

CALCIUM_During Blood Transfusion

Calcium during Blood Transfusion	B	IV	A	I	P
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Description

- Calcium should be administered with the first unit of blood and the 4th (if applicable)
- Calcium chloride contains 3 times the amount of elemental calcium contained in the same volume of calcium gluconate. Therefore, 1 g (10 mL) vial of calcium chloride 10% solution contain 273 mg of elemental calcium, whereas 1 g (10 mL) of 10% calcium gluconate contains 90 mg of elemental calcium. For this reason, larger doses of calcium gluconate are required.
- Doses below refer to dose of calcium solution, not elemental calcium.

Indications

- Patient is receiving a prehospital whole blood or plasma transfusion

Contraindications

- Known or suspected hypercalcemia
- Known or suspected digoxin toxicity (i.e. digoxin overdose)

Side Effects/Notes

- Extravasation of calcium chloride solution may cause tissue necrosis.
- Because of the risk of medication error, if calcium chloride is stocked, consider limiting to 1 amp per medication kit to avoid accidental overdose. Calcium gluconate solution will require 3 amp supply for equivalent dose.

Dosage and Administration

Calcium Gluconate 10% Solution

Adult:

- 3 gm (30 mL) slow IV/IO push.

Pediatric:

- 30 mg/kg slow IV/IO push not to exceed 3 gm

Calcium Chloride 10% Solution

Adult:

- 1 g (10 mL) slow IV/IO push

Pediatric:

- 10 mg/kg slow IV/IO push