

Magnesium Sulfate

PHYSIOLOGICAL ACTIONS:

Reduces striated muscle contractions and blocks peripheral neuromuscular transmission by reducing acetylcholine release at the myoneural junction

THERAPEUTIC EFFECTS:

Raises seizure threshold; Decreases BP through vasodilation; Anti-convulsant; Uterine relaxation; Corrects some ventricular dysrhythmias (Torsades de Pointes and dysrhythmias caused by tricyclic antidepressant overdose or digitalis toxicity)

INDICATIONS:

Toxemia of pregnancy (eclampsia and Pre-eclampsia)
Hypomagnesemic induced ventricular irritability
Torsades de Pointes and refractory V-Fib
Status asthmaticus not responsive to beta-adrenergic drugs

CONTRAINDICATIONS:

Heart block or myocardial damage

DOSAGE:

Preeclampsia - 2 gms IV SLOW IV Bolus

Ventricular Fibrillation/Pulseless Ventricular Tachycardia - 2 gms SLOW IV bolus over 3 minutes.
Dilute 2 gms (which is 4 cc's) into 30 cc syringe filled with D5W IV fluid.
May repeat x 1

Wide Complex Tachycardia – 1 gm SLOW IVP

Asthma – 25-50 mg/kg SLOW IV bolus, max. 2 gms

Pedi Ventricular Fibrillation/Pulseless Ventricular Tachycardia – 25-50 mg/kg.
Max dose 2 gms for hypomagnesemia state or torsades de pointe

ROUTE:

IV, IM

SPECIAL NOTES:

Given slowly when used IV/IO.

SIDE EFFECTS:

Hypotension; CNS or respiratory depression; diaphoresis; facial flushing; hypothermia; reduced heart rate; circulatory collapse; diarrhea; depressed reflexes