FORMULARY

Magnesium Sulfate

Class of Drug	Electrolyte
Mechanism of Action	Reduces striated muscle contractions and blocks peripheral neuromuscular transmission by reducing acetylcholinesterase release at the myoneural junction; manages seizures in toxemia of pregnancy; induces uterine relaxation in pre-term labor; can cause bronchodilation after beta-agonists and anticholinergics have been used.
Indications	Acute asthma / bronchospasm Seizures of eclampsia/pre-eclampsia Pre-term labor Torsades de Pointes Hypomagnesemia TCA overdose induced dysrhythmias Class IIa agent for refractory V-Fib and V-Tach after Amiodarone
Contraindications	Heart blocks and renal diseases
Adverse Effects	Respiratory and CNS depression Hypotension, cardiac arrest, and asystole may occur Facial flushing, diaphoresis, depressed reflexes, and Circulatory collapse
Precautions	Recommended that the drug not be given in the 2 hours before delivery if possible May enhance the effects of other CNS depressants Serious changes in cardiac function may occur with cardiac glycosides IV Calcium chloride or calcium gluconate should be available as antagonist if needed
Dosing/Administration	**Adult**: Asthma / bronchospasm: 2-4 gm IV/IO over 5 minutes Eclampsia/Pre-eclampsia: 4-6 gm IV/IO over 10 min, then 2-4 gm/hr Pre-term Labor: 2-4 gm IV/IO over 20 minutes then 2-4 gm/hr Torsades de Pointes or Refractory VF/VT: 1-2 gm IV/IO over 1-2 minutes **Pediatric**: Asthma / bronchospasm: 25-50 mg/kg IV/IO over 10 minutes (Usually mixed in 50-100 mL of NS)
Pregnancy Category	**Class D** Positive Evidence of Risk **–** There is positive evidence of human fetal risk based on adverse reaction data from investigational or marketing experience or studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks.