

AUSTRALIAN PRODUCT INFORMATION – CYCLOGYL™ (CYCLOPENTOLATE) EYE DROPS, SOLUTION

1 NAME OF THE MEDICINE

Cyclopentolate hydrochloride

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

CYCLOGYL Eye Drops contain cyclopentolate hydrochloride 10 mg/mL (1.0%).

It also contains benzalkonium chloride 0.1 mg/mL as a preservative.

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

3 PHARMACEUTICAL FORM

Eye drops.

CYCLOGYL Eye Drops have been formulated as a sterile, multi-dose product for topical ophthalmic use. The pH of CYCLOGYL Eye Drops is approximately 4.5.

4 CLINICAL PARTICULARS

4.1 THERAPEUTIC INDICATIONS

For mydriasis and cycloplegia in diagnostic procedures. For some pre- and post- operative states when mydriasis is required and when a shorter acting mydriatic and cycloplegic is needed in the therapy of iridocyclitis.

4.2 DOSAGE AND METHOD OF ADMINISTRATION

Adults

One drop, followed by a second drop in 5 minutes.

Complete recovery usually occurs in 24 hours.

Children

One drop is instilled in each eye, followed 5 minutes later by a second application if necessary.

Pretreatment with CYCLOGYL Eye Drops on the day prior to examination usually is not necessary.

In order to minimise systemic absorption, apply pressure to the tear duct for two minutes immediately after administration.

4.3 CONTRAINDICATIONS

Should not be used:

- when narrow-angle glaucoma or anatomically narrow angles are present
- when there is hypersensitivity to any component of this preparation (See Section 6.1. List of Excipients).

4.4 SPECIAL WARNINGS AND PRECAUTIONS FOR USE

FOR OPHTHALMIC USE ONLY - NOT FOR INJECTION.

This preparation may cause psychotic reactions, behavioural disturbances and other CNS disturbances in patients with increased susceptibility to anticholinergic drugs. This is especially true in younger age groups, but may occur at any age. Premature and small infants are especially prone to CNS and cardiopulmonary side effects from systemic absorption of cyclopentolate and, therefore, CYCLOGYL Eye Drops should not be used in these patients.

Use with caution in patients, especially children, who have previously had a severe systemic reaction to atropine.

CYCLOGYL may cause increased intraocular pressure. The possibility of undiagnosed glaucoma should be considered in some patients, such as elderly patients. Caution should be

observed when considering the use of this medication in the presence of Down's syndrome and in those predisposed to angle-closure glaucoma. To avoid inducing angle-closure glaucoma, determine the intraocular pressure and an estimation of the depth of the anterior chamber should be made prior to the initiation of therapy.

Complete recovery of accommodation usually occurs within 24 hours, however, in some individuals complete recovery may require several days.

Because of risk of provoking hyperthermia, use with caution in patients, especially children, who may be exposed to elevated environmental temperatures or who are febrile.

Use in hepatic impairment

No formal studies have been conducted in patients with hepatic impairment.

Use in renal impairment

No formal studies have been conducted in patients with renal impairment.

Use in the elderly

In the elderly and others where increased intraocular pressure may be encountered, mydriatics and cycloplegics should be used with caution.

Elderly patients may be a higher risk for undiagnosed glaucoma as well as cyclopentolate induced psychotic reactions and behavioural disturbances.

Paediatric use

CYCLOGYL 1% Eye Drops should not be used in small infants as concentrations greater than 0.5% are not recommended due to the risk of serious systemic side effects (see Special Warnings and Precautions for Use, Adverse Effects (Undesirable effects) and Overdosage).

Increased susceptibility to cyclopentolate has been reported in infants, young children and in children with Down syndrome, spastic paralysis or brain damage to central nervous system disturbances, and cardiopulmonary and gastrointestinal toxicity from systemic absorption of cyclopentolate. Cyclopentolate should not, therefore, be used in premature and small infants)

and should be used with great caution in young children and in children with Down syndrome, spastic paralysis or brain damage.

