# AUSTRALIAN PRODUCT INFORMATION

# BETASERT (Betahistine dihydrochloride) Tablets

## 1 NAME OF THE MEDICINE

Betahistine dihydrochloride

## 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

BETASERT (betahistine dihydrochloride) tablets are available as uncoated tablets containing betahistine dihydrochloride 16 mg.

For the full list of excipients, see Section 6.1 List of excipients.

## 3 PHARMACEUTICAL FORM

BETASERT (betahistine dihydrochloride) 16 mg tablets are Uncoated, round, biconvex, white to light creamy tablets, with a groove on one surface.

## 4 CLINICAL PARTICULARS

### 4.1 THERAPEUTIC INDICATIONS

Ménière's Syndrome as defined by the following core symptoms:

- vertigo (with nausea/vomiting)
- hearing loss (hardness of hearing)
- tinnitus

### 4.2 DOSE AND METHOD OF ADMINISTRATION

The recommended starting dose in adults is 8 to 16 mg three times a day. The maximum recommended daily dose is 48 mg.

The tablets may be taken with or without food. However, if gastrointestinal upset occurs, it is recommended that the tablets be taken with meals.

The dosage should be individually adapted according to the response. Improvement in symptoms may be observed in the first few days to weeks of treatment.

## 4.3 CONTRAINDICATIONS

BETASERT (betahistine dihydrochloride) Tablets are contraindicated as follows:

- during pregnancy and lactation.
- in children less than 18 years.
- in patients suffering from phaeochromocytoma
- in patients with active peptic ulcer or a history of this condition
- in patients with hypersensitivity to any component to the product (see Section 6.1 List of excipients)

## 4.4 SPECIAL WARNINGS AND PRECAUTIONS FOR USE

Patients with bronchial asthma need to be carefully monitored during therapy.

Caution should be taken in the treatment of patients receiving antihistamines (see Section 4.5 Interactions with Other Medicines and other forms of interactions).

**Use in hepatic impairment**:

Not available

**Use in renal impairment**:

Not available

**Use in the elderly:**

Not available

**Paediatric use:** Due to lack of clinical experience, betahistine dihydrochloride should not be used in children less than 18 years (see section 4.3 Contraindications).

**Effects on laboratory tests**:

Not available

## 4.5 INTERACTIONS WITH OTHER MEDICINES AND OTHER FORMS OF INTERACTIONS

*In vitro* data indicate an inhibition of betahistine metabolism by drugs that inhibit monoamineoxidase (MAO) including MAO subtype B (e.g. selegiline). Caution is recommended when using betahistine and MAO inhibitors (including MAO-B selective) concominantly.

An antagonism between betahistine dihydrochloride and antihistamines could be expected on a theoretical basis. However, no such interactions have been reported.

## 4.6 FERTILITY, PREGNANCY AND LACTATION

### Effects on fertility

There are no animal data on the effects of betahistine on fertility.

### Use in pregnancy (*Category B2*[1])

Betahistine dihydrochloride should not be used during pregnancy (see section 4.3 Contraindications) since there are insufficient data on the use of this medicine during pregnancy to evaluate possible harmful effects.

1 Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed.
Studies in animals are inadequate or may be lacking, but available data show no evidence of an increased occurrence of fetal damage.

### Use in lactation.

Betahistine dihydrochloride should not be used during lactation (see section 4.3 Contraindications).

## 4.7 EFFECTS ON ABILITY TO DRIVE AND USE MACHINES

The effects of this medicine on a person's ability to drive and use machines were not assessed as part of its registration.

## 4.8 ADVERSE EFFECTS (UNDESIRABLE EFFECTS)

Most of the reported adverse reactions pertain to the skin, gastrointestinal tract, body as a whole, nervous system, respiratory system and cardiovascular system.

Events are listed within body systems and categorised by frequency according to the following definitions: Common (frequency ≥1 and <10 %), Uncommon (frequency ≥ 0.1% and < 1 %), Rare (frequency ≥ 0.01% and < 0.1 %), Very rare (frequency < 0.01 %).

| | |
|---|---|
| **Skin and subcutaneous tissue disorders:** | Rare: various types of rash, pruritis and urticaria/angioneurotic oedema. These reactions are probably related to the histamine like structure of betahistine.<br>There was a single case of Stevens Johnson syndrome. |
| **Body as a whole:** | Common: headache<br>Rare: tiredness and malaise. |
| **Gastrointestinal system:** | *Common:* nausea and dyspepsia<br>*Rare:* vomiting, diarrhoea, abdominal distension, bloating and epigastric pain have been reported. These symptoms were usually mild.<br>Gastrointestinal disturbances may be relieved by reducing the dose or by taking betahistine with meals. |
| **Nervous system:** | *Rare:* dizziness<br>*Very rare:* convulsions, somnolence, confusion and hallucinations. Some of these symptoms may also be observed as part of the disease condition and are usually resolved without changes to the treatment schedule. Patients with neurological events usually presented with confounding factors. |
| **Cardiovascular system:** | *Very rare:* vasodilation, postural hypotension and tachycardia. |
| **Respiratory system:** | *Very rare:* dyspnoea, asthma and bronchospasms (see Section 4.4 Special Precautions and warnings for use) |
| **Immune system disorders:** | Hypersensitivity reactions, e.g. anaphylaxis have been reported |

***Reporting suspected adverse effects:***

Reporting suspected adverse reactions after registration of the medicinal product is important. It allows continued monitoring of the benefit-risk balance of medicinal product. Healthcare professionals are asked to report any suspected adverse reactions at https://www.tga.gov.au/reporting-problems.

