Larith® (Clarithromycin) Tablets U.S.P.
250mg & 500mg

Larith®XL (Clarithromycin) Extended-Release Tablets U.S.P.
500mg

Larith® (Clarithromycin) For Oral Suspension U.S.P.
125mg/5mL

Larith®DS (Clarithromycin) For Oral Suspension U.S.P.
250mg/5mL

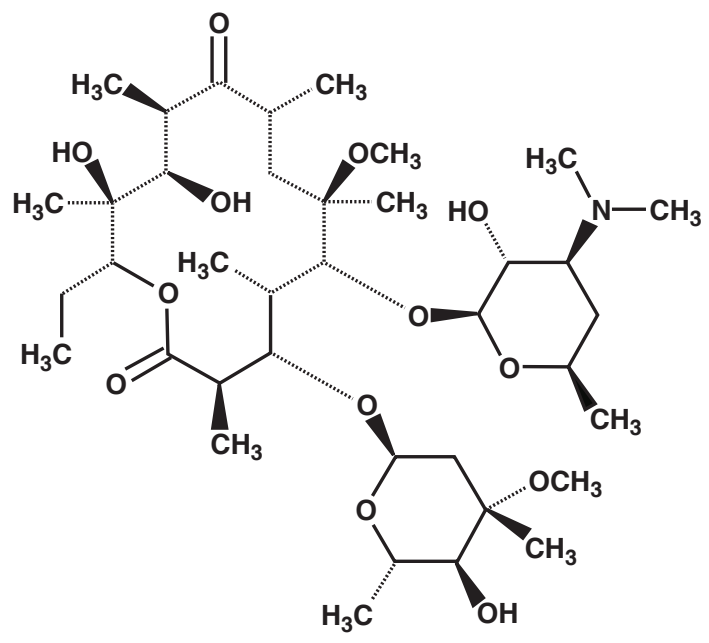
لیرتھ (کلیریتھرومائسن)
۲۵۰ ملی گرام
۵۰۰ ملی گرام ٹیبلٹس یو۔ایس۔پی۔
۱۲۵ ملی گرام/۵ ملی لیٹر
اورل سسپنشن یو۔ایس۔پی۔

لیرتھ ڈی ایس (کلیریتھرومائسن)
۲۵۰ ملی گرام/۵ ملی لیٹر
اورل سسپنشن یو۔ایس۔پی۔

لیرتھ ایکس ایل ۵۰۰ ملی گرام (کلیریتھرومائسن)
ٹیبلٹس یو۔ایس۔پی۔

DESCRIPTION:

Larith (Clarithromycin) is a semi-synthetic macrolide antibiotic, it is 6-o-methylerythromycin. The molecular formula is $C_{38}H_{69}NO_{13}$ and the molecular weight is 747.95. The structural formula is:



QUALITATIVE AND QUANTITATIVE COMPOSITION:

Larith® 250mg Tablets U.S.P.
Each film-coated tablet contains:
Clarithromycin U.S.P. 250mg
Larith® 500mg Tablets U.S.P.
Each film-coated tablet contains:
Clarithromycin U.S.P. 500mg
Larith®XL 500mg Tablets U.S.P.
Each extended-release tablet contains:
Clarithromycin U.S.P. 500mg
Larith® 125mg/5mL For Oral Suspension U.S.P.
Each 5mL of reconstituted suspension contains:
Clarithromycin ...125mg
Larith® DS 250mg/5mL For Oral Suspension U.S.P.
Each 5mL of reconstituted suspension contains:
Clarithromycin 250mg

CLINICAL PHARMACOLOGY:

Mechanism of Action: Clarithromycin is a macrolide antibiotic. Clarithromycin exerts its antibacterial action by binding to the 50s ribosomal subunits of susceptible bacteria and suppressing protein synthesis. It is highly potent against a wide variety of aerobic and anaerobic Gram-positive and Gram-negative organisms. The minimum inhibitory concentrations (MIC's) of clarithromycin are generally one log2 dilution more potent than the MIC's of erythromycin. In vitro data indicate Clarithromycin has excellent activity against Legionella pneumophila and Mycoplasma pneumoniae. In vitro and in vivo data show that this antibiotic has significant activity against clinically significant mycobacterial species.
NOTE: Most strains of methicillin-resistant and oxacillin-resistant staphylococci are resistant to clarithromycin.
Pharmacokinetics: Clarithromycin is rapidly absorbed from the gastrointestinal tract after oral administration. The absolute bioavailability of 250 mg clarithromycin tablets was approximately 50%. For a single 500 mg dose of clarithromycin, food slightly delays the onset of clarithromycin absorption, increasing the peak time from approximately 2 to 2.5 hours. Food also increases the clarithromycin

peak plasma concentration by about 24%, but does not affect the extent of clarithromycin bioavailability. Food does not affect the onset of formation of the antimicrobially active metabolite, 14-OH clarithromycin or its peak plasma concentration but does slightly decrease the extent of metabolite formation, indicated by an 11% decrease in area under the plasma concentration-time curve (AUC). Therefore, Clarithromycin tablets, may be given without regard to food.

