

	M24 - MAGNESIUM SULFATE (20%)	
	MEDICATION STANDING ORDER	HIGH ALERT MEDICATION ¹
Version date: 2023-12-13		Effective date: 2024-01-16 (0700)

INDICATIONS
<ul style="list-style-type: none"> • Cardiac arrest due to torsades de pointes • Known or suspected preeclampsia / eclampsia • Severe asthma not responding to bronchodilators

CONTRAINDICATIONS
<ul style="list-style-type: none"> • Myasthenia gravis (when treating preeclampsia / eclampsia)

CARDIAC ARREST / TORSADES DE POINTES		
ROUTE (WORK SCOPE)	INITIAL DOSE	REPEAT DOSE
INTRAVENOUS / INTRAOSSEOUS (ICP & ABOVE)	17 years & older - 1 to 2 grams	None
	12 months up to 17 years - 25 to 50 mg/kg (max = 2 gm)	

SEVERE ASTHMA		
ROUTE (WORK SCOPE)	INITIAL DOSE	REPEAT DOSE
INTRAVENOUS / INTRAOSSEOUS (ICP & ABOVE)	17 years & older - 2 grams over 15 min	None
	12 months up to 17 years - 50 mg/kg (max = 2 gm) over 15 min	

PREECLAMPSIA / ECLAMPSIA - SEIZURE PROPHYLAXIS		
ROUTE (WORK SCOPE)	INITIAL DOSE	REPEAT DOSE
INTRAVENOUS (PCP & ABOVE)	10 years & older - 4 grams over 15 minutes	None
INTRAOSSEOUS (ICP & ABOVE)		

ECLAMPSIA - SEIZURE TREATMENT / PATIENT HAS <u>NOT</u> RECEIVED PROPHYLAXIS		
ROUTE (WORK SCOPE)	INITIAL DOSE	REPEAT DOSE
INTRAVENOUS (PCP & ABOVE)	10 years & older - 4 grams over 10 minutes	2 grams over 5 minutes up to twice more if seizure(s) persist or recur (cumulative total = 8 gm)
INTRAOSSEOUS (ICP & ABOVE)		

ECLAMPSIA - SEIZURE TREATMENT / PATIENT HAS RECEIVED PROPHYLAXIS		
ROUTE (WORK SCOPE)	INITIAL DOSE	REPEAT DOSE
INTRAVENOUS (PCP & ABOVE)	10 years & older - 2 grams over 5 minutes	2 grams once over 5 minutes if seizure(s) persist or recur (cumulative total = 8 gm)
INTRAOSSEOUS (ICP & ABOVE)		

NOTES
<ol style="list-style-type: none"> ERS HIGH-ALERT MEDICATION: Refer to Shared Health Provincial Clinical Standard - Safety Controls for High-Alert Medications (refer to A03 - HIGH ALERT MEDICATIONS). The administration rate differs between cardiac arrest and preeclampsia / eclampsia. During arrest administer by rapid push, follow with a saline flush, and elevate the arm for 10 to 20 seconds if possible. In preeclampsia / eclampsia rapid injection may cause magnesium toxicity and respiratory muscle weakness. Administer over 15 - 20 minutes. In patients with preeclampsia without severe features the incidence of seizures is low. Consultation with on-line medical support (OLMS) is recommended before administration. Magnesium in excess of 8 grams in an hour may result in magnesium toxicity. Monitor frequently for signs of magnesium toxicity. Calcium chloride may be given to counteract magnesium toxicity.

5. Loss of deep tendon reflexes is the first sign of magnesium toxicity. Other manifestations include slurred speech, decreased level of consciousness, decreased muscle tone, and hypoventilation. DO NOT GIVE IF DEEP TENDON REFLEXES ARE DEPRESSED OR RESPIRATORY RATE IS 12 OR LESS

APPROVED BY	
	
Medical Director - Provincial EMS/PT	Associate Medical Director – Provincial EMS/SPT

VERSION CHANGES (refer to X08 for change tracking)
<ul style="list-style-type: none">• Addition of Shared Health Provincial Clinical Standard for high-alert medications