

Primera

# METOPROLOL TARTRATE

# METOPRIM

R<sub>x</sub>

100 mg Film-Coated Tablet

50 mg Film-Coated Tablet

## BETA ADRENOCEPTOR BLOCKER

### FORMULATION:

Each film-coated tablet contains:

|                          |        |
|--------------------------|--------|
| Metoprolol Tartrate, USP | 100 mg |
| Metoprolol Tartrate, USP | 50 mg  |

### PRODUCT DESCRIPTION:

**Metoprolol Tartrate (Metoprim) 100 mg Film-Coated Tablet:**

White to off-white film coated tablet, round, biconvex, bisected on one side, plain on the other side.

**Metoprolol Tartrate (Metoprim) 50 mg Film-Coated Tablet:**

White to off-white film coated tablet, round, biconvex, bisected on one side, plain on the other side.

### PHARMACODYNAMICS:

Metoprolol (Metoprim), like all other beta blockers, are competitive antagonists at beta-adrenergic sites and are used in the management of cardiovascular disorders such as hypertension, angina pectoris, cardiac arrhythmias and myocardial infarction. They are also given to control symptoms of sympathetic activity in alcohol withdrawal, anxiety states, hyperthyroidism and tremors. Metoprolol (Metoprim) is used for prophylaxis of migraine and of bleeding associated with portal hypertension.

### PHARMACOKINETICS:

Metoprolol is readily and completely absorbed from the gastrointestinal tract but is subject to considerable first pass metabolism. Peak plasma concentrations vary widely and occur about 1.5 to 2 hours after a single oral dose. It is moderately lipid soluble. Metoprolol is widely distributed; it crosses the blood brain barrier, the placenta, and is distributed into breast milk. It is slightly bound to plasma protein. It is extensively metabolized in the liver by oxidative deamination, O-dealkylation followed by oxidation, and aliphatic hydroxylation. The metabolites are excreted in the urine together with only small amounts of unchanged Metoprolol. The rate of hydroxylation to  $\alpha$ -hydroxymetoprolol is determined by genetic polymorphism; the half-life of Metoprolol in fast hydroxylation is stated 3 to 4 hours, where as in poor hydroxylation is 7 hours.

### INDICATIONS:

Metoprolol (Metoprim) is used in the management of hypertension, angina pectoris, cardiac arrhythmias, myocardial infarction and heart failure.

### DOSAGE AND ADMINISTRATION:

#### Hypertension:

100 mg Tablet: Initial dose of 1 tablet daily, increased weekly according to the response of the patient to 4 tablets, can be taken as 1 to 2 times daily or as prescribed by the physician. Usual maintenance dose is 1 to 2 tablets daily taken with or immediately following a meal.

#### Angina Pectoris:

50 mg Tablet: 1 to 2 tablets to be taken 2 or 3 times daily or as prescribed by the physician.

#### Cardiac Arrhythmia:

50 mg Tablet: 1 tablet to be taken 2 or 3 times daily, increase if necessary to 6 tablets in divided doses or as prescribed by the physician.

#### Maintenance treatment after myocardial infarction:

200 mg daily given in divided doses for long term oral treatment has been shown to reduce the risk of reinfarction (also in patients with diabetes mellitus) and reduce the risk of sudden death.

#### Functional heart disorders with palpitations:

100 mg Tablet: 1 tablet daily, given as a single dose every morning or as prescribed by the physician.

#### Migraine Prophylaxis:

100 mg Tablet: 100 mg – 200 mg given in divided doses, every 12 hours or as prescribed by the physician.

#### Hyperthyroidism:

The recommended dosage is 150-200 mg daily, given in 3-4 doses or as prescribed by the physician.

### CONTRAINDICATION:

Metoprolol (Metoprim) should not be given to patients with heart failure unless it is controlled. Atrioventricular block of second or third degree, patients with continuous or intermittent inotropic therapy acting through  $\beta$ -receptor agonism, sinus bradycardia, sick sinus syndrome, unstable decompensated cardiac failure, severe peripheral arterial circulatory disorder and cardiogenic shock. Metoprolol (Metoprim) is contraindicated in patients who have shown hypersensitivity to any component of the products or to other beta blockers. Metoprolol (Metoprim) should not be given to patients with acute myocardial infarction as long as the heart rate is <45 beats/min, the P-Q interval is >0.24 sec or the systolic blood pressure is <100 mmHg, other contraindications include metabolic acidosis, and partial heart block.

### WARNINGS AND PRECAUTIONS:

Do not take other medicine especially nonprescription sympathomimetic drugs unless prescribed by the physician. During treatment with Metoprolol (Metoprim), the risk of interfering with carbohydrate metabolism or masking hypoglycaemia is less than with non-selective Beta blockers. Patients suffering from heart failure should have their decompensation treated both before and during treatment with Metoprolol (Metoprim). Very rarely, a pre-existing A-V conduction disorder of moderate degree may become aggravated. If the patients develop increasing bradycardia, Metoprolol (Metoprim) should be given in lower doses or gradually withdrawn. Metoprolol (Metoprim) may aggravate the symptoms of peripheral arterial circulatory disorders. Where Metoprolol (Metoprim) is prescribed for a patient with pheochromocytoma, an alpha blocker should be given concomitantly. Abrupt interruption on the medication should be avoided. Metoprolol (Metoprim) should not be used by patients who have bronchospastic disease unless the patient does not correspond or tolerate antihypertensive drug.

