AUSTRALIAN PRODUCT INFORMATION- BENADRYL ORIGINAL

1 NAME OF THE MEDICINE

Diphenhydramine hydrochloride

Ammonium chloride

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each 5 mL of BENADRYL® Original contains diphenhydramine hydrochloride 12.5 mg and ammonium chloride 125mg.

Benadryl contains benzoates, saccharin, sugars and sodium (33.8mg/10mL). Refer to Section 6.1 for the full list of excipients

3 PHARMACEUTICAL FORM

Benadryl Original is a clear to slightly opalescent red liquid with a raspberry flavour.

4 CLINICAL PARTICULARS

4.1 THERAPEUTIC INDICATIONS

Benadryl Original provides relief from the symptoms of coughs and nasal congestion due to common cold.

4.2 DOSE AND METHOD OF ADMINISTRATION

The recommended doses of BENADRYL® Original are:

6 to 12 years	5 mL
Adults and children over 12 years	10 mL

The recommended dose should be taken every 4 hours as required. Do not exceed 6 doses in 24 hours.

Benadryl Original should not be used for children under 6 years and should be used under the advice of a doctor for children 6-11 years.

4.3 CONTRAINDICATIONS

1. Known hypersensitivity or idiosyncratic reaction to diphenhydramine (or substances of similar chemical structure) or any of the other ingredients in the product
2. Narrow-angle glaucoma
3. Stenosing peptic ulcer
4. Symptomatic prostatic hypertrophy
5. Bladder neck obstruction
6. Pyloroduodenal obstruction.
7. Severe liver failure or renal impairment

8. Children under the age of 6 years (see Use in children)
9. Patients taking monoamine oxidase inhibitors (MAOIs) (see Interactions with other medicines)

4.4 SPECIAL WARNINGS AND PRECAUTIONS FOR USE

Patients with the following conditions should be advised to consult a physician before using Benadryl Original:

- breathing problems such as emphysema or chronic bronchitis
- persistent or chronic cough such as with smoking, asthma or emphysema
- cough accompanied by excessive secretions (mucus)
- glaucoma
- Prostate hyperplasia with urinary retention

Patients should not use with any other products containing diphenhydramine, even ones used on skin. If symptoms persist, worsen, or if new symptoms appear, stop use and consult a physician.

Concomitant treatment

Precaution is recommended if other sedating antihistamines are taken concomitantly.

Mental Alertness

Diphenhydramine may cause drowsiness and may increase the effects of alcohol. Drowsiness may continue the following day. Those affected should not drive or operate machinery. Alcohol should be avoided (see Interactions with other medicines).

Diphenhydramine may enhance the sedative effects of central nervous system depressants including sedatives and tranquilizers. Consult a healthcare professional prior to taking with central nervous system depressants.

Hepatic impairment

Benadryl Original should be used with caution in patients with hepatic impairment.

Epilepsy

Benadryl Original should be used with caution in patients with epilepsy impairment.

Renal impairment

Benadryl Original should be used with caution in patients with renal impairment

Use in the elderly

No data available

Paediatric use

Diphenhydramine may cause excitability, especially in children. Benadryl Original should not be used for children under 6 years of age and should be used under the advice of a doctor for children 6-11 years.

Effects on laboratory tests

No data available

4.5 INTERACTIONS WITH OTHER MEDICINES AND OTHER FORMS OF INTERACTIONS

Diphenhydramine possesses anticholinergic activity which may be potentiated by other drugs with strong anticholinergic effects such as MAOIs and tricyclic antidepressants (TCAs), resulting in increased anticholinergic adverse effects.

Diphenhydramine may enhance the sedative effects of central nervous system depressants including alcohol, barbiturates, hypnotics, opioid analgesics, anxiolytic sedatives and antipsychotics.

Diphenhydramine may potentiate the effects of certain Beta Blockers such as metoprolol due to inhibition of CYP2D6 mediated metabolism.

