

**1. Generic Name**

Bisoprolol Fumarate Tablets I.P. 10 mg

**2. Qualitative and quantitative Composition:**

Each film coated tablet contains:

Bisoprolol Fumarate I.P. ....10 mg

Colour: Titanium Dioxide I.P.

The excipients used are Lactose Monohydrate, Microcrystalline Cellulose, Crospovidone, Magnesium Stearate, Hydroxy Propyl Methyl Cellulose, Polyethylene Glycol, Talc and Titanium Dioxide.

**3. Dosage form and strength**

**Dosage form:** Film Coated Tablets

**Strength:** 10 mg

**4. Clinical particulars**

**4.1. Therapeutic indication**

For the treatment of hypertension, coronary heart disease (angina pectoris).

**4.2. Posology and method of administration**

Standard treatment of CHF consists of an ACE inhibitor (or an angiotensin receptor blocker in case of intolerance to ACE inhibitors), a beta-blocker, diuretics, and when appropriate cardiac glycosides. Patients should be stable (without acute failure) when bisoprolol treatment is initiated.

It is recommended that the treating physician should be experienced in the management of chronic heart failure.

Transient worsening of heart failure, hypotension, or bradycardia may occur during the titration period and thereafter.

***Posology***

**Congestive Heart Failure (CHF)**

***Titration phase***

The treatment of stable chronic heart failure with bisoprolol requires a titration phase.

The treatment with bisoprolol is to be started with a gradual up titration according to the following steps:

- 1.25 mg once daily for 1 week, if well tolerated increase to
- 2.5 mg once daily for a further week, if well tolerated increase to
- 3.75 mg once daily for a further week, if well tolerated increase to
- 5 mg once daily for the 4 following weeks, if well tolerated increase to
- 7.5 mg once daily for the 4 following weeks, if well tolerated increase to

- 10 mg once daily for the maintenance therapy.

The maximum recommended dose is 10 mg once daily.

Close monitoring of vital signs (heart rate, blood pressure) and symptoms of worsening heart failure is recommended during the titration phase. Symptoms may already occur within the first day after initiating the therapy.

#### *Treatment modification*

If the maximum recommended dose is not well-tolerated, gradual dose reduction may be considered.

In case of transient worsening of heart failure, hypotension, or bradycardia reconsideration of the dosage of the concomitant medication is recommended. It may also be necessary to temporarily lower the dose of bisoprolol or to consider discontinuation.

The reintroduction and/or up titration of bisoprolol should always be considered when the patient becomes stable again.

If discontinuation is considered, gradual dose decrease is recommended, since abrupt withdrawal may lead to acute deterioration of the patient's condition.

Treatment of stable chronic heart failure with bisoprolol is generally a long-term treatment.

#### Hypertension

The usual adult dose is 10 mg once daily with a maximum recommended dose of 20 mg per day. In some patients, 5 mg per day may be adequate.

#### *Patients with hepatic or renal impairment*

There is no information regarding pharmacokinetics of bisoprolol in patients with chronic heart failure and with impaired hepatic or renal function. Up titration of the dose in these populations should therefore be made with additional caution. In patients with final stage impairment of renal function (creatinine clearance less than 20 ml/min) or in patients with severe hepatic dysfunction, the dosage should not exceed 10 mg bisoprolol once daily. Experience of use of bisoprolol in renal dialysis patients is limited, however. It is thought that bisoprolol fumarate cannot be dialysed.

#### *Older people*

No dosage adjustment is required but 5 mg per day may be adequate in some elderly patients; as for other adults, the dosage may have to be reduced in cases of severe renal or hepatic dysfunction.

#### *Paediatric population*

There is no paediatric experience with bisoprolol, therefore its use cannot be recommended in paediatric patients.

#### ***Method of administration***

Bisoprolol tablets should be taken in the morning and can be taken with food. They should be swallowed with liquid and should not be chewed.

### **4.3. Contraindications**

Bisoprolol is contraindicated in chronic heart failure patients with:

- Acute heart failure or during episodes of heart failure decompensation requiring i.v. Inotropic therapy.

