



**Doxacil®**

Doxycycline  
**Tetracycline**

### COMPOSITION

Doxacil® capsule : Each capsule contains Doxycycline Hydrochloride BP equivalent to Doxycycline BP 100 mg.

### PHARMACOLOGY

Doxacil® (Doxycycline), a member of tetracycline group of antibiotic, is a semi-synthetic derivative of oxytetracycline. Doxycycline is a bacteriostatic but in high concentrations frequently exhibits bactericidal effects. It acts principally by interference with protein synthesis and binds to the 30S ribosomal subunit, thereby preventing the attachment of aminoacyl transfer RNA to messenger RNA-ribosome complex. Doxacil® is a broad spectrum antibiotic with the broadest spectrum of any known antibacterial agents. It is active against a wide range of Gram-positive and Gram-negative bacteria, spirochetes, mycoplasma, rickettsia etc. It has an excellent mode of absorption and is almost completely absorbed (95%) from the gastrointestinal tract. Food does not interfere with the absorption of doxycycline. 90% of the drug in circulation is bound to plasma protein. Biological half-life varies between 16 hours following a single dose to 23 hours on repeated doses. Doxycycline is more lipid soluble than any other tetracycline and attains a wide distribution in body tissues and fluids. A very small amount is excreted in the urine and unlike other tetracyclines, doxycycline apparently does not accumulate in patients with impaired renal function as such it is preferred for uraemic patients with extrarenal infections. The drug is excreted in the feces, largely as an inactive conjugate or perhaps as a chelate.

### INDICATION

Doxacil® has a very wide spectrum of activities and has been used in the treatment of a large number of infections caused by susceptible organisms.

Respiratory tract infections: Pneumonia, influenza, pharyngitis, tonsillitis, bronchitis, sinusitis, otitis media and other streptococcal and staphylococcal infections where tetracycline resistance is not a problem.

Genitourinary tract infections: Pyelonephritis, cystitis, urethritis, gonorrhoea, epididymitis, syphilis, chancroid and granuloma inguinale.

Chlamydia: Lymphogranuloma venereum, psittacosis, trachoma.

Intestinal diseases: Whipple's disease, tropical sprue, blind loop syndrome.

In acute intestinal amoebiasis, Doxacil® may be a useful adjunct to amoebicides.

Bacillary infections: Brucellosis, tularemia, cholera, travelers diarrhea

Acne: Acne vulgaris, acne conglobata and other forms of acne.

Other infections: Actinomycosis, yaws, relapsing fever, leptospirosis, typhus, rickettsial pox and Q fever, Cellulitis furunculosis, abscess and infections caused by *Mycobacterium marinum*, *Bordetella pertussis* and *Bacillus anthracis*.

### **DOSAGE AND ADMINISTRATION**

*Adults:* Two capsules at a time or one capsule every 12 hours for the first day followed by one capsule per day.

*Children:* Over 8 years or weighing 45 Kg or less: 4.4 mg/Kg on the first day followed by 2.2 mg/Kg daily.

*Acute gonococcal urethritis:* 1 capsule twice daily for 2 to 4 days in male and until a cure has been obtained in female.

*Chlamydial infections:* 1 capsule twice daily for 7 days.

*Syphilis:* 3 capsules in divided doses for 10 days.

### **CONTRAINDICATION AND PRECAUTION**

It is contraindicated to patients with known hypersensitivity to any of the tetracyclines. It is also contraindicated in severe hepatic disorder and patients with systemic lupus erythematosus.

Concomitant intake of alkalis, antacids and iron may interfere with the absorption of Doxycycline. It is advisable to avoid giving doxycycline in conjunction with penicillin. Doxycycline should not be used in pregnant women unless, in the judgment of the physician, it is essential for the welfare of the patient.

The use of drugs of tetracycline group during tooth development (last half of pregnancy, infancy and childhood to the age of 12 years) may cause permanent discoloration of the teeth. Tetracyclines, therefore, should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.

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### **SIDE EFFECT**

Doxacil® may produce gastrointestinal irritation to a varying degree in some individuals. Epigastric distress, abdominal discomfort, nausea, and vomiting may occur. Long term therapy with Doxacil® may produce changes in the peripheral blood. Various skin reactions including rashes, urticaria, exfoliative dermatitis may follow the use of Doxacil® but they are rare.

### **DRUG INTERACTION**

Should not be taken with antacids, milk, other alkalis e.g. calcium, magnesium and iron, penicillin, anticoagulants, anti-diabetic agents, anti-convulsants and enzyme inducing drugs.

### **USE IN PREGNANCY AND LACTATION**

The drug should be avoided in nursing mothers and during the first trimester of pregnancy. Doxycycline is not recommended in neonates.

### **STORAGE CONDITION**

It should be stored in a dry place at room temperature.

### **HOW SUPPLIED**

Doxacil® capsule: Box containing 10 x 10 Doxacil capsules in blister pack.

