

**CALCIUM CHLORIDE/CALCIUM GLUCONATE**

**Drug Classification: Electrolyte solution**

**BACKGROUND**

**Pharmacodynamics**

Calcium chloride and calcium gluconate counteract the toxicity of hyperkalemia by stabilizing the membranes of the cardiac cells, reducing the likelihood of fibrillation.

**Indications**

- Asystole and PEA with known hyperkalemia or hypocalcemia.
- Calcium channel blocker toxicity. Signs include hypotension, heart block, widened QRS and/or bradycardia.

**Contraindications**

- There are no contraindications in the emergency setting.

**Cautions**

- Do not administer calcium chloride or calcium gluconate in the same IV line as sodium bicarbonate as precipitation will occur.
- Infiltration of calcium chloride into the skin may cause necrosis.<sup>1</sup>

**DOSAGE and ADMINISTRATION**

ADULT	PEDIATRICS (less than 60 kg)
<p><b><u>For all indications:</u></b></p> <ol style="list-style-type: none"><li>1. Administer <b>calcium chloride</b> 20 mg/kg slow IV/IO push.</li></ol> <p><b>OR</b></p> <p>Administer <b>calcium gluconate</b> 60 mg/kg slow IV/IO push.</p> <ol style="list-style-type: none"><li>2. Administration rate should not to exceed 1 mL per minute.</li></ol>	<p><b><u>For all indications:</u></b></p> <ol style="list-style-type: none"><li>1. Administer <b>calcium chloride</b> 20 mg/kg slow IV/IO push.</li></ol> <p><b>OR</b></p> <p>Administer <b>calcium gluconate</b> 60 mg/kg slow IV/IO push.</p> <ol style="list-style-type: none"><li>2. Administration rate should not to exceed 1 mL per minute.</li></ol>

**ADVERSE REACTIONS/SIDE EFFECTS**

- Rapid injection may cause the patient to complain of tingling sensations, a calcium taste, and a sense of oppression or “heat wave”.
- Patients taking digitalis may have increased ventricular irritability and Calcium Gluconate may

# HEALTHEAST MEDICAL TRANSPORTATION MEDICAL OPERATIONS MANUAL

produce digitalis toxicity.

- Rapid administration of calcium in a beating heart may produce slowing of the cardiac rate.

## NOTES

<sup>1</sup> If infiltration occurs, notify physician at receiving hospital immediately upon arrival so that antidotal therapy can begin immediately.

### REFERENCE GUIDELINE:

**2D PEA/Asystole**

**2I Wide Complex Tachycardia**

**2E Hyperkalemic Arrest**