

DRUG NAME: Dexamethasone**COMMON TRADE NAME(S):** DECADRON®, DEXASONE®, HEXADROL®**CLASSIFICATION:** steroidal agent*Special pediatric considerations are noted when applicable, otherwise adult provisions apply.***MECHANISM OF ACTION:**

Dexamethasone is a synthetic glucocorticoid devoid of mineralocorticoid effects. Glucocorticoids are cytotoxic to leukemia, myeloma, and lymphoma cells, probably via induction of apoptosis. Dexamethasone does not appear to be cell-cycle phase specific.¹

USES:**Primary uses:**

- *Leukemia²
- *Lymphoma²
- Acute leukemia, childhood²
- Brain tumours³
- Cerebral edema related to primary or metastatic brain tumours³
- Chemotherapy-induced nausea and vomiting²
- Hypersensitivity reactions²

Other uses:

*Health Canada approved indication

SPECIAL PRECAUTIONS:

Contraindications: dexamethasone is contraindicated in patients with systemic fungal infections. Live virus vaccines should not be given to patients receiving immunosuppressive glucocorticoid doses.²

Cautions: glucocorticoids should be used with caution in patients⁴:

- with hypothyroidism, cirrhosis, hypertension, congestive heart failure, or thromboembolic disorders
- with diabetes, glaucoma, cataracts, or tuberculosis
- at risk for osteoporosis
- with gastrointestinal diseases (diverticulitis, peptic ulcer, ulcerative colitis) due to perforation risk
- following acute myocardial infarction
- renal and hepatic impairment

Adrenal suppression: following prolonged therapy, abrupt discontinuation may result in a withdrawal syndrome and secondary adrenocortical insufficiency.²

SIDE EFFECTS:

ORGAN SITE	SIDE EFFECT
dermatology/skin	<i>extravasation hazard: none</i>
gastrointestinal	<i>emetogenic potential: rare⁵</i>

Adapted from standard reference⁶ unless specified otherwise.

Potential significant side effects include⁷:

- *acute*: sodium and fluid retention, hypokalemia, hyperglycemia, hypertension, increased susceptibility to and masked symptoms of infection, psychosis
- *delayed*: osteoporosis, thrombocytopenia, Cushing's syndrome, muscle weakness, loss of muscle mass, peptic ulcers

SUPPLY AND STORAGE:

Oral: Apotex and Pharmascience supply 0.5 mg and 4 mg tablets.^{8,9} Selected non-medicinal ingredients: lactose. Store at room temperature.^{8,9}

Injection: Sandoz supplies multi-dose 20 mg vial (4 mg/mL) and single-use 10 mg vial (10 mg/mL). Store at room temperature; protect from light.⁶

SOLUTION PREPARATION AND COMPATIBILITY:

Dexamethasone can be further diluted with NS or D5W. Diluted solution should be administered within 24 hours.⁶

PARENTERAL ADMINISTRATION:

BCCA administration guideline noted in ***bold, italics***

Subcutaneous ^{7,10}	has been used
Intramuscular ^{6,7,10}	has been used
<i>Direct intravenous^{6,7}</i>	<i>over several minutes</i>
<i>Intermittent infusion^{7,10}</i>	<i>over 15-30 min</i>
Continuous infusion ⁶	has been used
Intraperitoneal	no information found
Intrapleural	no information found
Intrathecal	no information found
Intra-arterial	no information found
Intravesical	no information found

DOSAGE GUIDELINES:

Doses are highly variable.^{3,11-16} Refer to protocol by which patient is being treated. Numerous dosing schedules exist and depend on disease, response and concomitant therapy.

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