- Cardiogenic shock
- Second- or third-degree AV block
- Sick sinus syndrome
- Sinoatrial block
- Symptomatic bradycardia
- Symptomatic hypotension
- Severe bronchial asthma
- Severe forms of peripheral arterial occlusive disease or severe forms of raynaud's syndrome.
- Untreated phaeochromocytoma
- Metabolic acidosis
- Hypersensitivity to bisoprolol or to any of the excipients.

#### **4.4. Special warnings and precautions for use**

The treatment of stable chronic heart failure with bisoprolol has to be initiated with a special titration phase.

Especially in patients with ischaemic heart disease the cessation of therapy with bisoprolol must not be done abruptly unless clearly indicated, because this may lead to transitional worsening of heart condition.

The initiation and cessation of treatment with bisoprolol necessitates regular monitoring.

There is no therapeutic experience of bisoprolol treatment of heart failure in patients with the following diseases and conditions:

- Insulin dependent diabetes mellitus (type I)
- Severely impaired renal function
- Severely impaired hepatic function
- Restrictive cardiomyopathy
- Congenital heart disease
- Haemodynamically significant organic valvular disease
- Myocardial infarction within 3 months
- Bisoprolol must be used with caution in:
  - Bronchospasm (bronchial asthma, obstructive airways diseases)
  - Diabetes mellitus with large fluctuations in blood glucose values; Symptoms of hypoglycaemia can be masked.
  - Strict fasting
  - Ongoing desensitisation therapy. As with other beta-blockers, bisoprolol may increase both the sensitivity towards allergens and the severity of anaphylactic reactions. Epinephrine treatment does not always yield the expected therapeutic effect.
- First degree AV block

- Prinzmetal's angina: Cases of coronary vasospasm have been observed. Despite its high beta<sub>1</sub>-selectivity, angina attacks cannot be completely excluded when bisoprolol is administered to patients with Prinzmetal's angina.
- Peripheral arterial occlusive disease. Aggravation of symptoms may occur especially when starting therapy.
- General anaesthesia

In patients undergoing general anaesthesia beta-blockade reduces the incidence of arrhythmias and myocardial ischemia during induction and intubation and the post-operative period. It is currently recommended that maintenance beta-blockade be continued peri-operatively. The anaesthetist must be aware of beta-blockade because of the potential for interactions with other drugs, resulting in bradyarrhythmias, attenuation of the reflex tachycardia and the decreased reflex ability to compensate for blood loss. If it is thought necessary to withdraw beta-blocker therapy before surgery, this should be done gradually and completed about 48 hours before anaesthesia.

Combination of bisoprolol with calcium antagonists of the verapamil or diltiazem type, with Class I antiarrhythmic drugs and with centrally acting antihypertensive drugs is generally not recommended.

Although cardioselective (beta<sub>1</sub>) beta-blockers may have less effect on lung function than non-selective beta-blockers, as with all beta-blockers, these should be avoided in patients with obstructive airways diseases, unless there are compelling clinical reasons for their use. Where such reasons exist, CORBIS may be used with caution. In patients with obstructive airways diseases, the treatment with bisoprolol should be started at the lowest possible dose and patients should be carefully monitored for new symptoms (e.g. dyspnea, exercise intolerance, cough). In bronchial asthma or other chronic obstructive lung diseases, which may cause symptoms, bronchodilating therapy should be given concomitantly. Occasionally an increase of the airway resistance may occur in patients with asthma, therefore the dose of beta<sub>2</sub>-stimulants may have to be increased.

Patients with psoriasis or with a history of psoriasis should only be given beta-blockers (e.g. bisoprolol) after carefully balancing the benefits against the risks.

In patients with pheochromocytoma bisoprolol must not be administered until after alpha-receptor blockade.

Under treatment with bisoprolol the symptoms of a thyrotoxicosis may be masked.

#### **4.5. Drugs interactions**

##### Combinations not recommended.

Calcium antagonists of the verapamil type and to a lesser extent of the diltiazem type: Negative influence on contractility and atrio-ventricular conduction. Intravenous administration of verapamil in patients on β-blocker treatment may lead to profound hypotension and atrioventricular block.

Class I antiarrhythmic drugs (e.g. quinidine, disopyramide; lidocaine, phenytoin; flecainide, propafenone): Effect on atrio-ventricular conduction time may be potentiated and negative inotropic effect increased.

