

## Dextrose 10 %, 25% & 50% - 20.090

**CLASS: A**

**PROTOCOL(S) USED IN:** Altered Mental Status, Hypoglycemia

**PHARMACOLOGY AND ACTIONS:**

- A. Glucose is used by the body as quick energy.
- B. Its use is regulated by insulin, which stimulates storage of glucose from the bloodstream lowering blood glucose levels.
- C. Glucagon, which mobilizes stored glucose into the bloodstream, raises glucose levels.

**INDICATIONS:**

- A. Hypoglycemic states usually associated with insulin shock in diabetes.
- B. The unconscious patient, when history is unobtainable but after a blood glucose test.

**CONTRAINDICATIONS:**

None

**SIDE EFFECTS AND NOTES:**

- A. Determine blood glucose level prior to administration.
- B. If glucose monitor is unavailable, draw blood for a red top tube (5ml).
- C. Extravasation of dextrose will cause necrosis of tissue.
- D. IV should be secured in a large vein and free return of blood into the syringe or tubing should be checked 2-3 times prior to and during administration
- E. If extravasation does occur, immediately dilute with up to 10ml Lidocaine 1% or Normal Saline injected SQ into extravasated area.
- F. Dextrose may precipitate Wernicke's encephalopathy in alcoholics. If suspected, give Thiamine 50-100mg IV prior to administration of dextrose.
- G. Do not draw blood for glucose determination from site proximal to an IV containing glucose or dextrose.
- H. Effect is delayed in elderly patients with poor circulation.
- I. Recheck blood glucose level 5 minutes after administration.

**ADULT DOSING:**

**Hypoglycemia/Altered mental status -**

**12.5 - 25 grams** of Dextrose 50% IV/IO into large, secure vein if patient isn't able to tolerate oral glucose.

**PEDIATRIC DOSING –**

**Hypoglycemia/Altered mental status - Repeat dose as needed.**

- Infants < 10 kg (birth to 1 year) with CBG < 45 mg/dcl:
  - Give **2.5 - 5 ml/kg of Dextrose 10%**.
- Children 10 kg – 35kg with CBG < 60 mg/dcl:
  - Give **2 - 4 ml/kg of Dextrose 25%**.