	M26 - CALCIUM CHLORIDE (10%)	
	Version date: 2025-02-14	Effective date: 2025-04-30 (07:00)
ERS HIGH-ALERT MEDICATION (A03)		

INDICATIONS	
<ul style="list-style-type: none"> Magnesium toxicity during treatment for eclampsia (table A) Beta blocker and/or calcium channel blocker toxicity (table B) 	For the treatment of hyperkalemia refer to M30



WARNINGS
<ul style="list-style-type: none"> None

TABLE A: MAGNESIUM TOXICITY	
INTRAVENOUS (INTRAOSSEOUS) INJECTION	PCP / ICP / ACP
ADULTS / ADOLESCENTS: <ul style="list-style-type: none"> Administer 10 to 20 mg/kg (0.1 to 0.2 ml/kg) by slow push over 2 to 5 minutes (maximum per dose = 2 grams) Repeat once as required if signs of magnesium toxicity persist 	

TABLE B: BETA BLOCKER TOXICITY / CALCIUM CHANNEL BLOCKER TOXICITY ¹	
INTRAVENOUS (INTRAOSSEOUS)	ACP
<u>CARDIAC ARREST</u> ALL AGES: <ul style="list-style-type: none"> Administer 20 mg/kg (0.2 ml/kg) by rapid push & follow with saline flush (maximum per dose = 2 grams) Repeat once if arrest persists 	
<u>NONARREST</u> ALL AGES: <ul style="list-style-type: none"> Administer 10 to 20 mg/kg (0.1 to 0.2 ml/kg) by slow push over 5 minutes (maximum per dose = 2 grams) Repeat once if bradycardia or hypotension persist 	

NOTES	
1.	<p>Evidence supporting the effectiveness of calcium administration in beta blocker (BB) or calcium channel blocker (CCB) toxicity is limited. Calcium may improve blood pressure and cardiac output in BB overdose, but may be ineffective with CCB toxicity, due to their negative effect on intracellular calcium handling.</p> <p>Severe hypercalcemia can provoke cardiac dysrhythmias due to the shortening of myocardial action potential duration. A trial of calcium is reasonable, but the serum level should be monitored before administering multiple sodium bicarbonate</p>
2.	Sodium bicarbonate is not compatible with calcium salts (flush intravenous tubing well between administration of calcium and bicarbonate).

LINKS
<ul style="list-style-type: none"> • A03 - High Alert Medications • C02 - Advanced Cardiac Arrest • C12 - Beta Blocker & Calcium Channel Blocker Toxicity • D09 - Preeclampsia & Eclampsia • M30 - Hyperkalemia Therapy

APPROVED BY	
	
EMS Medical Director	EMS Associate Medical Director

VERSION CHANGES (refer to X08 for change tracking)
<ul style="list-style-type: none"> • Addition of ACP work scope • Clarification of different dosing information for arrest vs nonarrest • Addition of indication for BB and CCB toxicity • Hyperkalemia moved to separate document (M30)