Centrally acting antihypertensive drugs such as clonidine and others (e.g. methyldopa, moxonidine, rilmenidine): Concomitant use of centrally acting antihypertensive drugs may worsen heart failure by a decrease in the central sympathetic tonus (reduction of heart rate and

cardiac output, vasodilation). Abrupt withdrawal, particularly if prior to beta-blocker discontinuation, may increase risk of “rebound hypertension”.

#### Combinations to be used with caution.

Calcium antagonists of the dihydropyridine type such as felodipine and amlodipine: Concomitant use may increase the risk of hypotension, and an increase in the risk of a further deterioration of the ventricular pump function in patients with heart failure cannot be excluded.

Class-III antiarrhythmic drugs (e.g. amiodarone): Effect on atrio-ventricular conduction time may be potentiated.

Topical beta-blockers (e.g. eye drops for glaucoma treatment) may add to the systemic effects of bisoprolol.

Parasympathomimetic drugs: Concomitant use may increase atrio-ventricular conduction time and the risk of bradycardia.

Insulin and oral antidiabetic drugs: Increase of blood sugar lowering effect. Blockade of beta-adrenoreceptors may mask symptoms of hypoglycaemia.

Anaesthetic agents: Attenuation of the reflex tachycardia and increase of the risk of hypotension.

Digitalis glycosides: Reduction of heart rate, increase of atrio-ventricular conduction time.

Non-steroidal anti-inflammatory drugs (NSAIDs): NSAIDs may reduce the hypotensive effect of bisoprolol.

$\beta$ -Sympathomimetic agents (e.g. isoprenaline, dobutamine): Combination with bisoprolol may reduce the effect of both agents.

Sympathomimetics that activate both  $\beta$ - and  $\alpha$ -adrenoceptors (e.g. noradrenaline, adrenaline): Combination with bisoprolol may unmask the  $\alpha$ -adrenoceptor-mediated vasoconstrictor effects of these agents leading to blood pressure increase and exacerbated intermittent claudication. Such interactions are considered to be more likely with nonselective  $\beta$ -blockers.

Concomitant use with antihypertensive agents as well as with other drugs with blood pressure lowering potential (e.g. tricyclic antidepressants, barbiturates, phenothiazines) may increase the risk of hypotension.

#### Combinations to be considered.

Mefloquine: increased risk of bradycardia

Monoamine oxidase inhibitors (except MAO-B inhibitors): Enhanced hypotensive effect of the beta-blockers but also risk for hypertensive crisis.

### **4.6. Use in special populations (such as pregnant women, lactating women, paediatric patients, geriatric patients etc.)**

#### **Pregnancy**

Bisoprolol has pharmacological effects that may cause harmful effects on pregnancy and/or the fetus/newborn. In general, beta-adrenoceptor blockers reduce placental perfusion, which has been associated with growth retardation, intrauterine death, abortion or early labour. Adverse effects (e.g. hypoglycaemia and bradycardia) may occur in the fetus and newborn infant. If treatment with beta-adrenoceptor blockers is necessary, beta<sub>1</sub>-selective adrenoceptor blockers are preferable.

Bisoprolol should not be used during pregnancy unless clearly necessary. If treatment with bisoprolol is considered necessary, the uteroplacental blood flow and the fetal growth should

be monitored. In case of harmful effects on pregnancy or the fetus alternative treatment should be considered. The newborn infant must be closely monitored. Symptoms of hypoglycaemia and bradycardia are generally to be expected within the first 3 days.

### **Breast-feeding**

It is not known whether this drug is excreted in human milk. Therefore, breastfeeding is not recommended during administration of bisoprolol.

### **4.7. Effects on ability to drive and use machines**

In a reported clinical study, with coronary heart disease patients bisoprolol did not impair driving performance. However, due to individual variations in reactions to the drug, the ability to drive a vehicle or to operate machinery may be impaired. This should be considered particularly at start of treatment and upon change of medication as well as in conjunction with alcohol.

