## Magnesium Sulfate

### Class:
- Electrolyte

### Actions:
- Corrects hypomagnesemia-induced cardiac arrhythmias and symptoms of cardiac insufficiency
- Depresses the CNS and blocks peripheral neuromuscular transmission, producing anticonvulsant effects in patients with severe pre-eclampsia or eclampsia
- May reduce cardiovascular morbidity and mortality (through reduction of ventricular arrhythmias and/or limitation of infarct size and reperfusion injury) in acute MI patients

### Indications:
- Torsades de Pointes (drug of choice)
- Eclampsia

### Dosage/Administration:

#### Adult:
- Torsades de Pointes:
  - 2 grams IV/IO push
- Any seizure during third trimester of pregnancy or post-partum:
  - 5 grams IV/IO infused over 10 minutes
- Recommended Admixture for Infusions:
  - Inject the amount to be infused into a 50 ml bag of NS and infuse over 10 min

### Side Effects:
- Side effects associated with administration are caused by magnesium intoxication. These include:
  - Flushing, sweating, hypotension, depression of reflexes, hypothermia, cardiac and CNS depression
  - Respiratory depression and paralysis of respiratory muscles
  - Hypocalcemia with signs of tetany has occurred secondary to MgSO4 therapy for eclampsia

### Contraindications:
- Heart Block

### Precautions:
- Should be administered with caution in patients with impaired renal function because of the danger of magnesium intoxication.

### Protocol Reference:
- Cardiac Arrest
- Dysrhythmias
- Obstetrics