CLARITHROMYCIN EXTENDED-RELEASE:

Provide extended absorption of clarithromycin from the gastrointestinal tract after oral administration. Relative to an equal total daily dose of immediate-release clarithromycin tablets, clarithromycin extended-release tablets provide lower and later steady-state peak plasma concentrations but equivalent 24-hour AUC's for both clarithromycin & its microbiologically active metabolite, 14-OH clarithromycin. While the extent of formation of 14-OH clarithromycin following administration of Clarithromycin XL tablets (2 x 500 mg once daily) is not affected by food, administration under fasting conditions is associated with approximately 30% lower clarithromycin AUC relative to administration with food. Therefore, Clarithromycin XL tablets should be taken with food. In healthy human subjects, steady-state peak plasma clarithromycin concentrations of approximately 2 to 3 µg/mL were achieved about 5 to 8 hours after oral administration of 2 x 500 mg Clarithromycin tablets once daily; for 14-OH clarithromycin, steady-state peak plasma concentrations of approximately 0.8 µg/mL were attained about 6 to 9 hours after dosing. Steady-state peak plasma clarithromycin concentrations of approximately 1 to 2 µg/mL were achieved about 5 to 6 hours after oral administration of a single 500 mg Clarithromycin tablet once daily; for 14-OH clarithromycin, steady-state peak plasma concentrations of approximately 0.6 µg/mL were attained about 6 hours after dosing. **Distribution:** After a 250 mg tablet every 12 hours, approximately 20% of the dose is excreted in the urine as clarithromycin, while after a 500 mg tablet every 12 hours, the urinary excretion of clarithromycin is somewhat greater, approximately 30%. In comparison, after an oral dose of 250 mg (125 mg/5 mL) suspension every 12 hours, approximately 40% is excreted in urine.

THERAPEUTIC INDICATIONS:

Larith (Clarithromycin) Tablets 250/500mg are indicated for the treatment of infection due to susceptible organisms, Such infections include: **1.** Upper respiratory tract infections (e.g. pharyngitis, sinusitis, bronchitis) **2.** Lower respiratory tract infections (e.g. bronchitis, pneumonia) **3.** Skin and soft tissue infections (e.g. folliculitis, cellulitis, abscesses) **4.** Larith (Clarithromycin) is indicated for the prevention of disseminated Mycobacterium avium complex infection in HIV. Infected patient with CD4 lymphocyte count less than or equal to 100/mm3. **5.** Larith (Clarithromycin) in the presence of acid suppression is also indicated for the eradication of H. pylori resulting in decrease recurrent of duodenal ulcer.

Larith XL (Clarithromycin extended-release tablets) are indicated for the treatment of adults with mild to moderate infection caused by susceptible strains of the designated microorganisms in the conditions listed below: Acute maxillary sinusitis due to Haemophilus influenzae, Moraxella catarrhalis, or Streptococcus pneumoniae. Acute bacterial exacerbation of chronic bronchitis due to Haemophilus influenzae, Haemophilus parainfluenzae, Moraxella catarrhalis, or Streptococcus pneumoniae Community-Acquired Pneumonia due to Haemophilus influenzae, Haemophilus parainfluenzae, Moraxella catarrhalis, Streptococcus pneumoniae, Chlamydia pneumoniae (TWAR), or Mycoplasma pneumoniae.

Larith (Clarithromycin) Oral Suspension 125mg/5mL indicated for the treatment of infection due to susceptible organisms, Such infections include: **1.** Upper respiratory tract infections (e.g. pharyngitis, sinusitis, bronchitis) **2.** Lower respiratory tract infections (e.g. bronchitis, pneumonia) **3.** Skin and soft tissue infections (e.g. folliculitis, cellulitis, abscesses)

DOSAGE AND ADMINISTRATION

For Adult

	Larith Tablets		Larith XL	
Infection	**Dose** (q12h)	**Duration** (days)	**Dose** (q24h)	**Duration** (days)
Pharyngitis/ Tonsillitis	250mg	10	-	-
Acute maxillary sinusitis	500mg	14	500mg	14
Acute exacerbation of chronic bronchitis	500mg	7-14	500mg	7
Community-Acquired Pneumonia	250mg	7-14	500mg	7
Uncomplicated skin and skin structure	250mg	7-14	500mg	7
H. Pylori (Clarithromycin) (Omeprazole) (Amoxicillin)	500mg b.i.d 20mg b.i.d 1g b.i.d	7-14	-	-

in more severe infection the dosage can be increased to two 500mg daily, the usual duration of treatment is 7 to 14 days. **For Children:** The recommended daily dose of clarithromycin pediatric suspension (125mg/5ml) is 7.5mg/kg b.i.d upto maximum dose of 500mg b.i.d for non-mycobacterial infections.

