

# NILHIST<sup>®</sup> SYRUP

## Bilastine Oral Solution 2.5 mg/ml

### COMPOSITION

Each ml contains:  
Bilastine.....2.5 mg  
In a flavoured syrup base

### PHARMACEUTICAL FORM

Oral Solution

### THERAPEUTIC INDICATION

For symptomatic treatment of allergic rhino-conjunctivitis (seasonal and perennial) and urticaria in children aged 6 to 11 years with a body weight of at least 20 kg.

### PSOLOGY AND METHOD OF ADMINISTRATION

Children 6 to 11 years of age with a body weight of at least 20 kg:

10 mg Bilastine (4 ml of oral solution) once daily for the relief of symptoms of allergic rhino-conjunctivitis (seasonal allergic rhinitis and perennial allergic rhinitis) and urticaria.

The oral solution should be taken one hour before or two hours after intake of food or fruit juice.

#### Duration of treatment:

For allergic rhino-conjunctivitis the treatment should be limited to the period of exposure to allergens. For seasonal allergic rhinitis treatment could be discontinued after the symptoms have resolved and reinitiated upon their reappearance. In perennial allergic rhinitis continued treatment may be proposed to the patients during the allergen exposure periods. For urticaria the duration of treatment depends on the type, duration and course of the complaints.

Route of Administration: To be taken orally

#### Special Population-

##### Renal impairment

The safety and efficacy of Bilastine in renally impaired children have not been established. Studies conducted in adults in special risk groups (renally impaired patients) indicate that it is not necessary to adjust the dose of Bilastine in adults.

##### Hepatic impairment

The safety and efficacy of Bilastine in hepatically impaired children have not been established. There is no clinical experience in both adult and paediatric patients with hepatic impairment. However, since Bilastine is not metabolized and is eliminated as unchanged in urine and feces, hepatic impairment is not expected to increase systemic exposure above the safety margin in adult patients. Therefore, no dosage adjustment is required in adult patients with hepatic impairment.

### CONTRAINDICATIONS

Hypersensitivity to the active substance or to any of the excipients.

### SPECIAL WARNINGS AND PRECAUTIONS FOR USE

Efficacy and safety of Bilastine in children under 2 years of age have not been established, and there is little clinical experience in children aged 2 to 5 years, therefore Bilastine should not be used in these age groups.

In patients with moderate or severe renal impairment coadministration of Bilastine with P-glycoprotein inhibitors, such as e.g. ketoconazole, erythromycin, cyclosporine, ritonavir or diltiazem, may increase plasma levels of Bilastine and therefore increase the risk of adverse effects of Bilastine. Therefore, coadministration of Bilastine and P-glycoprotein inhibitors should be avoided in patients with moderate or severe renal impairment.

### DRUG INTERACTIONS

Interaction studies have only been performed in adults and are summarised below.

**Interaction with food:** Food significantly reduces the oral bioavailability of Bilastine 20 mg tablets by 30% and that of Bilastine 2.5 mg/ml oral solution by 20%.

**Interaction with grapefruit juice:** Concomitant intake of Bilastine 20 mg and grapefruit juice decreased Bilastine bioavailability by 30%. This effect may also apply to other fruit juices. The degree of bioavailability decrease may vary between producers and fruits. The mechanism for this interaction is an inhibition of OATP1A2, an uptake transporter for which Bilastine is a substrate. Medicinal products that are substrates or inhibitors of OATP1A2, such as ritonavir or rifampicin, may likewise have the potential to decrease plasma concentrations of Bilastine.

**Interaction with ketoconazole or erythromycin:** Concomitant intake of Bilastine 20 mg o.d and ketoconazole 400 mg o.d or erythromycin 500 mg t.i.d. increased Bilastine AUC 2-fold and C<sub>max</sub> 2-3 fold. These changes can be explained by interaction with intestinal efflux transporters, since Bilastine is a substrate for P-gp and not metabolised. These changes do not appear to affect the safety profile of Bilastine and ketoconazole or erythromycin, respectively. Other medicinal products that are substrates or inhibitors of P-gp, such as cyclosporine, may likewise have the potential to increase plasma concentrations of Bilastine.

**Interaction with diltiazem:** Concomitant intake of Bilastine 20 mg o.d. and diltiazem 60 mg o.d. increased C<sub>max</sub> of Bilastine by 50%. This effect can be explained by interaction with intestinal efflux transporters, and does not appear to affect the safety profile of Bilastine.

