ORLOBIN®

AMIKACIN

Injection solution 100mg/2ml vial & 500mg/2ml vial

Composition: Active ingredient: Amikacin sulfate equivalent to Amikacin. **Excipients:** Sodium bisulfite, Sodium citrate, Sulphuric Acid, Water for injection.
Drug formulation: Injection solution.
Concentration of active ingredient:
100 mg / 2 ml vial: Each 2ml vial contains Amikacin sulphate equivalent to Amikacin 100mg.
500 mg / 2 ml vial: Each 2ml vial contains Amikacin sulphate equivalent to Amikacin 500mg.
Presentantion: Box containing one vial with the injectable solution.
Therapeutic category: Antibiotic.
Manufactured by: HELP SA, 10, Valaoritou str., GR 144 52 Metamorphosis, Attika GREECE.
Marketed by: MEDICUS SA, 10, Valaoritou str., GR 144 52 Metamorphosis, Attika GREECE.

WHAT YOU SHOULD KNOW ABOUT THE MEDICINE YOUR DOCTOR HAS PRESCRIBED

General Information:
ORLOBIN® is active against a broad spectrum of Gram-negative organisms, including pseudomonas and some Gram-positive organisms.
Sensitive Gram-negative organisms include: Pseudomonas spp., Escherichia coli, indole-positive and indole-negative Proteus spp., Klebsiella-Enterobacter-Serratia spp., Citrobacter freundii, Salmonella, Shigella, Mimaherellea and Providencia spp. Many strains of these Gram-negative organisms resistant to gentamicin and tobramycin show sensitivity to **ORLOBIN®** in vitro.
The principal Gram-positive organism sensitive to **ORLOBIN®** is Staphylococcus aureus, including methicilin-resistant strains. **ORLOBIN®** has some activity against other Gram-positive organisms including Streptococcus pyogenes. Diplococcus pneumoniae and certain strains of enterococci.
Indications:
ORLOBIN® is indicated in the short-term treatment of serious infections due to amikacin susceptible strains of Pseudomonas species, E. coli, Proteus species, Klebsiella-Enterobacter-Serratia species, Providencia species, Salmonella species, Citrobacter species and S. aureus.
Clinical studies have shown amikacin to be effective in bacteremia, septicemia (including neonatal sepsis), osteomyelitis, septic arthritis, respiratory tract, urinary tract, intra-abdominal (including peritonitis) infections and soft tissue abscesses. Appropriate bacteriological studies should be performed in order to identify and determine the susceptibility of the causative organism. Perform relevant surgical procedures when indicated.
Contraindications: Aminoglycosides may impair neuromuscular transmission, and should not be given to patients with myasthenia gravis.
Special precautions and warnings during use:
Patients should be well hydrated during **ORLOBIN®** therapy. In patients with impaired renal function or diminished glomerular filtration, **ORLOBIN®** should be used cautiously. In such patients, renal function should be assessed by the usual methods prior to therapy and periodically during the therapy. Daily doses should be reduced and/or the interval between doses lengthened in accordance with serum creatinine concentrations to avoid accumulation of abnormally high blood levels and to minimise the risk of ototoxicity.
If therapy is expected to last seven days or more in patients with renal impairment, or 10 days in other patients, a pre-treatment audiogram should be obtained and repeated during therapy. **ORLOBIN®** therapy should be stopped if tinnitus or subjective hearing loss develops, or if follow up audiograms show significant loss of high frequency response.
If signs of renal irritation appear (such as albumin, casts, red or white blood cells), hydration should be increased and a reduction in dosage may be desirable. These findings usually disappear when treatment is completed. However, if azotaemia or a progressive decrease in urine output occurs, treatment should be stopped.
As with other aminoglycosides, ototoxicity and/or nephrotoxicity can result from the use of **ORLOBIN®** precautions on dosage and adequate hydration should be observed. If signs of renal irritation appear (such as albumin, casts, red or white blood cells), hydration should be increased and a reduction in dosage may be desirable. These findings usually disappear when treatment is completed. However, if azotaemia or a progressive decrease in urine output occurs, treatment should be stopped.
The use of **ORLOBIN®** in patients with a history of allergy to aminoglycosides or in patients who may have subclinical renal or eighth nerve damage induced by prior administration of nephrotoxic and/or ototoxic agents such as streptomycin, dihydrostreptomycin, gentamicin, tobramycin, kanamycin, bekanamycin, neomycin, polymyxin, B, colistin, cephaloridrine, or viomycin should be considered with caution, as toxicity may be additive. In these patients **ORLOBIN®** should be used only if in the opinion of the physician, therapeutic advantages outweight the potential risks.
Large doses of amikacin administered during surgery have been responsible for a transient myasthenic syndrome.
Sulphites can cause allergic-type reactions including anaphylactic symptoms and bronchospasm in susceptible people, especially those with a history of asthma or allergy.
Pregnancy and Lactation:
The safety of amikacin in pregnancy has not yet been established.
Amikacin rapidly crosses the placenta into the foetal circulation and amniotic fluid, and there is a potential risk of ototoxicity in the foetus.
Interactions with other drugs or substances:
The risk of ototoxicity is increased when amikacin is used in conjunction with rapidly acting diuretic drugs, particularly when the diuretic is administered intravenously. Such agents include furosemide and ethacrynic acid. Irreversible deafness may result.
The intraperitoneal use of amikacin is not recommended in patients under the influence of anaesthetics or muscle-relaxing drugs (including ether, halothane, d-tubocurarine, succinylcholine and decamethonium) as neuromuscular blockade and consequent respiratory depression may occur.
Concurrent use with other potentially nephrotoxic or ototoxic drug substances should be avoided. Where this is not possible, monitor carefully.
Indomethacin may increase the plasma concentration of amikacin in neonates.
Dosage and Administration: This should be tailored to each individual patient's needs.

