

Dextrose D10%

(Glucose)

McHenry Western Lake County
EMS



Objectives

- During this session we will discuss:
- Class
- Actions
- Indications
- Contraindications
- Dosing/Routes
- How supplied
- Precautions
- Side effects



Class:

- Caloric
- Hyperglycemic, Carbohydrate



Actions:

- Needed for adequate utilization of amino acids
- Carbohydrate
- Rapid increase in blood glucose
- Short acting osmotic diuretic
- Helps return potassium into cells when used with insulin.



Indications:

- Hypoglycemia 70 or less or S&S of hypoglycemia



Dosing/Routes:

- GCS 14 or 15 and able to swallow: oral glucose
- If bG is borderline 60-70: D10% (25g/250ml) IVPB wide open- infuse 12.5 grams (125 or ½ IV Bag)
- If bG <60 D10% (25g/250ml) IVPB wide open infuse 25 grams (entire 250ml)

Dosing/Routes:

- Assess patient response 5 min after dextrose administration: Mental Status and bG level.
- If bG 70 or greater: Ongoing assessment
- If bG less than 70: Repeat D10% in 5 gram (50ml) increments at 5-10 min intervals. Reassess bG and mental status every 5 min after each increment.
- If no IV/IO Glucagon 1mg IM/IN

Peds Dosing

- Children and infants (up to 50kg or 110 lbs)
- Dextrose 10% 0.5g/kg up to 25g (5ml/kg)
See protocol page 102 for dosing chart.
- If bG is borderline 60-70 and symptomatic:
Give $\frac{1}{2}$ of the dose listed above.
- If no IV/IO Glucagon

Peds Dosing

- If no improvement after first dose and bG remains below 70: Give additional D10% at 0.5 /kg (5ml/kg up to 25g IVPB 5 min after initial dose.



How supplied:

- IV Bag of 25grams in 250ml



Contraindications:

- Hyperglycemia
- Stroke or head injuries with normal or high glucose levels



Precautions:

- Check IV or IO patency before infusing



Side effects/adverse reactions:

- Tissue necrosis if infiltration occurs
- May cause severe neuro signs and symptoms in alcoholics
- Intracranial hemorrhage and vein sclerosis in neonates if not diluted
- Ref: MWLCEMS Protocol and 2000 Mosby's Nursing Drug Reference Book



Tissue Necrosis



Case Study

- You have been called to the local grocery store and find a female patient in her 30's who is on the floor and unresponsive to verbal stimuli.
- She is conscious but can not answer your questions. You have noted a Med Tag around her wrist which indicates she is a Diabetic.



Case Study

- Her skin is cool and clammy and vitals are in normal range.
- You obtain a glucose check and it is 36.
- Base on her history, what would be the dose of Dextrose that you would give her?



Answer

- D10% (25 grams/250ml) infuse 25 grams (entire 250ml).

Question?

- What is required in the MWLCEMS system on all hypoglycemic patients prior to the administration of Dextrose



Answer

- A Blood Draw is required to be drawn and brought to the Hospital.

