

# TIBISTOP (Capsules)

## Rifampicin(150-300) mg.

### Composition and excipients:

Each capsule contains: 150 or 300 mg Rifampicin.  
Excipients: Pregelatinized starch-colloidal silicon dioxide -talc-Magnesium stearate.

### Mechanism of Action:

Rifampicin is an active bactericidal anti tuberculosis drug which is particularly active against the rapidly growing extracellular organisms and also has bactericidal activity intracellularly. Rifampicin has activity against slow and intermittently-growing M. Tuberculosis.

Rifampicin inhibits DNA-dependent RNA polymerase activity in susceptible cells. Specifically, it interacts with bacterial RNA polymerase but does not inhibit the mammalian enzyme. Cross-resistance to rifampicin has only been shown with other rifamycins

### Indications:

Tuberculosis: In combination with other active anti-tuberculosis drugs in the treatment of all forms of tuberculosis, including fresh, advanced, chronic and drug-resistant cases. Rifampicin is also effective against most atypical strains of Mycobacteria.

Leprosy: In combination with at least one other active anti-leprosy drug in the management of multibacillary and paucibacillary leprosy to effect conversion of the infectious state to a non-infectious state.

Other Infections: In the treatment of Brucellosis, Legionnaires Disease, and serious staphylococcal infections. To prevent emergence of resistant strains of the infecting organisms, rifampicin should be used in combination with another antibiotic appropriate for the infection.

Prophylaxis of meningococcal meningitis: For the treatment of asymptomatic carriers of N. meningitidis to eliminate meningococci from the nasopharynx.  
Haemophilus influenzae: For the treatment of asymptomatic carriers of H.influenzae and as chemoprophylaxis of exposed children, 4 years of age or younger.

### Pharmacokinetics:

Rifampicin is readily absorbed from the gastrointestinal tract. Peak serum concentrations of the order of 10 µg/ml occur about 2 to 4 hours after a dose of 10 mg/kg body weight on an empty stomach.

Absorption of rifampicin is reduced when the drug is ingested with food. The pharmacokinetics (oral and intravenous) in children are similar to adults. In normal subjects the biological half-life of rifampicin in serum averages about 3 hours after a 600 mg dose and increases to 5.1 hours after a 900 mg dose. With repeated administration, the half-life decreases and reaches average values of approximately 2-3 hours. At a dose of up to 600 mg/day, it does not differ in patients with renal failure and consequently, no dosage adjustment is required.

Rifampicin is rapidly eliminated in the bile and an enterohepatic circulation ensues. During this process, rifampicin undergoes progressive deacetylation, so that nearly all the drug in the bile is in this form in about 6 hours. This metabolite retains essentially complete antibacterial activity. Intestinal reabsorption is reduced by deacetylation and elimination is facilitated. Up to 30 % of a dose is excreted in the urine, with about half of this being unchanged drug. Rifampicin is widely distributed throughout the body. It is present in effective concentrations in many organs and body fluids, including cerebrospinal fluid. Rifampicin is about 80 % protein bound. Most of the unbound fraction is not ionized and therefore is diffused freely in tissues.

### Warnings:

Cautions should be taken in case of renal impairment if dose > 600 mg/day. All tuberculosis patients should have pre-treatment measurements of liver function.

Adults treated for tuberculosis with rifampicin should have baseline measurements of hepatic enzymes, bilirubin, serum creatinine, a complete blood count, and a platelet count.

Baseline tests are unnecessary in children unless a complicating condition is known or clinically suspected.

Patients with impaired liver function should only be given rifampicin in cases of necessity, and then with caution and under close medical supervision. In these patients, lower doses of rifampicin are recommended and careful monitoring of liver function, especially serum alanine aminotransferase (ALT) and serum aspartate aminotransferase (AST) should initially be carried out prior to therapy, weekly for two weeks, then every two weeks for the next six weeks. If signs of hepatocellular damage occur, rifampicin should be withdrawn.

Rifampicin should also be withdrawn if clinically significant changes in hepatic function occur. The need for other forms of antituberculosis therapy and a different regimen should be considered. Urgent advice should be obtained from a specialist in the management of tuberculosis. If rifampicin is re-introduced after liver function has returned to normal, liver function should be monitored daily.

In patients with impaired liver function, elderly patients, malnourished patients, and possibly, children under two years of age, caution is particularly recommended when instituting therapeutic regimens in which isoniazid is to be used concurrently with rifampicin. If the patient has no evidence of pre-existing liver disease and normal pre-treatment liver function, liver function tests need only be repeated if fever, vomiting, jaundice or other deterioration in the patient's condition occur.