4.6 FERTILITY, PREGNANCY AND LACTATION

Use in pregnancy – Pregnancy Category A

Diphenhydramine and ammonium chloride are both Pregnancy Category A. There are no adequate and well-controlled studies for the combination of ammonium chloride and diphenhydramine (with or without menthol and sodium citrate) in pregnant or breast-feeding women. This product should not be used during pregnancy unless the potential benefit of treatment to the mother outweighs the possible risks to the developing fetus. A physician should be consulted before use if pregnant..

Use in lactation

Diphenhydramine is excreted in breast milk. Therefore, BENADRYL® Original is not recommended for breastfeeding mothers unless the potential benefits to the patient are weighed against the possible risk to the infant. A physician should be consulted before breastfeeding.

Effects on fertility

No data available

4.7 EFFECTS ON ABILITY TO DRIVE AND USE MACHINES

Due to diphenhydramine's potential for sedation, caution should be used when driving a motor vehicle or operating machinery.

4.8 ADVERSE EFFECTS (UNDESIRABLE EFFECTS)

The following rare side effects have been associated with diphenhydramine hydrochloride use:

Body as a Whole: headache, photosensitivity, asthenia

Cardiovascular system: hypotension, palpitations, tachycardia

Digestive System: constipation, diarrhoea, dry mouth, dry throat, dyspepsia, nausea, vomiting.

Nervous system: agitation/ excitation, anxiety, confusion, convulsions, disturbed coordination, dizziness, hallucinations, insomnia, irritability, nervousness, paresthesia, somnolence/ sedation, tremor. Impaired performance (impaired driving performance, poor work performance, uncoordination, reduced motor skills and impaired information processing), appetite stimulation, muscle dyskinesias and activation of epileptogenic foci.

Respiratory System: dryness of nose, thickening of bronchial secretions, tightness of chest or throat, wheezing

Skin: pruritis, rash, urticaria

Special Senses: dryness of the eyes, blurred vision, tinnitus

Urogenital system: urinary hesitancy and retention.

Somnolence was the most frequently reported adverse effect.

Nausea and vomiting have been reported with high doses of ammonium chloride.

Post Marketing Data

Adverse drug reactions (ADRs) identified during post-marketing experience with the combination of ammonium chloride and diphenhydramine (with or without menthol and sodium citrate) are included in Table 2 and Table 3. The frequencies are provided according to the following convention:

Very common	≥1/10
Common	≥1/100 and < 1/10
Uncommon	≥1/1,000 and <1/100
Rare	≥1/10,000 and <1/1,000
Very rare	<1/10,000
Not known	(cannot be estimated from the available data)

Adverse Drug Reactions Identified during Post Marketing Experience with Ammonium Chloride and Diphenhydramine Hydrochloride with or without Menthol, Sodium Citrate Frequency Category Estimated from Spontaneous Reporting Rates

SOC Frequency Category	**Adverse Event Preferred Term**
Immune System Disorders	
Very rare	Angioedema
Very rare	Hypersensitivity
Psychiatric Disorders	
Very rare	Confusional state
Very rare	Hallucination
Very rare	Irritability
Very rare	Nervousness

Nervous System Disorders	
Very rare	Agitation, coordination abnormal, convulstion, dizziness headache, insomnia, paraesthesia, sedation, somnolence, tremor
Eye Disorders	
Very rare	Vision blurred
Ear and labyrinth Disorders	
Very rare	Tinnitus
Cardiac Disorders	
Very rare	Palpitations, tachycardia
Vascular Disorders	
Very rare	Hypotension
Respiratory, Thoracic and Mediastinal Disorders	
Very rare	Chest discomfort, dry throat, nasal dryness
Gastrointestinal Disorders	
Very rare	Abdominal pain, application site reaction, constipation, diarrhoea, dry mouth, dyspepsia, nausea, vomiting
Skin and Subcutaneous Tissue Disorders	
Very rare	Pruritus, rash, urticaria
Renal and Urinary Disorders	
Very rare	Urinary retention
General Disorders and Administrative Site Conditions	
Very rare	Asthenia

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 the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions at: https://www.tga.gov.au/reporting-problems.

