

MEDICATION REFERENCE LIST

MAGNESIUM SULFATE

1. **Classification: anticonvulsant; electrolyte**
2. **Physiologic Effects:**
 - 2.1. **depresses the CNS and blocks peripheral neuromuscular transmission by decreasing the amount of acetylcholine released by the motor nerve impulse**
 - 2.2. **slows formation of SA impulses and prolongs conduction time**
 - 2.3. **in severe asthma: Antagonizes translocation of Ca across cell membrane, leads to smooth muscle relaxation & bronchodilation**
 - 2.3.1. **Inhibits degranulation of mast cells (that release histamine)**
 - 2.3.2. **Decreases release of acetylcholine (decreases excitability of muscle fiber membranes)**
3. **Major Indications:**
 - 3.1. **seizure activity due to eclampsia**
 - 3.2. **refractory ventricular fibrillation and pulseless v-tach**
 - 3.3. **ventricular tachycardia (often torsades de pointes) due to hypomagnesemia**
 - 3.4. **hypomagnesemia associated with AMI**
 - 3.5. **severe asthma**
4. **Primary Contraindications:**
 - 4.1. **severe renal impairment**
 - 4.2. **heart blocks**
 - 4.3. **hypersensitivity**
5. **Side Effects:**
 - 5.1. **hypotension**
 - 5.2. **respiratory paralysis**
 - 5.3. **cardiac depression or asystole**
 - 5.4. **CNS depression and paralysis**
 - 5.5. **flushing and sweating**
6. **Additional Information:**
 - 6.1. **toxic accumulation may occur in renal failure**
 - 6.2. **check patellar reflex to avoid intoxication**
 - 6.3. **calcium salts used as the antidote for intoxication**