ADULT MEDICATION GUIDELINE	
Magnesium	
Scope (Staff):	All WNHS Staff
Scope (Area):	Obstetrics and Gynaecology
This document should be read in conjunction with the Disclaimer.	

Quick Links

Dose	Administration	Monitoring	Pregnancy and Breastfeeding

Restrictions

Formulary: Unrestricted

HIGH RISK Medication

Medication Class

Electrolyte/Mineral

Presentation

Ampoule: magnesium sulfate 2.47 g (contains magnesium **10 mmol**)/5 mL

IV Infusion Bag: magnesium sulfate 8g in 100mL water for injection (8%) (contains magnesium **32mmol**)

Tablet (Mag-Sup®): magnesium aspartate dihydrate 500 mg (contains magnesium 37.4 mg or **1.5 mmol**)

Storage

Tablet (Mag-Sup®): Store in a dry place at room temperature, below 30°C

Ampoule; IV Infusion Bag: Store at room temperature, below 25°C

Dose

Pre-eclampsia/Eclampsia/Neuroprotection of the Fetus

IV infusion:

Refer to Hypertension in pregnancy

and Magnesium Sulfate for Neuroprotection of the Fetus

Recurrent seizures/Eclampsia:

IV infusion:

Refer to Hypertension in pregnancy

Advanced Life Support (use ampoules):

IV injection:

5mmol (2.5mL) bolus. May be repeated once. An infusion of 20mmol over 4 hours may follow.

Management of Hypomagnesaemia

Refer to SCGH Hypomagnesaemia Guideline

Leg cramps in pregnancy*

Oral:

Magnesium Aspartate (Mag-Sup®): 2 to 6 tablets daily

** A Cochrane review found that there is currently insufficient evidence to determine whether any oral interventions (calcium, magnesium, vitamin B or C) are effective for leg cramps in pregnancy. See WNHS guideline for more information*

Administration

Oral: Take with food.

IV infusion (32mmol infusion pre-mixed bag)

Infusion must be administered via a controlled infusion device.

IV Infusion (using magnesium sulfate ampoules)

Dilution: Dilute 5mL (10mmol) in 100mL of Sodium Chloride 0.9%, Glucose 5% or Hartmann's. Concentration is 25mg/mL (0.1mmol/mL of magnesium)

Administration: **Infuse over 30 to 60 minutes**

IV Injection using magnesium sulfate ampoules:

Dilution: Dilute 5mL ampoule with at least 7.5mL of Sodium Chloride 0.9%, Glucose 5% or Hartmann's. Concentration is 200mg/mL (0.8mmol/mL of magnesium)

Administration: Inject SLOWLY at a maximum rate of 150mg/minute (0.6mmol/minute of magnesium).

For emergency IV Injection administration as per anaesthetics, see WNHS Adult Resuscitation Protocols

Refer to the Australian Injectable Drugs Handbook for more information.

Monitoring

IV:

Blood pressure, heart rate, respiratory rate, oxygen saturation, urine output and deep tendon reflexes.

Cease infusion if:

- Absent patellar reflexes
- Urinary output <25mL/hour
- Respiratory depression ≤12 breaths/minute
- Respiratory arrest

Signs of magnesium toxicity:

Nausea, vomiting, flushing, hypotension, bradycardia, muscle weakness, muscle paralysis, blurred or double vision, CNS depression and loss of reflexes.

More severe hypermagnesaemia may result in respiratory depression, respiratory paralysis, renal failure, coma, cardiac arrhythmias and cardiac arrest.

Treatment of toxicity:

- Calcium gluconate 1g/10mL IV over 3-10 minutes
- ECG monitoring recommended

Nifedipine may increase effects of magnesium sulfate and risk of hypotension. Use cautiously; monitor BP, deep tendon reflexes and respiratory function.

Pregnancy

1st Trimester: Safe to use

2nd Trimester: Safe to use

3rd Trimester: Safe to use

Breastfeeding

Safe to use

Related Policies, Procedures & Guidelines

WNHS Clinical Practice Guidelines:

Hypertension in pregnancy

Magnesium Sulfate for Neuroprotection of the Fetus
Preterm Labour

Adult Resuscitation Protocols

WNHS Pharmaceutical and Medicines Management Guidelines:

Medication Administration

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Common discomforts in Pregnancy. WNHS Obstetrics and Gynaecology Clinical Practice

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