

AUTHORIZED BY: CPC Quality of Care Committee  
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CATEGORY: ACP/PCP Medications  
TITLE: **DEXAMETHASONE**

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<b>Other Names:</b>	<ul style="list-style-type: none"><li>• <i>Decadron</i></li></ul>
<b>Classifications:</b>	<ul style="list-style-type: none"><li>• Corticosteroid</li></ul>
<b>Pharmacodynamics:</b>	<p>Dexamethasone is a long-acting corticosteroid with minimal sodium-retaining potential. It decreases inflammation by suppression of neutrophil migration, decreased production of inflammatory mediators, and reversal of increased capillary permeability; suppresses normal immune response. Dexamethasone induces apoptosis in multiple myeloma cells. Dexamethasone's mechanism of antiemetic activity is unknown.</p> <p>As a glucocorticoid, dexamethasone is an agonist of the glucocorticoid receptor (GR). It is highly selective for the GR over the mineralocorticoid receptor (MR), and in relation to this, has minimal mineralocorticoid activity.</p>
<b>Onset:</b>	PO : ~ 30 minutes IM : ~ 5 – 15 minutes IV : Rapid
<b>Peak:</b>	PO : ~ 1-2 hours IM : ~ 10-30 minutes IV : ~ 5-10 minutes
<b>Duration:</b>	<ul style="list-style-type: none"><li>• 4-6 hours</li><li>• The half-life of dexamethasone after either an 8 mg oral dose or intravenous dose was approximately 1-5 hours and may be extended to 6-8 hours in the elderly</li></ul>
<b>Indications:</b>	<ul style="list-style-type: none"><li>• For mild/moderate or severe Croup patients: Current history of URTI <b>AND</b></li><li>• Barking cough or recent history of a barking cough.</li><li>• Respiratory distress</li><li>• Hx. of asthma OR</li><li>• COPD OR 20 pack/year history of smoking</li><li>• For short-term emergency corticosteroid therapy.</li><li>• Situations when a rapid and intense hormonal effect is desired, e.g., shock, hypersensitivity reactions, status asthmaticus, organ transplants, cerebral edema, hypercalcemia, bacterial meningitis.</li><li>• Antiemetic for chemotherapy-induced nausea and vomiting.</li><li>• Multiple Sclerosis (Acute Exacerbation)</li><li>• Cerebral Edema</li><li>• Shock</li><li>• Allergic Conditions</li><li>• Multiple Myeloma</li><li>• COVID-19 Disease</li></ul>
<b>Contraindications:</b>	<ul style="list-style-type: none"><li>• Allergy or sensitivity to steroids.</li><li>• Currently on PO or parenteral steroids</li></ul>
<b>Precautions:</b>	<ul style="list-style-type: none"><li>• DEXAMETHASONE is not recommended for use during pregnancy</li></ul>

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- Adverse Reactions:**
- Hypersensitivity: anaphylactoid reactions, anaphylaxis, angioedema, urticaria
  - IV related reactions: burning and tingling in the perineal area may occur with rapid IV injections; slowing down may reduce the occurrence.
  - GI: peptic ulcer, perforation, hemorrhage, nausea, pancreatitis, abdominal distension, increased appetite.
  - CNS: mental disturbances (euphoria, mood swings, depression, personality changes, psychoses), insomnia, headache, vertigo.
  - Dermatologic: hypo- or hyper-pigmentation, bruising, scarring, induration, and sterile abscess.
  - Electrolyte disturbances: hypokalemia.
  - Endocrine and metabolic: hyperglycemia.
  - Ophthalmic: increased intraocular pressure.
  - Immunosuppression
- Drug Interaction:**
- Antibiotics: Erythromycin
  - Antifungal: Ketoconazole, Itraconazole, Posaconazole, Voriconazole
  - Blood thinners: Apixaban, Rivaroxaban, Warfarin
  - Cholesterol drugs: Cholestyramine, Colesevelam, Colestipol
  - Cushing's Syndrome drugs: Aminoglutethimide
  - Diabetes drugs: Pramlintide, Metformin
  - Diuretics: Bumetanide, Furosemide, Hydrochlorothiazide
  - Epilepsy drugs: Phenytoin, Fosphenytoin, Phenobarbital, Carbamazepine
  - Heart drugs: Digoxin
  - Hormones: Estrogen, Oral Contraceptives
  - HIV drugs: Atazanavir, Darunavir, Fosamprenavir, Indinavir
  - NSAIDs: Aspirin, Ibuprofen, Indomethacin, Naproxen
  - Tuberculosis drugs: Rifampin, Rifabutin, Rifapentine
  - Vaccines: Measles, Mumps, and Rubella, Intranasal flu, Smallpox, Chickenpox, Rotavirus, Yellow Fever, Typhoid
- Clinical & Special Considerations:**
- Dosage is 0.5mg/kg to a maximum single dosage of 8mg.
  - EPINEPHRine and Salbutamol take priority over the administration of Dexamethasone.
  - Administration is in conjunction with Salbutamol and patients requiring ventilator support or CPAP.
  - EPINEPHRine should be the 1st medication administered if the patient is apneic
  - Dexamethasone admin in Croup patients is via PO only.
- Image & Preparations:** 0.5mg/kg to a maximum 8mg
- References:**
- The Ottawa Hospital Parental Drug Therapy Manual
  - Lexicomp 2020 <http://online.lexi.com>
  - Compendium of Pharmaceuticals and Specialties 2022(CPS)
  - <https://www.medicalnewstoday.com/articles/322409#interactions>
  - <https://www.e-therapeutics.ca/search>
  - <https://www.pharmacists.ca/rxtx/en/contact-us/>
  - <https://reference.medscape.com/drug/decadron-dexamethasone-intensol-dexamethasone-342741>

***NOTE: The information contained herein does not supersede or negate the MoHLTC Provincial Advanced Life Support Patient Care Standards and should only serve as general information about the medication itself. For medication dosages, please refer to the current version of the Ontario Provincial ALS Patient Care Standards.***