**Interaction with alcohol:** The psychomotor performance after concomitant intake of alcohol and 20 mg o.d. Bilastine was similar to that observed after intake of alcohol and placebo.

**Interaction with lorazepam:** Concomitant intake of Bilastine 20 mg o.d. and lorazepam 3 mg o.d. for 8 days did not potentiate the depressant CNS effects of lorazepam.

#### Paediatric population

No interaction studies have been performed in children with Bilastine oral solution. As there is no clinical experience regarding the interaction of Bilastine with other medicinal products, food or fruit juices in children, the results obtained in adult interactions studies should be at present taken into consideration when prescribing Bilastine to children. There are no clinical data in children to state whether changes to the AUC or C<sub>max</sub> due to interactions affect the safety profile of Bilastine.

### USE IN SPECIFIC POPULATIONS

#### Pregnancy

Bilastine oral solution is indicated in children aged 6 to 11 years.

There are no or limited amount of data from the use of Bilastine in pregnant women, it is preferable to avoid the use of Bilastine during pregnancy.

#### Lactation

Bilastine oral solution is indicated in children aged 6 to 11 years.

The excretion of Bilastine in milk has not been studied in humans. A decision on whether to continue/discontinue breast-feeding or to discontinue/abstain from Bilastine therapy must be made taking into account the benefit of breast-feeding for the child and the benefit of Bilastine therapy for the mother.

### EFFECTS ON ABILITY TO DRIVE AND USE MACHINES

Bilastine oral solution is indicated in children aged 6 to 11 years.

A study performed in adults to assess the effects of Bilastine on the ability to drive demonstrated that treatment with 20 mg Bilastine did not affect driving performance. However, as the individual response to the medicinal product may vary, patients should be advised not to drive or use machines until they have established their own response to Bilastine.

### UNDESIRABLE EFFECTS

The percentage of children (2-11 years) which reported adverse events (AEs) after treatment with Bilastine 10 mg for allergic rhinoconjunctivitis or chronic idiopathic urticaria in a 12-week controlled clinical trial was comparable with the percentage in the group receiving placebo (68.5% versus 67.5%).

The related AEs most commonly reported by 291 children (2-11 years) receiving Bilastine 10 mg (orodispersible tablet formulation) during clinical trials (\*260 children exposed in the clinical safety study, 31 children exposed in the pharmacokinetic study) were headache, allergic conjunctivitis, rhinitis and abdominal pain. These related adverse events occurred with a comparable frequency in 249 patients receiving placebo.

#### Tabulated summary of adverse reactions in paediatric population

AEs at least possibly related to Bilastine and reported in more than 0.1% of children (2-11 years) receiving Bilastine during the clinical development are tabulated below.

Frequencies are assigned as follows:

Very common (≥ 1/10)

Common (≥ 1/100 to <1/10)

Uncommon (≥ 1/1,000 to <1/100)

Not known (cannot be estimated from the available data)

Rare, very rare and reactions with unknown frequency have not been included in the table.

System Organ Class		Bilastine 10 mg (n=291) #	Placebo (n=249)
Frequency	Adverse reaction		
<b>Infections and infestations</b>			
Common	Rhinitis	3 (1.0 %)	3 (1.2 %)
<b>Nervous system disorders</b>			
Common	Headache	6 (2.1 %)	3 (1.2 %)
Uncommon	Dizziness	1 (0.3 %)	0 (0.0 %)
	Loss of consciousness	1 (0.3 %)	0 (0.0 %)
<b>Eye disorders</b>			
Common	Allergic conjunctivitis	4 (1.4 %)	5 (2.0 %)
Uncommon	Eye irritation	1 (0.3 %)	0 (0.0 %)
<b>Gastrointestinal disorders</b>			
Common	Abdominal pain / Upper abdominal pain	3 (1.0 %)	3 (1.2 %)
Uncommon	Diarrhoea	2 (0.7 %)	0 (0.0 %)
	Nausea	1 (0.3 %)	0 (0.0 %)
	Lip swelling	1 (0.3 %)	0 (0.0 %)
<b>Skin and subcutaneous tissue disorders</b>			
Uncommon	Eczema	1 (0.3 %)	0 (0.0 %)
	Urticaria	2 (0.7 %)	2 (0.8 %)
<b>General disorders and administration site conditions</b>			
Uncommon	Fatigue	2 (0.7 %)	0 (0.0 %)

\*260 children exposed in the clinical safety study, 31 children exposed in the pharmacokinetic study

#### Description of selected adverse reactions in paediatric population

Headache, abdominal pain, allergic conjunctivitis and rhinitis were observed either in children treated with Bilastine 10 mg or with placebo. The frequency reported was 2.1% vs. 1.2% for headache; 1.0% vs. 1.2% for abdominal pain; 1.4% vs. 2.0% for allergic conjunctivitis, and 1.0% vs. 1.2% for rhinitis.

#### Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Kindly report any suspected adverse reactions to pharmavigil@jbcpl.com.

### OVERDOSE

There are no data for overdose in children.

Information regarding acute overdose of Bilastine is retrieved from the experience of clinical trials conducted during the development in adults and the post-marketing surveillance. In clinical trials, after administration of Bilastine at doses 10 to 11 times the therapeutic dose (220 mg as single dose or 200 mg/day for 7 days) to 26 adult healthy volunteers, frequency of treatment emergent adverse events was two times higher than with placebo. The adverse reactions most frequently reported

were dizziness, headache and nausea. No serious adverse events and no significant prolongation in the QTc interval were reported. The information collected in the post-marketing surveillance is consistent with that reported in clinical trials.

Critical evaluation of Bilastine's multiple dose (100 mg x4 days) effect on ventricular repolarization by a "thorough QT/QTc cross-over study" involving 30 healthy adult volunteers did not show significant QTc prolongation.

In the event of overdose symptomatic and supportive treatment is recommended.

There is no known specific antidote to Bilastine.

## PHARMACOLOGICAL PROPERTIES

### Pharmacodynamic properties

**Pharmacotherapeutic group:** Antihistamines for systemic use.

### Mechanism of Action

Bilastine is a non-sedating, long-acting histamine antagonist with selective peripheral H1 receptor antagonist affinity and no affinity for muscarinic receptors.

Bilastine inhibited histamine-induced wheal and flare skin reactions for 24 hours following single doses.

### Clinical efficacy

The efficacy of Bilastine has been studied in adults and adolescents. According to guidelines, the proved efficacy in adults and adolescents can be extrapolated to children, having demonstrated that the systemic exposure with 10 mg Bilastine in children from 6 to 11 years with a body weight of at least 20 kg is equivalent to the exposure in adults with 20 mg Bilastine. The extrapolation from adult and adolescent data is deemed appropriate for this product as the pathophysiology of allergic rhinoconjunctivitis and urticaria is the same for all age groups.

In clinical trials performed in adult and adolescent patients with allergic rhinoconjunctivitis (seasonal and perennial), Bilastine 20 mg, administered once daily for 14-28 days, was effective in relieving symptoms such as sneezing, nasal discharge, nasal itching, nasal congestion, ocular itching, tearing and ocular redness. Bilastine effectively controlled symptoms for 24 hours.

In two clinical trials performed in patients with chronic idiopathic urticaria, Bilastine 20 mg, administered once daily for 28 days was effective in relieving the itching intensity and the number and size of wheals, as well as the patients discomfort due to urticaria. Patients improved their sleep conditions and their quality of life.

No clinically relevant prolongation of QTc interval or any other cardiovascular effect has been observed in the clinical trials performed with Bilastine, even at doses of 200 mg daily (10 times the clinical dose) for 7 days in 9 subjects, or even when coadministered with P-gp inhibitors, such as ketoconazole (24 subjects) and erythromycin (24 subjects). Additionally a thorough QT study including 30 volunteers has been performed.

In controlled clinical trials at the recommended dose of 20 mg once daily, the CNS safety profile of Bilastine was similar to placebo and the incidence of somnolence was not statistically different from placebo. Bilastine at doses of up to 40 mg q.d. did not affect psychomotor performance in clinical trials and did not affect driving performance in a standard driving test.

Older patients ( $\geq 65$  years) included in phase II and III studies showed no difference in efficacy or safety with respect to younger patients.

