



**REGIONAL ADULT PARENTERAL DRUG MONOGRAPH**

GENERIC NAME

**magnesium sulphate  
(gestational hypertension)**

**Effective Date:** Dec 2011

**Revised Date:** Dec 2022

CLASSIFICATION

**Electrolyte  
Anticonvulsant**

OTHER NAMES

**MgSO<sub>4</sub>**

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**ADMINISTRATION POLICY:**

**NOTE:** *For use in electrolyte replacement, refer to magnesium sulfate (electrolyte replacement monograph)*

IV Infusion – **Administration restricted to nurses in LDRP/ER/ICU/OU**

IV Intermittent – **Administration restricted to nurses in LDRP/ER/ICU/OU**

**RECONSTITUTION/DILUTION/ADMINISTRATION:**

**Available as:** 200 mg/mL – 10 mL single use vial

*All magnesium sulphate infusions must be administered by an infusion pump.*

**Loading Dose:** Add 4 grams (20 mL of 200 mg/mL) to 100 mL normal saline.  
Final Volume: 120 mL Final Concentration: 33.3333 mg/mL  
Administer over 20 to 30 minutes

**IV Infusion:** Add 20 grams (100 mL of 200 mg/mL) to 500 mL normal saline bag  
Final Volume: 600 mL Final Concentration: 33.3333 mg/mL

**IV Infusion: Pump Library:**

**Magnesium Sulphate gestational**

Drug Library	Dose Rate	Short Name	Care Unit
Yes	mL/h	mggest	Critical Care

See dosing table on next page, NOTE that medication is ordered in grams but administration dosing is in mL.

**DOSAGE:**

**NOTE:** *Some cases may take as long as six months to resolve. Hypertension that persists beyond this period should be evaluated and treated as in any nonpregnant woman.*

**Loading dose:** 4 grams

**Maintenance:** Start at 1 to 2 grams/hour  
*Refer to chart below for conversion of gram/hour to mL/hour*

**Maximum single dose:** 4 grams

**Maximum rate:** IV maintenance dose: 150 mg/minute (9 grams/hour)

**Maximum concentration:** 200 mg/mL (20%)



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**STABILITY/COMPATIBILITY:**

**Stability of Final Admixture:** 24 hours at room temperature

**Compatibility:** Compatible in D5W, normal saline, combination dextrose-saline solutions, Lactated Ringer

**PRECAUTIONS, POTENTIAL ADVERSE REACTIONS:**

- Cardiovascular: Contraindicated in patients with heart block. Hypotension, flushing, sweating, hypothermia.
- Central Nervous System: CNS depression & decreased deep tendon reflexes.
- Respiratory: respiratory depression

**ADDITIONAL NOTES AND NURSING CONSIDERATIONS:**

- 200 mg/mL contains 0.8 mmol/mL or 1.6 mEq/mL elemental magnesium
- Ongoing patient monitoring includes:
  - Urine output: greater than 100 mL over previous 4 hours or greater than 30 mL/hour
  - Hourly assessment for presence of reflexes: lower dose if reflexes are absent
  - Hourly assessment of respirations: goal of 12 or greater per minute
  - Hourly oximetry: keep oxygen saturations greater than 94%
- **ANTIDOTE** for magnesium toxicity: Calcium gluconate 10 mL of 10% solution IV push over 3 minutes

**IV infusion titration dosing table**

<b>Diluted magnesium sulfate 33.3333 mg/mL dosing table</b>	
<b>Ordered dose (grams/hour)</b>	<b>Infusion rate (mL/hour)</b>
1	30
2	60
3	90
4	120