Administration: For intamuscular or intraveneous use.

At the recommended dosage level, uncomplicated infections due to sensitive organisms should respond to therapy within 24 to 48 hours. If clinical response does not occur within three to five days, consideration should be given to alternative therapy.

Intramuscular or intravenous administration (for most infections the intramuscular route is preferred, but in life-threatening infections, or in patients in whom intramuscular injection is not feasible, the intravenous route either slow bolus (two to three minutes) or infusion (0.25% over 30 minutes) may be used. Also, in the dosage and administration: use of the 100mg/2ml strength is recommended for children for the accurate measurement of the appropriate dose.

Elderly: Amikacin is excreted by the renal route. Renal function should be assessed whenever possible and dosage adjusted as described under impaired renal function.

Adults and Children: 15mg/kg/day in two equally divided doses (equivalent to 500mg b.i.d. in adults): use of the 100mg/2ml strength is recommended for children for the accurate measurement of the appropriate dose.

- ***Neonates and premature infants:*** An initial loading dose of 10mg/kg followed by 15mg/kg/day in two equally divided doses. Sufficient extensive clinical use has not been achieved to enable firm dosage guidelines to be given in premature infants.
- ***Elderly:*** Amikacin is excreted by the renal route. Renal function should be assessed whenever possible and dosage adjusted as described under impaired renal function.
- ***Life-threatening infections and/or those caused by pseudomonas:*** The adult dose may be increased to 500mg every 8 hours but should neither exceed 1.5gr/day nor be administered for a period longer than 10 days. A maximum total adult dose of 15gr should not be exceeded.
- ***Urinary tract infections:*** (other than pseudomonal infections): 7.5mg/kg/day in two equally divided doses (equivalent to 250mg b.i.d. in adults). As the activity of amikacin is enhanced by increasing the pH, a urinary alkalinising agent may be administered concurrently.
- ***Impaired renal function:*** In patients with impaired renal function, the daily dose should be reduced and/or the intervals between doses increased to avoid accumulation of the drug. A suggested method for estimating dosage in patients with known or suspected diminished renal functions is to multiply the serum creatinine concentration (in mg/100ml) by 9 and to use the resulting figure as the interval in hours between doses.

Serum Creatinine Concentration (mg/100ml)	Interval between ORLOBIN® doses 7.5mg/kg I M (hours)
1.5	13.5
2.0	18
2.5	22.5
3.0	27
3.5	31.5
4.0	36
4.5	40.5
5.0	45
5.5	49.5
6.0	54

As renal function may alter appreciably during therapy, the serum creatinine should be checked frequently and the dosage regimen modified as necessary.

- ***Intraperitoneal use:*** Following exploration for established peritonitis, or after peritoneal contamination due to faecal spill during surgery. **ORLOBIN®** may be used as an irrigant after recovery from anaesthesia in concentrations of 0.25% (2.5mg/ml). It may also be instilled in to the wound at closure. If instillation is desired in adults, a single dose of 500mg is diluted in 20ml of sterile distilled water and may be instilled through a polyethylene catheter sufured into the wound at closure. If possible, instillation should postponed until the patient has fully recovered from the effects of anaesthesia and muscle-relaxing drugs.
- ***Other routes of administration:*** Amikacin in concentrations of 0.25% may be used satisfactorily as an irrigating solution in abscess cavities, the pleural space, the peritoneum and the cerebral ventricles.

Side-effects:

When the recommended precautions and dosages are followed, the incidence of toxic reactions, such as tinnitis, vertigo, and partial reversible deafness, skin rash, drug fever, headache, paraesthesia, nausea and vomiting is low. Urinary signs of renal irritation (albumin, casts, and red or white cells), azotaemia and oliguria have been reported. There have been reports of retinal toxicity following intravitreal injection of amikacin.

Expiry date of the product:

Do not use this product after the expiry date shown on the internal and external packaging.

Storage instructions for this product: **ORLOBIN®** as supplied, is stable at ≤25°C for a period of three years.

INFORMATION ON THE RATIONAL USE OF MEDICINES

•This drug has been prescribed to you by your doctor only for the specific medical problem of yours. You should not give it to other persons or use it for another affection, without having previously consulted your doctor. •If during the treatment any problem with the drug arises, immediately inform your doctor or your chemist. •If you have any questions whatever, about the information concerning the drug you are taking, or need better informing about your medical problem, do not hesitate to ask your doctor or your chemist to give you this information. •For the drug you have been administered to be effective and safe, it should be taken according to the instructions you have been given. •For your safety and health it is necessary to read carefully every information concerning the drug you have been administered. •Do not keep any drugs in bathroom cabinets, because heat, dampness and humidity can alter a drug and render it harmful. •Do not keep any drugs you do not need any more or which have already expired. •For greater safety keep all drugs in a safe place out of children's reach.

THIS MEDICINE IS TO BE TAKEN ONLY BY DOCTOR'S PRESCRIPTION