

RX

Drug Name: **Methylprednisolone**
Trade Name: **Solu-Medrol**
REVISED: **November 1, 2017**

Class:

- Synthetic glucocorticoid
- Corticosteroid

Mechanism of Action:

- The anti-inflammatory actions of corticosteroids are thought to involve phospholipase A₂ inhibitory proteins, collectively called lipocortins. Lipocortins, in turn, control the biosynthesis of potent mediators of inflammation such as prostaglandins and leukotrienes by inhibiting the release of the precursor molecule arachidonic acid
- It inhibits acute & chronic inflammation, & stabilizes cell membranes
- Additionally, it potentiates vascular smooth muscle relaxation by beta-adrenergic agonists and may alter airway hyperactivity

Indications:

- Anaphylaxis
- Bronchodilator-unresponsive reactive airway disease (asthma, COPD)
- Acute spinal cord injury (with deficits)-Not covered in SWO's

Contraindications:

- Systemic fungal infections (*many clinicians believe this is relative as long as appropriate antimicrobial treatment is administered simultaneously*)
- TB
- Cushing's disease

Precautions:

Most precautions are related to long-term steroid therapy.

- Psychosis
- Renal/Hepatic disease
- Diabetes
- Seizure disorders
- Recent MI (*has been associated with left ventricular free-wall rupture*)
- Heart failure, Hypertension (*can cause edema*)
- Myasthenia gravis
- GI disease
- Coagulopathies
- Pregnancy (C)

Dosage:

Adults:

- IV/IM: 125 mg

Pediatrics:

- 1-2 mg/kg IV

Onset:

- 1-2 hours

Duration:

- 8-24 hours

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This document is for **reference only**. Please refer to SWO's for specific indications, dosages, and applications

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Side Effects:

Most side effects seen in long-term steroid therapy

- Sodium & water retention
- CHF
- HTN
- HA, vertigo
- Hypokalemia
- Seizures
- N/V
- Dysrhythmias

Interactions:

- Increases blood glucose levels, may require adjustment of insulin dosage
- Potassium-wasting effects can be exacerbated by concomitant administration of diuretics

PEARLS:

- *The Brady Prehospital Pharmacology text indicates that there are no major contraindications to the use of Methylprednisolone in the emergency setting*
- *While Solumedrol was once in common use for acute spinal cord injuries, recent clinical studies have suggested that it may be ineffective in this role, and may have adverse effects on long term recovery. The dose for this would be 30 mg/kg IV bolus (over 15 minutes) followed 45 minutes later by an infusion of 5.4 mg/kg/hr for 23 hours. Not covered in ACCESS SWO's*

REFERENCE ONLY