In some patients hyperbilirubinaemia can occur in the early days of treatment. This results from competition between rifampicin and bilirubin for hepatic excretion.

Because of the possibility of immunological reaction including occurring with intermittent therapy (less than 2 to 3 times per week) patients should be closely monitored. Patients should be cautioned against interrupting treatment. Rifampicin has enzyme induction properties that can enhance the metabolism of endogenous substrates including adrenal hormones, thyroid hormones and vitamin D. Isolated reports have associated porphyria exacerbation with rifampicin administration.

At the time of prescription patients should be advised of the signs and symptoms and monitored closely for skin reactions.

It is important to note that early manifestations of hypersensitivity, such as fever, lymphadenopathy or biological abnormalities (including eosinophilia, liver abnormalities) may be present even though rash is not evident. If such signs or symptoms are present, the patient should be advised to consult immediately their physician.

Most of these reactions occurred within 2 days to 2 months after treatment initiation; the time to onset can vary depending on the conditions.

### Contraindications:

Rifampicin is contra-indicated in the presence of jaundice, and in patients who are hypersensitive to the rifampicin or any of the excipients.

Rifampicin use is contraindicated when given concurrently with the combination of saquinavir/ritonavir.

### Drug interactions:

#### Pharmacodynamic Interactions

When rifampicin is given concomitantly with the combination saquinavir/ritonavir, the potential for hepatotoxicity is increased. Therefore, concomitant use of Rifadin with saquinavir/ritonavir is contraindicated.

When rifampicin is given concomitantly with either halothane or isoniazid, the potential for hepatotoxicity is increased. The concomitant use of rifampicin and

halothane should be avoided. Patients receiving both rifampicin and isoniazid should be monitored closely for hepatotoxicity.

The concomitant use of rifampicin with other antibiotics causing vitamin K dependent coagulopathy such as cefazolin (or other cephalosporins with N-methyl-thiotetrazole side chain) should be avoided as it may lead to severe coagulation disorders, which may result in fatal outcome (especially in high doses). Examples of drugs or drug classes affected by rifampicin:

- Antiarrhythmics (e.g. disopyramide, mexiletine, quinidine, propafenone, tocinide),
- Antiepileptics (e.g. phenytoin),
- Hormone antagonist (antiestrogens e.g. tamoxifen, toremifene, gestinone),
- Antipsychotics (e.g. haloperidol, aripiprazole),
- Anticoagulants (e.g. coumarins),
- Antifungals (e.g. fluconazole, itraconazole, ketoconazole, voriconazole),
- Antivirals (e.g. saquinavir, indinavir, efavirenz, amprenavir, nelfinavir, atazanavir, lopinavir, nevirapine),
- Barbiturates
- Beta-blockers (e.g. bisoprolol, propranolol),
- Anxiolytics and hypnotics (e.g. diazepam, benzodiazepines, zolpidem, zolpidem),
- Calcium channel blockers (e.g. diltiazem, nifedipine, verapamil, nimodipine, isradipine, nicardipine, nisoldipine),
- Antibacterials (e.g. chloramphenicol, clarithromycin, dapson, doxycycline, fluoroquinolones, telithromycin),
- Corticosteroids
- Cardiac glycosides (digitoxin, digoxin),
- Clofibrate,
- Systemic hormonal contraceptives including estrogens and progestogens,
- Antidiabetic (e.g. chlorpropamide, tolbutamide, sulfonylureas, rosiglitazone),
- Immunosuppressive agents (e.g. ciclosporin, sirolimus, tacrolimus)
- Irinotecan,
- Thyroid hormone (e.g. levothyroxine),
- Losartan,
- Analgesics (e.g. methadone, narcotic analgesics),
- Praziquantel,
- Quinine,
- Riluzole,
- Selective 5-HT3 receptor antagonists (e.g. ondansetron)
- Statins metabolised by CYP 3A4 (e.g. simvastatin),
- Theophylline,
- Tricyclic antidepressants (e.g. amitriptyline, nortriptyline),
- Cytotoxics (e.g. imatinib),
- Diuretics (e.g. eplerenone)
- Enalapril: decrease enalapril active metabolite exposure. Dosage adjustments should be made if indicated by the patient's clinical condition
- Hepatitis-C antiviral drugs (eg, daclatasvir, simeprevir, sofosbuvir, telaprevir-ir): Concurrent use of treatment of hepatitis-C antiviral drugs and rifampicin should be avoided.
- Morphine: Plasma concentrations of morphine may be reduced by rifampicin. The analgesic effect of morphine should be monitored and doses of rifampicin adjusted during and after treatment with rifampicin.