## 4.9 OVERDOSE

There have been a few cases of overdosage reported. Although in most cases no overdose symptoms were reported, some patients have experienced mild to moderate symptoms of overdosage including nausea, dry mouth, epigastric pain and sleepiness at doses above 200 mg. A case of convulsion was reported at a dose of 728 mg. In all cases recovery was complete. Treatment should include standard supportive measures.

For information on the management of overdose, contact the Poison Information Centre on 131126 (Australia).

# 5 PHARMACOLOGICAL PROPERTIES

## 5.1 PHARMACODYNAMIC PROPERTIES

### Mechanism of action

The mechanism of action of betahistine is not known. Pharmacological testing in animals has shown that the blood circulation in the striae vascularis of the inner ear improves, probably by means of a relaxation of the precapillary sphincters of the microcirculation of the inner ear.

In further animal pharmacological studies, betahistine was found to have weak H1 receptor agonistic and considerable H3 antagonistic properties in the CNS and autonomic nervous system. Betahistine was also found to have a dose dependent inhibiting effect on spike generation of neurons in lateral and medial vestibular nuclei in cats. The importance of this observation in the action against Ménière's syndrome or vestibular vertigo, however, remains unclear.

### Clinical trials:

Not available

## 5.2 PHARMACOKINETIC PROPERTIES

**Absorption:**

In man, orally administered doses of betahistine dihydrochloride are rapidly and completely absorbed from the gastrointestinal tract.

**Distribution:**

Studies with radio-labelled betahistine have demonstrated a plasma half-life of 3.4 hours and a urinary half-life of 3.5 hours for the radio-label.

**Metabolism**:

The drug is rapidly metabolised to one major metabolite - 2-pyridylacetic acid

**Excretion:**

The drug is excreted in the urine.
Urinary excretion of the label was about 90% complete within 24 hours of administration.

## 5.3 PRECLINICAL SAFETY DATA

**Genotoxicity** – No nonclinical data are available on the genotoxic potential of betahistine.

**Carcinogenicity** – No animal data are available on the carcinogenic potential of betahistine.

# 6 PHARMACEUTICAL PARTICULARS

## 6.1 LIST OF EXCIPIENTS

The inactive ingredients in BETASERT 16 mg tablets are colloidal anhydrous silica, microcrystalline cellulose, mannitol, citric acid anhydrous, and purified talc.

## 6.2 INCOMPATIBILITIES

Incompatibilities were either not assessed or not identified as part of the registration of this medicine.

## 6.3 SHELF LIFE

In Australia, information on the shelf-life can be found on the public summary of the Australian Register of Therapeutic Goods (ARTG). The expiry date can be found on the packaging.

## 6.4 SPECIAL PRECAUTIONS FOR STORAGE

Store below 25°C in original container to protect from light and moisture.

## 6.5 NATURE AND CONTENTS OF CONTAINER

OPA/Al/PVC/Al blister packs of 100*, 60*, 30*, 25 and 10*.

* Not currently marketed

## 6.6 SPECIAL PRECAUTIONS FOR DISPOSAL

In Australia, any unused medicine or waste material should be disposed of by taking to your local pharmacy.

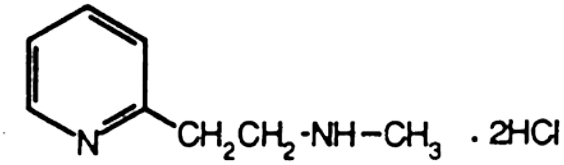
### 6.7 PHYSICOCHEMICAL PROPERTIES

Betahistine dihydrochloride is chemically identified as *N*-Methyl-2-(pyridine-2-yl)ethanamine dihydrochloride. Chemically, betahistine has a close resemblance to histamine.

Molecular formula of $C_8H_{14}Cl_2N_2$

Molecular weight of 209.1

**Chemical structure**




**CAS number** 5579-84-0

Betahistine dihydrochloride is a white or slightly yellow powder, which is very hygroscopic. The drug substance is very soluble in water, soluble in methanol and 96% ethanol, and practically insoluble in 2-propanol. The pKa values are 3.5 and 9.7.

## 7 MEDICINE SCHEDULE (POISONS STANDARD)

S4 – Prescription only medicine

## 8 SPONSOR

Generic Partners Pty Ltd
Level 1, 313 Burwood Road
Hawthorn VIC 3122

## 9 DATE OF FIRST APPROVAL

14 August 2014

## 10 DATE OF REVISION

24 April 2019

### SUMMARY TABLE OF CHANGES

| Section Changed | Summary of new information |
|---|---|
| **ALL** | Reformatted to align with the revised TGA form for providing product information version 8 March 2018 |
| **ALL** | Change in tradename from Betavert to Betasert |
| **8** | Change in address of Sponsor company |
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