### **4.8. Undesirable effects**

The following definitions apply to the frequency terminology used hereafter:

Very common ( $\geq 1/10$ ) Common ( $\geq 1/100$  to  $< 1/10$ ) Uncommon ( $\geq 1/1,000$  to  $< 1/100$ ) Rare ( $\geq 1/10,000$  to  $< 1/1,000$ ) Very rare ( $< 1/10,000$ )

<b>System organ class</b>	<b>Very Common (<math>\geq 1/10</math>)</b>	<b>Common (<math>\geq 1/100</math> to <math>&lt; 1/10</math>)</b>	<b>Uncommon (<math>\geq 1/1,000</math> to <math>&lt; 1/100</math>)</b>	<b>Rare (<math>\geq 1/10,000</math> to <math>&lt; 1/1,000</math>)</b>	<b>Very rare (<math>&lt; 1/10,000</math>)</b>
Psychiatric Disorders			Sleep disorders (including vivid dreams), depression	Nightmares, hallucinations, anxiety, psychosis, confusion	
Nervous system disorders		Dizziness*, Headache*		Syncope	
Eye disorders				dry eyes, impaired vision	Conjunctivitis
Ear and labyrinth disorders				Hearing disorders	
Cardiac disorders			AV-conduction disturbances, worsening of pre-existing heart failure, bradycardia (decrease in pulse rate)		
Vascular disorders		Feeling of coldness or numbness in the extremities, hypotension	Orthostatic hypotension	Cyanosis of extremities, paraesthesia If you already have Raynaud's	

System organ class	Very Common ( $\geq 1/10$ )	Common ( $\geq 1/100$ to $< 1/10$ )	Uncommon ( $\geq 1/1,000$ to $< 1/100$ )	Rare ( $\geq 1/10,000$ to $< 1/1,000$ )	Very rare ( $< 1/10,000$ )
				disease or intermittent claudication (pain in the legs while walking) Bisoprolol may make these worse.	
Respiratory, thoracic and mediastinal disorders			Bronchospasm in patients with bronchial asthma or a history of obstructive airways disease	Allergic rhinitis	
Gastro-intestinal disorders			Gastrointestinal complaints such as nausea, vomiting, diarrhoea, constipation		
Hepatobiliary disorders				increased liver enzymes (ALAT, ASAT), Hepatitis	
Reproductive system and breast disorders				potency disorders	
Skin and subcutaneous tissue disorders				Hypersensitivity reactions (itching, flush, rash)	Alopecia. Beta-blockers may provoke or worsen psoriasis or induce psoriasis-like rash. Not known: angioedema
Musculoskeletal and Connective tissue disorders			Muscular weakness and cramps	muscle and joint ache	
General disorders and administration site conditions		lassitude fatigue*	asthenia	Perspiration, Oedema	

System organ class	Very Common ( $\geq 1/10$ )	Common ( $\geq 1/100$ to $< 1/10$ )	Uncommon ( $\geq 1/1,000$ to $< 1/100$ )	Rare ( $\geq 1/10,000$ to $< 1/1,000$ )	Very rare ( $< 1/10,000$ )
Metabolism and nutrition disorders				Increased triglycerides. Beta-blockers may mask the symptoms of thyrotoxicosis or hypoglycaemia.	

### **Reporting of adverse reactions**

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Report suspected adverse reactions via any point of contact available at [www.torrentpharma.com](http://www.torrentpharma.com) or at email: [pv@torrentpharma.com](mailto:pv@torrentpharma.com) or call on 1800-120-3001.

## **4.9. Overdose**

### **Symptoms**

With overdose (e.g. daily dose of 15 mg instead of 7.5 mg) third degree AV-block, bradycardia, and dizziness have been reported. In general the most common signs expected with overdosage of a beta-blocker are bradycardia, hypotension, bronchospasm, acute cardiac insufficiency and hypoglycaemia. To date a few cases of overdose (maximum: 2000 mg) with bisoprolol have been reported in patients suffering from hypertension and/or coronary heart disease showing bradycardia and/or hypotension; all patients recovered. There is a wide inter-individual variation in sensitivity to one single high dose of bisoprolol and patients with heart failure are probably very sensitive. Therefore, it is mandatory to initiate the treatment of these patients with a gradual up titration according to the scheme given in section 4.2.

