Pharmacologic properties:

Calcium is a cation that essential for neurotransmission, bone formation, enzymatic reactions and muscle (including cardiac) contraction. In the myocardium, it increases the force of contraction and augments cardiac output. Calcium also has a stabilizing effect on myocardial membranes when dangerously high potassium levels make the heart at risk for fibrillation.

Indications:

- Hyperkalemia with associated ECG disturbances
- Hypocalcemia (known)
- Calcium channel blocker toxicity with hemodynamic compromise
- Magnesium (MgSO4) toxicity

Contraindications:

- Cardiac arrest not associated with one of the above
- Digoxin toxicity
- Hypercalcemia

Precautions:

- Cautious use in patients receiving Digoxin - do not administer to patients with suspected Digoxin toxicity or overdose
- Do not mix with sodium bicarbonate - it will precipitate

Adverse Reactions:

- Bradycardia (usually caused by rapid administration)
- Arrhythmias - especially in patients on digoxin
- Sclerosis of veins (if IV infiltrates)

Dosage and administration:

Adult

- 1000 mg slow IV. If patient is taking digitalis, administer 250 mg slow IV.

Pediatric

- 20 mg/kg slow IV. Maximum dose of 200 mg.