Seizures and acute psychosis induced by cyclopentolate are especially prominent in children. Cyclopentolate should be used with caution in children, with known epilepsy.

Fair-skinned children with blue eyes may exhibit an increased response and/or increased susceptibility to adverse reactions.

Observe infants closely for at least 30 minutes following instillation.

Feeding intolerance and necrotising enterocolitis (NEC) in preterm infants may follow ophthalmic use of this product in infants. Cases of NEC have been reported in preterm infants following administration. It is recommended that feeding be withheld for 4 hours after examination in infants.

Parents should be warned not to get this preparation in their children's mouth or cheeks and to wash their hands and the child's hands or cheeks following administration.

Effects on laboratory tests

No data available.

Information for Patients

Nasolacrimal occlusion or gently closing the eyelid after administration is recommended. This may reduce the systemic absorption of medicinal products administered via the ocular route and result in a decrease in systemic adverse reactions.

Parents should be warned not to get this preparation in their child's mouth and to wash their own hands and the child's hands following administration.

After cap is removed, if tamper evident snap collar is loose, remove before using product.

Do not touch the dropper tip to any surface as this may contaminate the solution.

A transient burning sensation may occur upon instillation.

Contact Lenses

CYCLOGYL Eye Drops contain benzalkonium chloride which may cause eye irritation and is known to discolour soft contact lenses. Avoid contact with soft contact lenses. Patients must be instructed to remove contact lenses prior to application of CYCLOGYL Eye Drops and wait 15 minutes before reinsertion.

4.5 INTERACTIONS WITH OTHER MEDICINES AND OTHER FORMS OF INTERACTIONS

The effects of CYCLOGYL Eye Drops may be enhanced by concomitant use of other drugs having antimuscarinic properties, such as amantadine, some antihistamines, phenothiazine antipsychotics, and tricyclic antidepressants. Cyclopentolate may interfere with the anti-glaucoma action of carbachol or pilocarpine; also, concurrent use of this medication may antagonise the anti-glaucoma and miotic actions of ophthalmic cholinesterase inhibitors.

4.6 FERTILITY, PREGNANCY AND LACTATION

Effects on fertility

Studies have not been performed to evaluate the effects of topical ocular administration of cyclopentolate on fertility.

Use in pregnancy

Pregnancy Category B2.

Animal reproduction studies have not been conducted with cyclopentolate. It is not known whether cyclopentolate can cause foetal harm when administered to a pregnant woman or can affect reproductive capacity. Cyclopentolate should be administered to a pregnant woman only if clearly needed.

Use in lactation

It is not known whether this drug is excreted in human milk. A risk to the suckling child cannot be excluded. Because many drugs are excreted in human milk, use only when considered essential by the physician.

4.7 EFFECTS ON ABILITY TO DRIVE AND USE MACHINES

Cyclopentolate eye drops may cause drowsiness and blurred vision. Patients should be advised not to drive or engage in other hazardous activities while pupils are dilated, unless vision is clear. Patients may experience sensitivity to light and should protect eyes in bright illumination during dilation.

4.8 ADVERSE EFFECTS (UNDESIRABLE EFFECTS)

Ocular

Increased intraocular pressure, burning, photophobia, blurred vision, irritation, hyperaemia, conjunctivitis, blepharoconjunctivitis, punctate keratitis, synechiae.

Systemic

Use of cyclopentolate has been associated with psychotic reactions and behavioural disturbances in children. These disturbances include ataxia, incoherent speech, restlessness, hallucinations, hyperactivity, seizures, disorientation as to time and place, and failure to recognise people.