### **Management**

If overdose occurs, bisoprolol treatment should be stopped and supportive and symptomatic treatment should be provided. Limited data suggest that bisoprolol is hardly dialysable. Based on the expected pharmacologic actions and recommendations for other beta-blockers, the following general measures should be considered when clinically warranted.

Bradycardia: Administer intravenous atropine. If the response is inadequate, isoprenaline or another agent with positive chronotropic properties may be given cautiously. Under some circumstances, transvenous pacemaker insertion may be necessary.

Hypotension: Intravenous fluids and vasopressors should be administered. Intravenous glucagon may be useful.

AV block (second or third degree): Patients should be carefully monitored and treated with isoprenaline infusion or transvenous cardiac pacemaker insertion.

Acute worsening of heart failure: Administer i.v. diuretics, inotropic agents, vasodilating agents.

Bronchospasm: Administer bronchodilator therapy such as isoprenaline, beta2-sympathomimetic drugs and/or aminophylline.

Hypoglycaemia: Administer i.v. glucose.

## **5. Pharmacological properties**

### **5.1. Mechanism of Action**

Bisoprolol is a highly beta1-selective-adrenoceptor blocking agent, lacking intrinsic stimulating and relevant membrane stabilising activity. It only shows low affinity to the beta2-receptor of the smooth muscles of bronchi and vessels as well as to the beta2-receptors concerned with metabolic regulation. Therefore, bisoprolol is generally not to be expected to influence the airway resistance and beta2-mediated metabolic effects. Its beta1-selectivity extends beyond the therapeutic dose range.

### **5.2. Pharmacodynamic properties**

In total 2647 patients were included in the reported CIBIS II trial. 83% (n = 2202) were in NYHA class III and 17% (n = 445) were in NYHA class IV. They had stable symptomatic systolic heart failure (ejection fraction <35%, based on echocardiography). Total mortality was reduced from 17.3% to 11.8% (relative reduction 34%). A decrease in sudden death (3.6% vs 6.3%, relative reduction 44%) and a reduced number of heart failure episodes requiring hospital admission (12% vs 17.6%, relative reduction 36%) was observed. Finally, a significant improvement of the functional status according to NYHA classification has been shown. During the initiation and titration of bisoprolol hospital admission due to bradycardia (0.53%), hypotension (0.23%), and acute decompensation (4.97%) were observed, but they were not more frequent than in the placebo-group (0%, 0.3% and 6.74%). The numbers of fatal and disabling strokes during the total study period were 20 in the bisoprolol group and 15 in the placebo group.

The CIBIS III trial investigated 1010 patients aged  $\geq 65$  years with mild to moderate chronic heart failure (CHF; NYHA class II or III) and left ventricular ejection fraction  $\leq 35\%$ , who had not been treated previously with ACE inhibitors, beta-blockers, or angiotensin receptor blockers. Patients were treated with a combination of bisoprolol and enalapril for 6 to 24 months after an initial 6-month treatment with either bisoprolol or enalapril.

There was a trend toward higher frequency of chronic heart failure worsening when bisoprolol was used as the initial 6 months treatment. Non-inferiority of bisoprolol-first versus enalapril-first treatment was not proven in the per-protocol analysis, although the two strategies for initiation of CHF treatment showed a similar rate of the primary combined endpoint death and hospitalization at study end (32.4% in the bisoprolol-first group vs. 33.1% in the enalapril-first group, per-protocol population). The study shows that bisoprolol can also be used in elderly chronic heart failure patients with mild to moderate disease.

Bisoprolol is also used for the treatment of hypertension and angina.

In acute administration in patients with coronary heart disease without chronic heart failure bisoprolol reduces the heart rate and stroke volume and thus the cardiac output and oxygen consumption. In chronic administration the initially elevated peripheral resistance decreases.

### **5.3. Pharmacokinetic properties**

#### Absorption

Bisoprolol is absorbed and has a biological availability of about 90% after oral administration.

#### Distribution

The distribution volume is 3.5 l/kg. The plasma protein binding of bisoprolol is about 30%.

## Biotransformation and Elimination

Bisoprolol is excreted from the body by two routes. 50% is metabolised by the liver to inactive metabolites which are then excreted by the kidneys. The remaining 50% is excreted by the kidneys in an unmetabolised form. Total clearance is approximately 15 l/h. The half-life in plasma of 10-12 hours gives a 24-hour effect after dosing once daily.