### Clinical safety

In a 12-week controlled clinical trial with children aged 2-11 years (total 509 children, 260 treated with Bilastine 10 mg: 58 at age 2 to <6 years, 105 at age 6 to <9 years and 97 at 9 to <12 years and 249 treated with placebo: 58 at age 2 to <6 years, 95 at age 6 to <9 years and 96 at 9 to <12 years), at the recommended paediatric dose of 10 mg once daily, the safety profile of Bilastine (n=260) was similar to placebo (n=249), with adverse drug reactions seen in 5.8% and 8.0% of patients taking Bilastine 10 mg and placebo, respectively. Both Bilastine 10 mg and placebo showed a slight decrease in somnolence and sedation scores on the Paediatric Sleep Questionnaire during this study, with no statistically significant differences between treatment groups. In these children aged 2 to 11 years, no significant differences in QTc were observed following 10 mg Bilastine daily compared with placebo. Quality of Life questionnaires specific for children with allergic rhinoconjunctivitis or chronic urticaria showed a general increase in scores over 12 weeks with no statistically significant difference between the Bilastine and placebo arms. The total population of 509 children encompassed: 479 subjects with allergic rhinoconjunctivitis and 30 subjects diagnosed of chronic urticaria. 260 children received Bilastine, 252 (96.9%) for allergic rhinoconjunctivitis and 8 (3.1%) for chronic urticaria. In analogy, 249 children received placebo, 227 (91.2%) for allergic rhinoconjunctivitis and 22 (8.8%) for chronic urticaria.

### Pharmacokinetic properties

#### Absorption

Bilastine is rapidly absorbed after oral administration with a time to maximum plasma concentration of around 1.3 hours. No accumulation was observed. The mean value of Bilastine oral bioavailability is 61%.

### Distribution

*In vitro* and *in vivo* studies have shown that Bilastine is a substrate of Pgp and OATP.

At therapeutic doses Bilastine is 84-90% bound to plasma proteins.

### Biotransformation

Bilastine did not induce or inhibit activity of CYP450 isoenzymes in *in vitro* studies.

### Elimination

In a mass balance study performed in healthy adult volunteers, after administration of a single dose of 20 mg <sup>14</sup>C-bilastine, almost 95% of the administered dose was recovered in urine (28.3%) and faeces (66.5%) as unchanged Bilastine, confirming that Bilastine is not significantly metabolized in humans. The mean elimination half-life calculated in healthy volunteers was 14.5 h.

### Linearity

Bilastine presents linear pharmacokinetics in the dose range studied (5 to 220 mg), with a low interindividual variability.

### Renal impairment

The effects of Bilastine in patients with renal impairment have been studied in adults.

### Hepatic impairment

There are no pharmacokinetic data in subjects with hepatic impairment. Bilastine is not metabolized in human. Since the results of the renal impairment study indicate renal elimination to be a major contributor in the elimination, biliary excretion is expected to be only marginally involved in the elimination of Bilastine. Changes in liver function are not expected to have a clinically relevant influence on Bilastine pharmacokinetics.

### Paediatric population

Pharmacokinetic data in children were obtained in a Phase II pharmacokinetic study including 31 children aged 4 to 11 years with allergic rhinoconjunctivitis or chronic urticaria, administered once daily with Bilastine 10 mg orodispersible tablet. This formulation has been shown to be bioequivalent to Bilastine 2.5 mg/ml oral solution. Pharmacokinetic analysis of plasma concentration data showed that the paediatric dose of Bilastine 10 mg once daily results in systemic exposure equivalent to that seen after a 20 mg dose in adults and adolescents, being the mean AUC value 1014 ng\*hr/ml for children 6 to 11 years. These results were largely below the safety threshold based on data from 80 mg once daily dose in adults in accordance to the drug safety profile. These results confirmed the choice of Bilastine 10 mg p.o. once daily as the appropriate therapeutic dose for the paediatric population in the age range 6 to 11 years with a body weight of at least 20 kg.

## DESCRIPTION

Bilastine is a novel new-generation antihistamine that is highly selective for the H1 histamine receptor, has a rapid onset and prolonged duration of action. Bilastine is described chemically as C<sub>28</sub>H<sub>37</sub>N<sub>3</sub>O<sub>3</sub>. Its molecular weight is 463.6 g/mol.

## INCOMPATIBILITIES

Not applicable.

### Packaging information

Bottle of 15ml and 60ml.

**Storage: Store at a temperature not exceeding 30°C. Protect from light.**

Keep out of reach of children



Marketed by & © Regd. Trade Mark of :  
**J. B. CHEMICALS & PHARMACEUTICALS LTD.**  
Neelam Centre, 'B' Wing, Hind Cycle Road,  
Worli, Mumbai - 400 030. India.

### DATE OF REVISION

**October 2021**

*Note: This prescribing information is applicable for India Market only.*