This drug produces reactions similar to those of other anticholinergic drugs, however, the central nervous system manifestations as noted above are more common. Other toxic manifestations of anticholinergic drugs are tachycardia, hyperpyrexia, vasodilation, urinary retention, diminished gastrointestinal motility and decreased secretion in salivary and sweat glands, pharynx, bronchii and nasal passages. Severe manifestations of toxicity include coma, medullary paralysis and death.

Post Marketing Events

The following adverse reactions have been reported following administration of CYCLOGYL Eye Drops. Frequency cannot be estimated from the available data. Within each System Organ Class, adverse reactions are presented in order of decreasing seriousness:

Eye disorders

Not Known: photophobia, drug effect prolonged (mydriasis), eye irritation, vision blurred, eye pain, ocular hyperaemia.

Nervous system disorders

Not Known: incoherent, retrograde amnesia, dizziness, headache, somnolence.

Psychiatric disorders

Not Known: hallucination, confusional state, disorientation, agitation, restlessness.

Immune system disorders

Not Known: hypersensitivity.

Gastrointestinal disorders

Not Known: vomiting, nausea, dry mouth.

Skin and subcutaneous tissue disorders

Not Known: erythema.

General disorders and administration site conditions

Not Known: gait disturbance, pyrexia, fatigue.

Description of selected adverse reactions

This drug produces reactions similar to those of other anticholinergic drugs. The central nervous system manifestations such as ataxia, incoherent speech, restlessness, hallucinations, hyperactivity, seizures, disorientation as to time and place, and failure to recognize people are possible. Other toxic manifestations of anticholinergic drugs are skin rash, abdominal distention in infants, unusual drowsiness, tachycardia, hyperpyrexia, vasodilation, urinary retention, diminished gastrointestinal motility, and decreased secretion in salivary and sweat glands, pharynx, bronchi and nasal passages. Severe reactions are manifested by hypotension with rapid progressive respiratory depression.

CYCLOGYL Eye Drops may increase intraocular pressure and provoke glaucoma attacks in patients predisposed to acute angle closure in particular geriatric patients (See Special Warnings and Precautions for Use).

The onset of cyclopentolate toxicity occurs within 20 to 30 minutes of drug instillation, and although usually transient (subsiding in 4 to 6 hours), the symptoms can last 12 to 24 hours.

Paediatric population

Increased risk for systemic toxicity has been observed in premature and small infants, young children, or children with Down syndrome, spastic paralysis or brain damage with this class of drug (See Special Warnings and Precautions for Use).

Use of CYCLOGYL Eye Drops has been associated with psychotic reactions and behaviour changes in paediatric patients. Central nervous system reactions manifest similar to those listed above. Seizures and acute psychosis induced by cyclopentolate are especially prominent in children.

Feeding intolerance may follow ophthalmic use of the product in infants. Patients. (See Special Warnings and Precautions for Use).

A local or generalized allergic-type response to cyclopentolate consisting of an urticarial rash has been described in children.

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 www.tga.gov.au/reporting-problems.

4.9 OVERDOSE

An ocular overdose of CYCLOGYL Eye Drops can be flushed from the eye(s) with lukewarm water.

Excessive dosage may produce exaggerated symptoms as noted under Adverse Effects (Undesirable Effects).

Systemic toxicity may occur following topical use, particularly in children. It is manifested by flushing and dryness of the skin (a rash may be present in children), blurred vision, a rapid and irregular pulse, fever, abdominal distension in infants, convulsions and hallucinations and the loss of neuromuscular coordination. Severe intoxication is characterized by central nervous

system depression, coma, circulatory and respiratory failure, and death. Treatment is symptomatic and supportive. In infants and small children the body surface must be kept moist.

In cases of suspected overdose the first action should be to discontinue administration of the drug. In case of severe manifestations of toxicity the antidote of choice is physostigmine salicylate.

Paediatric Dose

Slowly inject 0.5 mg physostigmine salicylate intravenously. If toxic symptoms persist and no cholinergic symptoms are produced repeat at five minutes intervals to a maximum of 2.0 mg.

