



MONOGRAPH

DIPHENHYDRAMINE

Scope (Staff):	Medical, Pharmacy, Nursing
Scope (Area):	All Clinical Areas

Child Safe Organisation Statement of Commitment

CAHS commits to being a child safe organisation by applying the National Principles for Child Safe Organisations. This is a commitment to a strong culture supported by robust policies and procedures to reduce the likelihood of harm to children and young people.

This document should be read in conjunction with this [DISCLAIMER](#)

QUICKLINKS

Dosage/Dosage Adjustments	Administration	Compatibility	Monitoring
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DRUG CLASS

Antihistamine.¹

INDICATIONS AND RESTRICTIONS

Diphenhydramine is restricted to prescribing in the oncology setting at Perth Children's Hospital. Diphenhydramine is only to be used in patients when oral non-sedating antihistamines (e.g. cetirizine, loratadine) are unsuitable. There is no evidence suggesting that sedating antihistamines are more effective than oral non-sedating antihistamines.¹

- Allergic conditions e.g. rhinitis, urticaria, pruritis (excluding anaphylaxis)^{2,3}
- Premedication e.g. anti-cancer therapy, intravenous immunoglobulin⁴
- Infusion or transfusion-related reactions e.g. intravenous immunoglobulin, monoclonal antibody therapy, anti-cancer therapy⁵
- Acute drug-induced extrapyramidal symptoms e.g. medication-induced dystonic reactions⁴

Diphenhydramine is not indicated for the management of anaphylaxis.^{3,4} Refer to the [ASCIA](#) guidelines for recognition and management of anaphylaxis. **The ASCIA guidelines should be considered when differentiating possible anaphylaxis from allergic, infusion or transfusion-related reactions.**

Only IV/IM formulation of diphenhydramine is available on the [Paediatric Formulary](#).

All other uses and dosage forms of diphenhydramine require an Individual Patient Approval (IPA) from the CAHS Drugs and Therapeutics Committee (DTC) prior prescribing.

CONTRAINDICATIONS

- Hypersensitivity to diphenhydramine or any component of the formulation.
- Neonates or premature infants.⁶

PRECAUTIONS

- Less sedating antihistamines are preferred for allergic reactions over sedating antihistamines due to increased risk of adverse effects in children (particularly <2 years old). This includes sedation, paradoxical stimulation, and anticholinergic effects.²
- Use with caution in patients with asthma, urinary retention, hypertension, hyperthyroidism, cardiovascular disease, gastrointestinal or bladder outlet obstruction; these conditions may be worsened due to anticholinergic effects of diphenhydramine.^{2,6}
- Avoid use in patients with risk factors for angle-closure glaucoma; it can increase intraocular pressure which might cause acute angle-closure crisis.^{2,6}
- **Diphenhydramine has no role in the treatment of anaphylaxis.³ It can mimic some signs of anaphylaxis, such as drowsiness, and worsen hypotension.^{3,4}**

FORMULATIONS

Listed below are products available at PCH, other formulations may be available, check with pharmacy if required:

- Diphenhydramine hydrochloride (Auspman[®]) 100mg/2mL vials
- Imprest location: [Formulary One](#)

DOSAGE & DOSAGE ADJUSTMENTS

IV, IM:

Allergic reaction (NOT if anaphylaxis is suspected)

- Child ≥ 4 weeks: 1 mg/kg (maximum 50 mg/dose) up to every 6-8 hours⁵

Premedication

- Child ≥ 4 weeks: 1 mg/kg/dose (maximum 50 mg/dose) 30 to 60 minutes before the infusion⁵

Renal impairment:

- No dose adjustment is required.⁶

Hepatic impairment:

- No dose adjustment is required.⁵

RECONSTITUTION & ADMINISTRATION**IV injection:**

- May be administered undiluted as an IV push at a rate not exceeding 25 mg/min. ^{5,6}
- May be diluted with a compatible fluid and administered as an intermittent infusion over 10 to 15 minutes. ^{5,6}
- Concurrent administration of an IV fluid bolus should be considered when diphenhydramine is used in the setting of allergic, infusion or transfusion related allergic reactions.

IM injection:

- May be given undiluted by deep IM injection. ^{5,6}

COMPATIBILITY (LIST IS NOT EXHAUSTIVE)**Compatible fluids:** ⁶

Glucose 5%, Glucose 10%, Sodium chloride 0.9%

Compatible at Y-site: ⁷

Azithromycin, caspofungin, ciprofloxacin, docetaxel, fentanyl, filgrastim, fluconazole, meropenem, morphine, ondansetron, piperacillin -tazobactam.

Only commonly used drugs are listed below. This is not a complete list of incompatible drugs.

