Pharmacologic properties:

Calcium is a cat ion 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 (MgS04) 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.