Rifampicin treatment reduces the systemic exposure of oral contraceptives. Patients on oral contraceptives should be advised to use alternative, non-hormonal methods of birth control during rifampicin therapy. Also diabetes may become more difficult to control.

Concurrent use of ketoconazole and rifampicin has resulted in decreased serum concentrations of both drugs.

If p-aminosalicylic acid and rifampicin are both included in the treatment regimen, they should be given not less than eight hours apart to ensure satisfactory blood levels.

### Pregnancy:

At very high doses in animals rifampicin has been shown to have teratogenic effects. There are no well controlled studies with rifampicin in pregnant women. Although rifampicin has been reported to cross the placental barrier and appear in cord blood, the effect of rifampicin, alone or in combination with other antituberculosis drugs, on the human foetus is not known. Therefore, rifampicin should be used in pregnant women only if the potential benefit justifies the potential risk to the foetus. When rifampicin is administered during the last few weeks of pregnancy it may cause post-natal haemorrhages in the mother and infant for which treatment with Vitamin K1 may be indicated.

### Lactation:

Rifampicin is excreted in breast milk, patients receiving rifampicin should not breast feed unless in the physician's judgement the potential benefit to the patient outweighs the potential risk to the infant.

### Undesirable effects:

System organ class	Frequency	Possible effects
Infections and infestations	Unknown	Pseudomembranous colitis Influenza
	Common	Thrombocytopenia with or without purpura, usually associated with intermittent therapy, but is reversible if drug is discontinued as soon as purpura occurs.
Blood and lymphatic system disorders	Uncommon	Leukopenia
	Unknown	Disseminated intravascular coagulation Eosinophilia Agranulocytosis Hemolytic anemia Vitamin K dependent Coagulation disorders
Immune system disorders	Unknown	Anaphylactic reaction

Endocrine disorders	Unknown	Adrenal insufficiency in patients with compromised adrenal function have been observed
Metabolism and nutritional disorders	Unknown	Decreased appetite
Psychiatric disorders	Unknown	Psychotic disorder
	Common	Headache Dizziness
Nervous system disorders	Unknown	Cerebral hemorrhage and fatalities have been reported when rifampicin administration has been continued or resumed after the appearance of purpura
Eye disorders	Unknown	Tear discoloration
Vascular disorders	Unknown	Shock Flushing Vasculitis Bleeding
Respiratory disorders	Unknown	Dyspnoea Wheezing Sputum discoloured
	Common	Nausea Vomiting
	Uncommon	Diarrhea
Gastrointestinal disorders	Unknown	Gastrointestinal disorder Abdominal discomfort Tooth discoloration (which may be permanent)
Hepatobiliary disorders	Unknown	Hepatitis Hyperbilirubinaemia
Skin and subcutaneous tissue disorders	Unknown	Erythema multiforme Stevens-Johnson syndrome (SJS) Toxic epidermal necrolysis (TEN) Drug reaction with eosinophilia and systemic symptoms (DRESS) Acute generalized exanthematouspustulosis (AGEP) Skin reaction Pruritus Rash Pruritic Urticaria Dermatitis allergic Pemphigoid Sweat discoloration
Musculoskeletal and connective tissue disorders	Unknown	Muscle weakness Myopathy Bone pain
Renal and urinary disorders	Unknown	Acute kidney injury usually due to renal tubular necrosis or tubulointerstitial nephritis Chromaturia
Pregnancy, puerperium and perinatal conditions	Unknown	Post-partum haemorrhage Fetal-maternal haemorrhage
Reproductive system and breast disorders	Unknown	Menstrual disorder
Congenital, familial and genetic disorders	Unknown	Porphyria
	Very common	Pyrexia Chills
General disorders	Unknown	Edema



Investigations	Common	Blood bilirubin increased Aspartate aminotransferase increased Alanine aminotransferase increased
	Unknown	Blood pressure decreased Blood creatinine increased Hepatic enzyme increased

### Dosage and administration:

The daily dose of rifampicin, calculated from the patient's body weight, should preferably be taken at least 30 minutes before a meal or 2 hours after a meal to ensure rapid and complete absorption.