Dosage Based on Body Weight (kg)

Weight (kg)	**Approx Age** (yrs)	**Dosage per 5ml teaspoon twice daily**
8 - 11	1 - 2	½
12 - 19	3 - 6	1
20 - 29	7 - 9	1½
30 - 40	10 - 12	2

Children < 8kg should be dosed on a per kg basis (approx. 7.5mg/kg b.i.d)

CONTRAINDICATIONS:

Clarithromycin is contraindicated in patients with a known hypersensitivity to clarithromycin, erythromycin, or any of the macrolide antibiotics. Concomitant administration of clarithromycin and any of the following drugs is contraindicated: cisapride, pimozide, astemizole, terfenadine and ergotamine or dihydroergotamine.

PRECAUTIONS:

General: Prescribing clarithromycin 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. Clarithromycin is principally excreted via the liver and kidney. Clarithromycin may be administered without dosage adjustment to patients with hepatic impairment and normal renal function. **Renal Insufficiency:** Severe renal impairment with or without coexisting hepatic impairment, decreased dosage or prolonged dosing intervals may be appropriate. Clarithromycin in combination with ranitidine bismuth citrate therapy is not recommended in patients with creatinine clearance less than 25 mL/min. Clarithromycin in combination with ranitidine bismuth citrate should not be used in patients with a history of acute porphyria.

PREGNANCY:

Teratogenic Effects. Pregnancy Category C.

Nursing Mothers: It is not known whether clarithromycin is excreted in human

milk. Because many drugs are excreted in human milk, caution should be exercised when clarithromycin is administered to a nursing woman.
Pediatric Use: Safety and effectiveness of clarithromycin in pediatric patients under 6 months of age have not been established.

OVERDOSAGE:
Overdose of clarithromycin can cause gastrointestinal symptoms such as abdominal pain, vomiting, nausea, and diarrhea. Adverse reactions accompanying over dosage should be treated by the prompt elimination of unabsorbed drug and supportive measures. As with other macrolides, clarithromycin serum concentrations are not expected to be appreciably affected by hemodialysis or peritoneal dialysis.

DIRECTION FOR RECONSTITUTION:
Tap the bottle before reconstitution. Add some water Invert bottle and shake well until all granules are dispersed.Then slowly add more water up to the mark on the bottle. Use only cool, boiled water. Reconstituted suspension should be used within 14-days. Do not refrigerate the reconstituted suspension.

SHAKE WELL BEFORE USE.

DOSAGE:
As directed by the physician.

INSTRUCTIONS:
Store at 20°C to 25°C. Excursion permitted to 15°C to 30°C.
Protect from heat, light and moisture.
Keep all medicines out of the reach of children.

PRESENTATION:
Larith® 250mg Tablets are available in Alu/Alu blister pack of 1x10's.
Larith® 500mg Tablets are available in Alu/Alu blister pack of 1x10's.
Larith® XL 500mg Tablets are available in Alu/Alu blister pack of 1x5's.
Larith® 125mg/5mL For Oral Suspension is available in 60mL HDPE Bottle.
Larith® DS (Clarithromycin) For Oral Suspension 250mg/5mL is available in 60mL HDPE Bottle.

سسپنشن تیار کرنے کیلئے: سسپنشن تیار کرنے سے پہلے بوتل کو اچھی طرح ہلائیں۔
اُبلا ہوا ٹھنڈا پانی بوتل میں شامل کریں اور بوتل کو آہستگی سے ہلائیں۔
تا کہ تمام سسپنشن اچھی طرح حل ہو جائے۔ پھر مزید پانی بوتل پر دیئے ہوئے نشان تک شامل کر دیں اور بوتل کو دوبارہ آہستگی سے ہلائیں۔ تیار شدہ سسپنشن ۱۴ دن کے اندر استعمال کر لیں۔ تیار شدہ سسپنشن ریفریجریٹر میں نہ رکھیں۔
خوراک: ڈاکٹر کی ہدایت کے مطابق استعمال کریں۔
ہدایات: ۲۰ سے ۲۵ ڈگری سینٹی گریڈ پر رکھیں،
محفوظ رکھنے کی حد ۱۵ سے ۳۰ ڈگری سینٹی گریڈ ہے۔
روشنی، گرمی اور نمی سے محفوظ رکھیں۔
تمام دوائیں بچوں کی پہنچ سے دور رکھیں۔ صرف رجسٹرڈ ڈاکٹر کے نسخہ پر فروخت کریں۔
استعمال سے پہلے بوتل کو اچھی طرح ہلائیں۔ بوتل کو مضبوطی سے بند کریں۔
سسپنشن کی سیل خراب یا کھلی ہونے کی صورت میں استعمال نہ کریں۔

For detailed information:

Genix Pharma (Pvt.) Ltd.
44,45-B, Korangi Creek Road, Karachi-75190, Pakistan.
UAN: +92-21-111-10-10-11, **Email:** info@genixpharma.com
www.genixpharma.com

ISO 9001:2015 ISO 14001:2015 ISO 45001:2018