Adolescent and Adult

Slowly inject 2.0 mg physostigmine salicylate intravenously. A second dose of 1-2 mg may be given after 20 minutes if no reversal of toxic manifestations has occurred. Physostigmine salicylate can be administered subcutaneously.^{1,2,3}

For information on the management of overdose, contact the Poisons Information Centre on 13 11 26 (Australia).

5 PHARMACOLOGICAL PROPERTIES

5.1 PHARMACODYNAMIC PROPERTIES

Mechanism of action

This anticholinergic preparation blocks the responses of the sphincter muscle of the iris and the accommodative and paralysis of muscle of the ciliary body to cholinergic stimulation, producing pupillary dilation (mydriasis) accommodation (cycloplegia). It acts rapidly, but has a shorter duration than atropine.

Clinical trials

No data are available.

5.2 PHARMACOKINETIC PROPERTIES

No data available.

5.3 PRECLINICAL SAFETY DATA

Genotoxicity

Studies in animal or humans have not been conducted to evaluate the potential of these effects.

Carcinogenicity

Studies in animal or humans have not been conducted to evaluate the potential of these effects.

6 PHARMACEUTICAL PARTICULARS

6.1 LIST OF EXCIPIENTS

Benzalkonium chloride

Boric acid

Disodium edetate

Potassium chloride

Sodium carbonate and/or hydrochloric acid (to adjust pH)

Purified water.

6.2 INCOMPATIBILITIES

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

6.3 SHELF LIFE

18 months. Discard 4 weeks after opening.

6.4 SPECIAL PRECAUTIONS FOR STORAGE

Store at 2 to 8°C. (Refrigerate. Do not freeze.).

6.5 NATURE AND CONTENTS OF CONTAINER

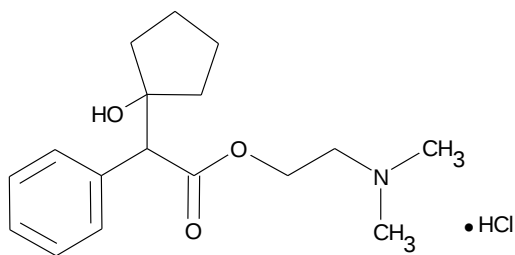
CYCLOGYL Eye Drops are supplied in multi-dose, red LDPE bottles with natural LDPE Drop-Tainer™ dispensers, 15 mL.

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 PHYSIOCHEMICAL PROPERTIES

Chemical structure:



Empirical formula: C₁₇H₂₅NO₃, HCl

Molecular weight: 327.85

Chemical name: 2-dimethylaminoethyl (RS)-2-(1-hydroxycyclopentyl)-2-phenylacetate hydrochloride.

CAS Registry Number: 5870-29-1.

7 MEDICINE SCHEDULE (POISON STANDARD)

Prescription Only Medicine (Schedule 4).

8 SPONSOR

Alcon Laboratories (Australia) Pty Ltd

15 Talavera Road.

Macquarie Park NSW 2113.

Australia Toll Free: 1800 224 153.

9 DATE OF FIRST APPROVAL

15 October 1991.

10 DATE OF REVISION

15 August 2023.

Summary table of changes

Section changed	Summary of new information
4.8 ADVERSE EFFECTS (UNDESIRABLE EFFECTS)	Addition of “Ocular hyperaemia” under ‘Eye disorders’.

¹ Rumack, B.H.: Anticholinergic Poisoning: Treatment with Physostigmine. Pediatrics 52(6): 499-51; 1973,

² Duvoisin, R.C. and Katz R.: Reversal of Central Anticholinergic Syndrome in Man by Physostigmine. J.Am.Med.Assn. 206(9); 1963-65, 1968.

³ Grant W.M: Toxicology of the Eye. Second Edition, Volume 1. Springfield, Illinois, Charles C. Thomas: 1974.

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