[Compatibilities of IV drugs](#) must be checked when two or more drugs are given concurrently.

INCOMPATIBLE drugs:

Hydrocortisone sodium succinate, cefepime, amphotericin B, allopurinol, foscarnet.

MONITORING

- Blood pressure ^{2,4}
- Excessive sedation ⁵
- Falls risk due to psychomotor impairment ²

ADVERSE EFFECTS

Common: sedation, drowsiness, dizziness, confusion, headache, blurred vision, mydriasis, dry eyes, constipation, dry mouth, and urinary retention. Psychomotor impairment e.g. impaired alertness, cognition, learning, memory and performance. ^{2,7}

Infrequent: hypotension, tachycardia, nausea, vomiting, diarrhoea. ²

Rare: paradoxical stimulation (e.g. excitation, hallucinations, restlessness, insomnia, increased heart rate, irritability, muscle spasms and in extreme cases, seizures), leucopaenia, agranulocytosis, haemolytic anaemia, allergic reactions, arrhythmias, dyskinesia, hallucinations, elevated liver enzymes. ^{2,6}

STORAGE

Store at room temperature below 25 degrees Celsius and protect from light. ^{4,8}

INTERACTIONS

This medication may interact with other medications; consult PCH approved references (e.g. [Clinical Pharmacology](#)), a clinical pharmacist or PCH Medicines Information Service on extension 63546 for more information.

Please note: The information contained in this guideline is to assist with the preparation and administration of **diphenhydramine**. Any variations to the doses recommended should be clarified with the prescriber prior to administration

Related CAHS internal policies, procedures and guidelines

[Chemotherapy Induced Nausea and Vomiting \(CINV\) Management](#)

[Intramuscular Injections – Clinical Practice Manual](#)

[Medication Administration – Medication Management Manual](#)



[Medication Preparation, Checking and Administration – Medication Management Manual](#)

[Postoperative Nausea and Vomiting \(PONV\) Management in Children](#)

References

1. Simons FE. H1-antihistamines: more relevant than ever in the treatment of allergic disorders. *Journal of allergy and clinical immunology*. 2003 Oct 1;112(4):S42-52.
2. Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists. Pharmaceutical Society of Australia. The Royal Australian College of General Practitioners. Adelaide SA: Australian Medicines Handbook 2022.
3. Australian Society of Clinical Immunology and Allergy. Anaphylaxis Checklist; 2023 [cited April 23]. Available from: [Checklist - Anaphylaxis - Australasian Society of Clinical Immunology and Allergy \(ASCI\)](#)
4. Cardona V, Ansotegui IJ, Ebisawa M, El-Gamal Y, Fernandez Rivas M, Fineman S, et al. World Allergy Organization Anaphylaxis Guidance 2020. *World Allergy Organization Journal*. 2020;13(10).
5. Diphenhydramine (systemic): pediatric drug information. Lexicomp; 2022 [cited Oct 22]. Available from: https://www.uptodate-com.pklibresources.health.wa.gov.au/contents/diphenhydramine-systemic-pediatric-drug-information?search=diphenhydramine%20children&source=panel_search_result&selectedTitle=1~147&usage_type=panel&showDrugLabel=true&display_rank=1#
6. Diphenhydramine hydrochloride. Pediatric Injectable Drugs. Royal Pharmaceutical Society; 2022 [cited Oct 22]. Available from: [MedicinesComplete — CONTENT > Pediatric Injectable Drugs > Drug: DiphenhydrAMINE HCl \(health.wa.gov.au\)](#)
7. Clinical Pharmacology. Diphenhydramine. Elsevier Inc.; 2022 [cited Oct 22]. Available from: <https://www-clinicalkey-com.pklibresources.health.wa.gov.au/pharmacology/monograph/197?sec=monindi>
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File Path:	W:\Safety & Quality\CAHS\CLOVERS MEDICAL Pharmacy\Procedures Protocols and Guidelines\Medication Monographs_Word\PCH.MED.Diphenhydramine.docx		
Document Owner:	Chief Pharmacist		
Reviewer / Team:	Pharmacist, Immunology and Allergy Consultant, Senior Pharmacist, Senior Pharmacist, Oncology and Haematology Supervisor Pharmacist.		
Date First Issued:	Jun 2023	Last Reviewed:	NEW
Amendment Dates:		Next Review Date:	Jul 2026
Approved by:	CAHS Medication Safety Committee	Date:	Jun 2023
Endorsed by:	CAHS Drug & Therapeutics Committee	Date:	Jul 2023
Standards Applicable:	NSQHS Standards:   NSMHS: N/A Child Safe Standards: N/A		

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