



# Drug Therapy Protocols: Dexamethasone

<b>Policy code</b>	DTP_DEX_0323
<b>Date</b>	March, 2023
<b>Purpose</b>	To ensure a consistent procedural approach to dexamethasone administration.
<b>Scope</b>	Applies to all Queensland Ambulance Service (QAS) clinical staff.
<b>Health care setting</b>	Pre-hospital assessment and treatment.
<b>Population</b>	Applies to all ages unless specifically mentioned.
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# Dexamethasone

March, 2023

## Drug class

Corticosteroid<sup>[1,2]</sup>

## Pharmacology

Dexamethasone is a long acting synthetic corticosteroid that produces anti-inflammatory and immunosuppressive effects. The precise mechanism by which corticosteroids exert their effect on croup are not fully known. It is presumed to be based on vasoconstrictive actions in the upper airway, followed by the systemic anti-inflammatory effect.<sup>[1]</sup>

## Metabolism

Hepatic metabolism and renal excretion.<sup>[1,2]</sup>

## Indications

- Croup

## Contraindications

- Allergy AND/OR Adverse Drug Reaction
- Children less than 6 months OR greater than 8 years of age (consultation required)
- Steroid administration within 4 hours

## Precautions

- Nil in this setting

## Side effects

- Nil

## Presentation

- Vial, 8 mg/2 mL dexamethasone

## Onset (PO)

30 minutes<sup>[2]</sup>  
(for croup)

## Duration (PO)

72 hours<sup>[3,4]</sup>

## Half-life

4–5 hours<sup>[3,4]</sup>  
(children)

## Schedule

- S4 (Restricted drugs).

## Routes of administration

Per oral (PO)



## Special notes

- Ambulance officers must only administer medication for the listed indications and dosing range. Any consideration for treatment outside the listed scope of practice requires mandatory approval via the *QAS Clinical Consultation and Advice Line*.
- If parents/carers have administered steroids (within 4 hrs) prior to QAS arrival dexamethasone administration must be **withheld**.
- The QAS will supply the dexamethasone IV presentation for oral administration, as it is more practical in the pre-hospital setting. This practice is not uncommon with hospital based guidelines.
- Dexamethasone is the preferred corticosteroid for the treatment of croup due to its lower hospital re-presentation rate.<sup>[3,4]</sup>
- All patients administered dexamethasone for the treatment of croup must be transported to an appropriate health facility for assessment.
- The Westley Croup Score must be used by all officers to assess croup severity.

## Adult dosages

**Note:** QAS officers are **NOT** authorised to administer dexamethasone to adult patients.

## Paediatric dosages<sup>[3,4]</sup>

### Croup



PO

6 months to 8 years – **0.3 mg/kg**  
(rounded to the nearest **0.5 mL**)

Weight	Volume (8 mg/2 mL presentation)
> 5 – 10 kg	0.5 mL
> 10 – 15 kg	1.0 mL
> 15 kg	1.5 mL

May be repeated once to ensure the desired dose is administered in a child who is resistant to taking oral medication (e.g. a child who has spat out the medication).

**Total maximum dose 0.6 mg/kg (or 12 mg)**

**Oral preparation/administration:** Mix the required dose of dexamethasone with a small amount of sweet ingestible liquid (e.g. fruit juice, cordial or glucose gel (Glucose 15<sup>TM</sup>)) – administer orally with either a syringe or clean spoon.