4.9 OVERDOSE

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

Keep out of reach of children. In the event of an overdose, seek medical attention immediately.

5.0 PHARMOCOLOGICAL PROPERTIES

5.1 PHARMACODYNAMIC PROPERTIES

Mechanism of action

As an antihistamine, diphenhydramine hydrochloride antagonizes endogenous histamine by competitively and reversibly blocking the histamine H1 receptor.

As an antitussive, diphenhydramine hydrochloride selectively suppresses the central cough mechanism, thus raising the threshold for afferent (incoming) cough pulses.

Ammonium chloride is an expectorant that has an irritant effect on mucous membranes.

Clinical trials

No data available.

5.2 PHARMACOKINETIC PROPERTIES

Absorption

Diphenhydramine hydrochloride is well absorbed from the gastro-intestinal tract, although high first-pass metabolism appears to affect systemic bioavailability. Following a single 50 mg oral dose, peak plasma concentrations of 66 ± 22 ng/mL were achieved in 2.3 ± 0.64 hours. Bioavailability of the oral form is reported to be 72 ± 26%.

Ammonium chloride is absorbed from the gastrointestinal tract. The ammonium ion is converted into urea in the liver or is attached to the amide nitrogen of glutamine for transport in the blood.

Distribution

Diphenhydramine hydrochloride is widely distributed throughout the body, including the central nervous system (CNS). It crosses the placenta and has been detected in breast milk. Diphenhydramine is highly bound to plasma proteins and total protein binding is reported to be 78 ± 3%. Volume of distribution is 4.5 ± 2.8 L/kg.

Metabolism

Metabolism is extensive with approximately 50% of diphenhydramine hydrochloride metabolized in the liver to the inactive metabolite diphenylmethane, which suggests a large first-pass effect.

Excretion

Little, if any, diphenhydramine hydrochloride is excreted unchanged in the urine. The elimination half-life of diphenhydramine hydrochloride is 8.5 ± 3.2 hours and may be prolonged with age. Total body clearance is 6.2 ± 1.7 mL/min-1/kg-1 and may be decreased with age.

5.3 PRECLINICAL SAFETY DATA

Genotoxicity

No data available

Carcinogenicity

No data available

6 PHARMACEUTICAL PARTICULARS

6.1 LIST OF EXCIPIENTS

Benadryl Original contains sucrose, glucose-liquid, glycerol, sodium citrate, raspberry flavour, citric acid monohydrate, saccharin sodium, menthol, Allura Red FC, Brilliant Blue FCF, sodium benzoate.

6.2 INCOMPATIBILITIES

Incompatibilities were either not assessed or not identified as part of the registration of this medicine. Refer to section 4.5: Interactions with other medicines and other forms of interactions.

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 30°C

6.5 NATURE AND CONTENTS OF CONTAINER

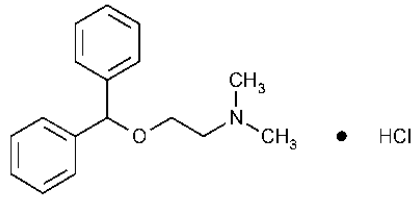
Benadryl Original is available in a glass bottle containing200 mL.

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

Chemical structure



Chemical Name: 2-(diphenylmethoxy)-N,N-dimethylethanamine hydrochloride.

CAS number

Diphenhydramine hydrochloride: 58-73-1

Ammonium chloride: 1215-02-9

7 MEDICINE SCHEDULE (POISONS STANDARD)

Pharmacist Only Medicine (S3)

8. SPONSOR

Johnson & Johnson Pacific
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9. DATE OF FIRST APPROVAL

16 July 2012

10. DATE OF REVISION

03 March 2021

SUMMARY TABLE OF CHANGES

Section Changed	Summary of new information
4.4	Additional warnings
4.6	Additional statements
4.8	Inclusion of post marketing data
4.9	Additional warnings