



**REGION 11
CHICAGO EMS SYSTEM
MEDICATION TABLE**

Medication Name: Magnesium

Approved: EMS Medical Directors Consortium

Effective: June 1, 2026

GENERIC NAME	Magnesium
TRADE NAME	Magnesium Sulfate (MgSO ₄)
CLASSIFICATION	Electrolyte
DOSAGE FORMS	Magnesium Sulfate in Water for Injection 2 grams/50 ml (40 mg/ml), Intravenous Bag
ACTION(S)	<ol style="list-style-type: none"> 1. <u>Eclampsia and Pre-Eclampsia</u>: Blocks calcium flow to receptors in the brain which causes cerebral vasodilation and decreases the neuro-excitation that causes eclamptic seizures 2. <u>Bronchospasm</u>: Relaxation smooth muscle in constricted bronchioles 3. <u>Torsades de Pointes</u>: Stabilizes the cardiac membrane
INDICATIONS	<ol style="list-style-type: none"> 1. Eclampsia and Pre-Eclampsia – Prevention and control of seizures in pre-eclampsia and eclampsia 2. Bronchospasm 3. Torsades de Pointes
CONTRAINDICATIONS	Hypersensitivity to magnesium
ADULT DOSE / ROUTE	<ol style="list-style-type: none"> 1. <u>For Eclampsia and Pre-Eclampsia</u>: Administer 4 grams in 100 ml water (2 bags), IV or IO infusion over 15 minutes (goal) 2. <u>For Bronchospasm</u>: Administer 2 grams in 50 ml water infusion over 10 minutes 3. <u>For Torsades de Pointes</u>: Administer 2 grams in 50 ml water as a slow IV push (over 1-2 minutes)
PEDIATRIC DOSE / ROUTE	For Bronchospasm: Administer 40 mg/kg over 10 minutes
SIDE EFFECTS	Minimal side effects with standard doses, facial flushing, and hypotension with rapid administration