

Corticosteroids

<u><i>Class Overview</i></u>				
<i>Indication</i>	<i>MOA</i>	<i>Common Side Effects (>3% reported frequency)</i>	<i>Warnings/Precautions</i>	<i>Counseling Points</i>
- Treatment of acute asthma exacerbation	Decreases inflammation by suppression of migration of polymorphonuclear leukocytes and reversal of increased capillary permeability; suppresses the immune system by reducing activity and volume of the lymphatic system; suppresses adrenal function at high doses.	<ul style="list-style-type: none"> -Adrenal suppression -Cardiovascular effects -Psychiatric/behavioral effects -Cushing syndrome -GI effects -Hyperglycemia -Infection -Neuromuscular/skeletal effects -Ocular effects 	<ul style="list-style-type: none"> - Adrenal suppression: May cause hypercortisolism or suppression of hypothalamic-pituitary-adrenal (HPA) axis, particularly in younger children. - Kaposi sarcoma: Prolonged treatment with corticosteroids has been associated with the development of Kaposi sarcoma; clinical improvement may occur with prednisone discontinuation. 	<ul style="list-style-type: none"> - Take in the morning - Take with food

Corticosteroids: Available Medications

Name (Brand)	Dosage Forms	Dosage Strengths
Prednisolone (Orapred, Pediapred)	Oral solution	Solution: 5mg/5mL, 10mg/5mL, 15mg/5mL
Prednisone	Oral concentrate, oral solution, tablet	Solution: 5mg/5mL Tablet: 1 mg, 2.5 mg, 5 mg, 10mg, 20mg, 50 mg
Dexamethasone (Decadron)	Oral solution, oral tablet, injectable solution	Oral solution: 1 mg/mL, 0.5mg/5mL Tablet: 0.5 mg, 0.75 mg, 1 mg, 1.5 mg, 2 mg, 4 mg, 6 mg Injection: 4mg/ml, 10mg/ml
Methylprednisolone (Medrol, Solu-medrol)	Oral tablet, injectable solution	Tablet: 4mg, 8 mg, 16 mg, 32 mg, 4 mg Injection: 40mg/mL, 80 mg/mL
Triamcinolone acetanide	Injectable solution	Injection: 40mg/mL, 80 mg/mL

Corticosteroids: *Pharmacokinetics*

Name (Brand)	Onset (h)	DDI/ Metabolism	Active Metabolite	Serum t $\frac{1}{2}$ (h)
Prednisolone (Orapred, Pediapred)	1-2	Hepatic	NA	2-4
Prednisone	2	Hepatic	Prednisolone	2-3
Dexamethasone (Decadron)	2-14 days	Hepatic	NA	IV: ~1 to 5 Oral: 4 \pm 0.9
Methylprednisolone (Medrol, Solu-medrol)	1	Hepatic	NA	IV: 1.9 \pm 0.7 PO: 2.5 \pm 1.2
Triamcinolone acetonide	24-48	Hepatic	NA	5

Corticosteroids: *Dosing*

Name (Brand)	Dosing
Prednisolone (Orapred, Pediapred)	Acute asthma exacerbation (1-2 mg/kg/day to max 60 mg/day, usually from 3-10 days, most commonly 5 days)
Prednisone	Acute asthma exacerbation (1-2 mg/kg/day to max 60 mg/day, usually from 3-10 days, most commonly 5 days)
Dexamethasone (Decadron)	0.3 – 0.6 mg /kg from 1 to 5 days Use of 1-2 days similar to 5 days of prednisone
Methylprednisolone (Medrol, Solu-medrol)	2 mg/kg initially or 1 mg/kg q 6 hrs x 48 hr (max of 60-80 mg) then 1-2 mg/kg/day (max 30-40 mg)
Triamcinolone acetonide	Consider 20-80 mg intramuscularly given in the gluteal muscle