



Drug Therapy Protocols: Hydrocortisone

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Date	January, 2020
Purpose	To ensure a consistent procedural approach to hydrocortisone administration.
Scope	Applies to all Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
Population	Applies to all ages unless specifically mentioned.
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Hydrocortisone

January, 2020

Drug class

Corticosteroid

Pharmacology

Hydrocortisone is an adrenocortical steroid that produces an anti-inflammatory process. This inhibits the accumulation of inflammatory cells at inflammation sites, phagocytosis, lysosomal enzyme release and synthesis and/or release of mediators of inflammation. Additionally, it prevents and suppresses cell mediated immune reactions.^[1-3]

Metabolism

Hepatic ^[1]

Indications

- **Asthma** (excluding mild)
- **Acute exacerbation of COPD** (with evidence of respiratory distress)
- **Severe allergic reaction OR anaphylaxis** (requiring adrenaline (epinephrine) administration)
- **Symptomatic adrenal insufficiency**^[4,5] (with a known history of Addison's disease, congenital adrenal hyperplasia, pan-hypopituitarism or long-term steroid administration)

Contraindications

- Allergy and/or Adverse Drug Reaction

Precautions

- Hypertension

Side effects

- Nil

Presentation

- Vial, 100 mg *hydrocortisone*

Onset (IV)

1–2 hours

Duration (IV)

6–12 hours

Half-life

6–8 hours

Schedule

- S₄ (Restricted drugs).

Routes of administration

Intramuscular injection (IM)



Intravenous injection (IV)



Special notes

- Ambulance officers must only administer medications 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.
- Each 100 mg hydrocortisone vial is to be reconstituted with 2 mL of sodium chloride 0.9% or water for injection.
- All cannulae and IV lines must be flushed thoroughly with sodium chloride 0.9% following each medication administration.
- All parenteral medications must be prepared in an aseptic manner. The rubber stopper of all vials must be disinfected with an appropriate antimicrobial swab and allowed to dry prior to piercing.

Adult dosages

- **Asthma** (excluding mild)
- **Acute exacerbation of COPD** (with evidence of respiratory distress)



IM

100 mg
Single dose only.

IV

100 mg
Slow push over **1 minute**.
Single dose only.

- **Severe allergic reaction OR anaphylaxis** (requiring adrenaline (epinephrine) administration)



IM

200 mg
Single dose only.



IV

200 mg
Slow push over **1 minute**.
Single dose only.

- **Symptomatic adrenal insufficiency** (with a known history of Addison's disease, congenital adrenal hyperplasia, pan-hypopituitarism or long-term steroid administration)



IM

100 mg
Single dose only.



IV

100 mg
Slow push over **1 minute**.
Single dose only.

Paediatric dosages

- **Asthma** (excluding mild)
- **Severe allergic reaction OR anaphylaxis** (requiring adrenaline (epinephrine) administration)

CCP	IM	4 mg/kg Single dose only, not to exceed 100 mg.
CCP	IV	4 mg/kg Slow push over 1 minute . Single dose only, not to exceed 100 mg.
<p>Symptomatic adrenal insufficiency (with a known history of Addison's disease, congenital adrenal hyperplasia, pan-hypopituitarism or long-term steroid administration)</p>		
ACP2 CCP	IM	0 – 4 years – 25 mg 5 – 10 years – 50 mg > 10 years – 100 mg Single dose only.
ACP2 CCP	IV	0 – 4 years – 25 mg 5 – 10 years – 50 mg > 10 years – 100 mg Slow push over 1 minute . Single dose only.