#### Tuberculosis:

Rifampicin should be given with other effective anti-tuberculosis drugs to prevent the possible emergence of rifampicin-resistant strains of Mycobacteria. Adults: The recommended single daily dose in tuberculosis is 8-12 mg/kg. Usual Daily dose: Patients weighing less than 50 kg - 450 mg. Patients weighing 50 kg or more - 600 mg.

Children: In children, oral doses of 10-20 mg/kg body weight daily are recommended, although a total daily dose should not usually exceed 600 mg.

#### Leprosy:

600 mg doses of rifampicin should be given once per month. Alternatively, a daily regimen may be used. The recommended single daily dose is 10 mg/kg. Usual daily dose: Patients weighing less than 50 kg - 450 mg. Patients weighing 50 kg or more - 600 mg.

In the treatment of leprosy, rifampicin should always be used in conjunction with at least one other anti-leprosy drug.

Brucellosis, Legionnaires Disease or serious staphylococcal infections

Adults: The recommended daily dose is 600-1200 mg given in 2 to 4 divided doses, together with another appropriate antibiotic to prevent the emergence of resistant strains of the infecting organisms.

Prophylaxis of meningococcal meningitis

Adults: 600 mg twice daily for 2 days.

Children (1 - 12 years): 10 mg/kg twice daily for 2 days.

Prophylaxis of Haemophilus influenzae

Adults and children: For members of households exposed to H. influenzae B disease when the household contains a child 4 years of age or younger, it is recommended that all members (including the child) receive rifampicin 20 mg/kg once daily (maximum daily dose 600 mg) for 4 days.

Impaired liver function:

A daily dose of 8 mg/kg should not be exceeded in patients with impaired liver function.

Use in the elderly:  
In elderly patients, the renal excretion of rifampicin is decreased proportionally with physiological decrease of renal function; due to compensatory increase of liver excretion, the terminal half-life in serum is similar to that of younger patients. However, as increased blood levels have been noted in one study of rifampicin in elderly patients, caution should be exercised in using rifampicin in such patients, especially if there is evidence of impaired liver function.

### Overdose:

#### Signs and Symptoms

Nausea, vomiting, abdominal pain, pruritus, headache and increasing lethargy will probably occur within a short time after acute ingestion; unconsciousness may occur when there is severe hepatic disease. Transient increases in liver enzymes and/or bilirubin may occur. Brownish-red or orange coloration of the skin, urine, sweat, saliva, tears and faeces will occur, and its intensity is proportional to the amount ingested. Facial or periorbital oedema has also been reported in paediatric patients. Hypotension, sinus tachycardia, ventricular arrhythmias, seizures and cardiac arrest were reported in some fatal cases. The minimum acute lethal or toxic dose is not well established. However, non-fatal acute overdoses in adults have been reported with doses ranging from 9 to 12 g rifampicin. Fatal acute overdoses in adults have been reported with doses ranging from 14-60 g. Alcohol or a history of alcohol abuse was involved in some of the fatal and nonfatal reports.

Nonfatal overdoses in paediatric patients ages 1 to 4 years old of 100 mg/kg for one to two doses have been reported.

#### Management:

Intensive supportive measures should be instituted and individual symptoms treated as they arise. Since nausea and vomiting are likely to be present, gastric lavage is probably preferable to induction of emesis. Following evacuation of the gastric contents, the instillation of activated charcoal slurry into the stomach may help absorb any remaining drug from the gastrointestinal tract. Antiemetic medication may be required to control severe nausea and vomiting. Active diuresis (with measured intake and output) will help promote excretion of the drug. Haemodialysis may be of value in some patients.

**Packaging:** 3 blisters, each contains 10 Capsules /carton box.

**Storage Condition:** store at room temperature 20° - 25° C, Protect from light and moisture.

TPP220861	THIS IS A MEDICAMENT
<ul style="list-style-type: none"> <li>- A medicament is a product but unlike any other products.</li> <li>- A medicament is a product which affects your health, and its consumption contrary to instructions is dangerous for you.</li> <li>- Follow strictly the doctor's prescription, the method of use and the instructions of the pharmacist who sold the medicament. The doctor and the pharmacist are experts in medicine, its benefits and risks.</li> <li>- Do not by yourself interrupt the period of treatment prescribed for you.</li> <li>- Do not repeat the same prescription without consulting your doctor.</li> </ul>	
<p>KEEP MEDICAMENTS OUT OF REACH OF CHILDREN (Arab Health Ministers) (Arab Pharmacists Association)</p>	

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