissues, has been observed.
Photosensitivity/Phototoxicity: Moderate to severe photosensitivity/phototoxicity reactions, the latter of which may manifest as exaggerated sunburn reactions (for example, burning, erythema, exudation, vesicles, blistering, edema) involving areas exposed to light (typically the face, "V" area of the neck, extensor surfaces of the forearms, dorsa of the hands), can be associated with the use of quinolones after sun or UV light exposure.
Development of drug resistant bacteria: Prescribing Ciprofloxacin in the absence of a proven or strongly suspected bacterial infection or a prophylactic indication is unlikely to provide benefit to the patient and increases the risk of the development of drug-resistant bacteria.
Potential risks with concomitant use of drugs metabolized by cytochrome p450 1a2 enzymes: Ciprofloxacin is an inhibitor of the hepatic CYP1A2 enzyme pathway. Co-administration of Ciprofloxacin and other drugs primarily metabolized by CYP1A2 (for example, theophylline, methylxanthines, caffeine, tizanidine, ropinirole, clozapine, olanzapine) results in increased plasma concentrations of the co- administered drug and could lead to clinically significant pharmacodynamic adverse reactions of the co- administered drug.
Interference with timely diagnosis of syphilis:
Ciprofloxacin has not been shown to be effective in the treatment of syphilis. Perform a serologic test for syphilis in all patients with gonorrhea at the time of diagnosis. Perform follow-up serologic test for syphilis three months after Ciprofloxacin treatment.
Crystalluria: Crystalluria related to ciprofloxacin has been reported only rarely in humans because human urine is usually acidic. Hydrate patients well to prevent the formation of highly concentrated urine.

USE IN SPECIFIC POPULATIONS:
Pregnancy:
Pregnancy Category C:
There are no adequate and well-controlled studies in pregnant women. Ciprofloxacin should not be used during pregnancy unless the potential benefit justifies the potential risk to both fetus and mother.
Lactation:
Because of the potential risk of serious adverse reactions (including articular damage) in infants nursing from mothers taking Ciprofloxacin, 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.
Pediatric use:
Although effective in clinical trials, Quinolones, including Ciprofloxacin, cause arthropathy in juvenile animals
Geriatric use:
Caution should be used when prescribing Ciprofloxacin to elderly patients especially those on corticosteroids.
Renal impairment:
Some modification of dosage is recommended, particularly for patients with severe renal dysfunction.
Hepatic impairment:
In preliminary studies in patients with stable chronic liver cirrhosis, no significant changes in ciprofloxacin pharmacokinetics have been observed. The pharmacokinetics of ciprofloxacin in patients with acute hepatic insufficiency, have not been studied.

OVERDOSAGE:
In the event of acute overdosage, reversible renal toxicity has been reported in some cases. Empty the stomach by inducing vomiting or by gastric lavage. Observe the patient carefully and give supportive treatment, including monitoring of renal function, urinary pH and acidify if required, to prevent crystalluria and administration of magnesium, aluminum, or calcium containing antacids which can reduce the absorption of ciprofloxacin. Adequate hydration must be maintained. Only a small amount of ciprofloxacin (less than 10%) is removed from the body after hemodialysis or peritoneal dialysis.

INSTRUCTIONS:
- Store below 30ºC.
- Protect from heat, sunlight & moisture.
- Keep out of the reach of children.
- To be sold on the prescription of a registered medical practitioner only.

PRESENTATION:
BACTCID Tablet 250 mg : Pack of 1 x 10 tablets.
BACTCID Tablet 500 mg : Pack of 1 x 10 tablets.

ہدایات:
۳۰ درجہ سینٹی گریڈ سے کم درجہ حرارت پر رکھیں۔
گرمی، دھوپ اور نمی سے بچائیں۔
بچوں کی پہنچ سے دور رکھیں۔
صرف ڈاکٹر کے نسخہ پر فروخت کریں۔

FOR FURTHER INFORMATION PLEASE CONTACT:

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