## Linearity

The kinetics of bisoprolol are linear and independent of age.

## Special population

Since the elimination takes place in the kidneys and the liver to the same extent a dosage adjustment is not required for patients with impaired liver function or renal insufficiency. The pharmacokinetics in patients with stable chronic heart failure and with impaired liver or renal function has not been studied. In patients with chronic heart failure (NYHA stage III) the plasma levels of bisoprolol are higher and the half-life is prolonged compared to healthy volunteers. Maximum plasma concentration at steady state is 64±21 ng/ml at a daily dose of 10 mg and the half-life is 17±5 hours.

## 6. Nonclinical properties

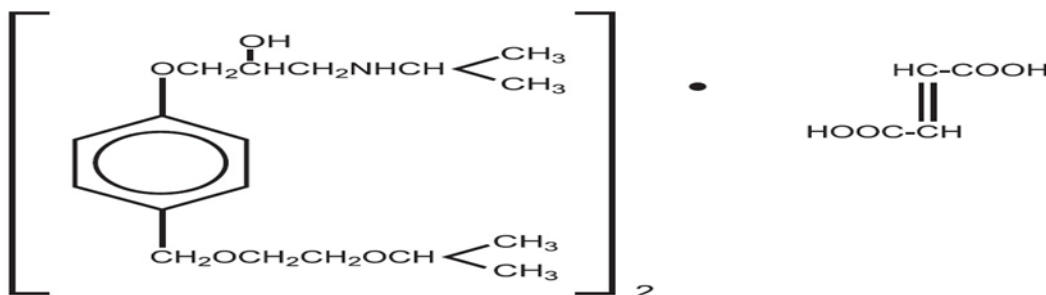
### 6.1. Animal Toxicology or Pharmacology

Preclinical data reveal no special hazard for humans based on conventional studies of safety pharmacology, repeated dose toxicity, genotoxicity, carcinogenic potential, toxicity to reproduction.

## 7. Description

### Bisoprolol fumarate

Bisoprolol fumarate is chemically described as 2-propanol,1-[4-[[2-(1-methylethoxy) ethoxy] methyl]phenoxy]-3-[(1-methylethyl)amino]-, (±)-, (E)-2-butenedioate. Its molecular formula is  $(C_{18}H_{31}NO_4)_2 \cdot C_4H_4O_4$  and it has a molecular weight of 767.0. Its structural formula is:



### CORBIS 10

Bisoprolol Fumarate Tablets are white coloured, circular shaped, biconvex, film coated tablets with plain on both sides.

The excipients used are Lactose Monohydrate, Microcrystalline Cellulose, Crospovidone, Magnesium Stearate, Hydroxy Propyl Methyl Cellulose, Polyethylene Glycol, Talc and Titanium Dioxide.

## 8. Pharmaceutical particulars

### 8.1. Incompatibilities

Not applicable

### 8.2. Shelf-life

Do not use later than date of expiry.

### **8.3. Packaging information**

**CORBIS 10** is available in Pack of 10 tablets.

### **8.4. Storage and handing instructions**

Do not store above 30°C. Protect from light.

Keep out of reach of children.

### **9. Patient Counselling Information**

Ask the patients to inform the treating physicians in case of any of the below:

- Have any allergies
- Have kidney or liver problems
- Are pregnant or plan to become pregnant
- Are breastfeeding or plan to breastfeed
- Have any serious illness
- Are taking any medicines (prescription, over the counter, vitamins, or herbal products)

### **10. Details of manufacturer**

Ordain Healthcare Global Pvt Ltd.  
Survey No. 532, Uthiramerur Road,  
Melavalampettai, Karunguzhi (PO),  
Madurantakam Taluk,  
Chengalpattu District-603303,  
Tamilnadu, India.

### **11. Details of permission or licence number with date**

Mfg Licence No.: TN00003296 issued on 18.09.2024.

### **12. Date of revision**

JUL 2026

**MARKETED BY**

**TORRENT**  
PHARMA

TORRENT PHARMACEUTICALS LTD.

**IN/CORBIS 10/JUL 2026/05/PI**