### PREGNANCY AND LACTATION:

Beta Blockers reduce placental perfusion which has been associated with abortion, early death, growth retardation and intrauterine death. Beta Blockers may cause bradycardia in the fetus, new born and breast-fed infant. Metoprolol (Metoprim) should not be given during pregnancy and lactation unless potential benefit may warrant the use of the drug despite the potential risk involved. Appropriate maternofetal monitoring must be performed in pregnant women treated with Metoprolol (Metoprim). Small amount of Metoprolol (Metoprim) is excreted in milk and should not expect to cause any adverse effect in breastfed infants if the mother is being treated with Metoprolol (Metoprim) within normal range of therapeutic dose.

### DRUG INTERACTIONS:

Co-administration of digitalis glycosides and Beta blockers may increase atrioventricular conduction time and may induce bradycardia.

Inhalation anesthetics enhance the cardio depressant effect in patients receiving Beta blockers.

The dosage of oral antidiabetic drugs may have to be readjusted in patients receiving Beta blockers.

Antihypertensive effects of Beta blocker may decrease by concomitant treatment with indomethacin or other prostaglandin synthetase inhibitor drug.

When adrenaline is administered to patients treated with beta-blockers, cardio selective beta-blockers interfere much less with blood pressure control than non-selective beta blockers.

If concomitant treatment with clonidine is to be discontinued, Beta blocker medication should be withdrawn several days before clonidine.

Increased negative and chronotropic effects may occur when Metoprolol (Metoprim) is given together with calcium antagonists of the verapamil type.

Beta blockers may enhance the negative inotropic and negative chronotropic effect of antiarrhythmic agents e.g. quinidine and amiodarone

Patients receiving concomitant treatment with sympathetic ganglion blocking agents, other Beta blockers or Mono Amine Oxidase Inhibitors (MAOIs) should be kept under close surveillance.

Metoprolol (Metoprim) is a metabolic substrate for the Cytochrome P450 isoenzyme CYP2D6. Drugs that act as enzyme-inducing and enzyme-inhibiting substances may exert an influence on the plasma level of Metoprolol (Metoprim) may be raised by co-administration of compounds metabolized by CYP2D6, e.g. antihistamine, antiarrhythmic, antidepressants, antipsychotics and COX-2 inhibitor.

The plasma concentration of Metoprolol (Metoprim) is decreased by rifampicin and may be increased by alcohol and hydralazine.

### ADVERSE DRUG EFFECTS:

Serious adverse drug effects include heart failure, heart block and bronchospasm. Metoprolol, like other beta blockers are associated with fatigue, coldness of the extremities and sleep disturbances. Fatigue is a common side effect of Metoprolol. Other side effects are reported as paresthesia, peripheral neuropathy and myopathy. Adverse gastrointestinal effects include nausea, vomiting, diarrhea, constipation and abdominal cramping.

### OVERDOSAGE AND TREATMENT:

#### Overdose:

The symptoms of Metoprolol (Metoprim) overdose may include bradyarrhythmia, bradycardia, bronchospasm, cardiac conduction, cardiac insufficiency and hypotension.

#### Treatment:

If Metoprolol (Metoprim) overdose is justified, monitoring, supervision and supportive measure must be provided. Gastric lavage and activated charcoal should be administered. Bronchodilators can reverse bronchospasms. Adrenostimulating drug e.g. Atropine, pacemaker to treat bradycardia and conduction disorders, injection of glucagon, intravenous administration of dobutamine (adrenostimulating drug) with alpha 1 receptor agonist drugs added in the presence of vasodilation for the treatment of hypotension and acute cardiac failure and shock should be treated with suitable volume expansion. Intravenous use of Ca<sup>2+</sup> can also be considered.

### STORAGE CONDITION:

Store at temperatures not exceeding 30°C

Keep the product out of sight and reach of children

Protect from light

### AVAILABILITY:

Alu/PVDC Blister Pack x 10's (Box of 100's)

### CAUTION:

Foods, Drugs, Devices and Cosmetics Act prohibits dispensing without prescription.

### ADR REPORTING STATEMENT:

For suspected adverse drug reaction, report to the FDA: [www.fda.gov/ph](http://www.fda.gov/ph)  
Seek medical attention immediately at the first sign of any adverse drug reaction.

### REGISTRATION NUMBER:

|  |            |
|--|------------|
| Metoprolol Tartrate (Metoprim) 100 mg Film-Coated Tablet | DR-XY38922 |
| Metoprolol Tartrate (Metoprim) 50 mg Film-Coated Tablet  | DR-XY30344 |

### DATE OF FIRST AUTHORIZATION:

|  |                  |
|--|------------------|
| Metoprolol Tartrate (Metoprim) 100 mg Film-Coated Tablet | January 4, 2011  |
| Metoprolol Tartrate (Metoprim) 50 mg Film-Coated Tablet  | January 19, 2009 |

### DATE OF REVISION OF PACKAGE INSERT:

Version number: 2

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### MANUFACTURED FOR:

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