

DEXTROSE [10%, 50% SOLUTIONS]

DRUG CLASSIFICATION	Glucose; Simple-Sugar Carbohydrate Antihypoglycemic Agent
MECHANISM OF ACTION	Rapidly restores blood glucose levels in hypoglycemia and provides a source of carbohydrate calories. Prevents ketosis by reducing the loss of body protein and nitrogen, further promoting glycogen deposition. Reverses CNS effects of hypoglycemia by rapidly increasing serum glucose levels. Dextrose is oxidized to carbon dioxide and water, yielding energy.
CLINICAL INDICATIONS	Symptomatic Hypoglycemia with BGL \leq 69 mg/dL
STANDARD CONTRAINDICATIONS	Known Hypersensitivity to Dextrose, Corn Products, or Other Relative Components Dehydrated Delirium Tremens or Other Signs of Severe Dehydration Known or Suspected Intracranial Hemorrhage
POTENTIAL ADVERSE EFFECTS	Electrolyte Imbalance / Reactive Hyperglycemia / Hyperosmotic Syndrome / Extravasation
GENERAL RISKS & PRECAUTION	1) Any IV access site used for the administration of dextrose should be monitored closely due to increased risk of extravasation and necrosis at the injection site. 2) Use with caution in the presence of pulmonary edema as these patients are highly susceptible to excessive fluid accumulation. 3) Use with caution in patients with renal impairment due to increased risk of electrolyte and fluid/volume overload. 4) In patients with known history of violence after D50 administration, consider the administration of D10 or slow IV push of D50. 5) It is safer to assume hypoglycemia than hyperglycemia if doubt exists; always reassess BGL after dextrose therapy.
PROTOCOL INDEX	Diabetic-Adult (AM-2) Pediatric Diabetic (PM-2) Newly Born (AO-2)

MEDICATION ADMINISTRATION

ADULT

PEDIATRIC

Adult Hypoglycemia (Symptomatic with BGL \leq 69 mg / dL)

125 – 250 mL [IV/IO] of **D10** = 12.5 – 25 g Dextrose; (Maximum: 25 g per dose)

If no improvement with D10%, repeat with higher concentration:

25 – 50 mL [IV/IO] of **D50** = 12.5 – 25 g Dextrose; (Maximum: 25 g per dose)

Infuse slowly; May repeat D50 as needed until BGL \geq 80 mg/dL.

Pediatric Hypoglycemia (Symptomatic with BGL \leq 69 mg / dL)

5 mL / kg [IV/IO] of **D10** = 0.5 g Dextrose / kg; (Maximum: 25 g per dose)

If no improvement with D10%, repeat with higher concentration:

1 mL / kg [IV/IO] of **D50** = 0.5 g Dextrose / kg; (Maximum: 25 g per dose)

Infuse slowly; May repeat D50 as needed until BGL \geq 80 mg/dL.

Neonatal Hypoglycemia (Symptomatic with BGL $<$ 40 mg / dL)

2 mL / kg [IV/IO] of **D10** = 0.2 g Dextrose / kg

May repeat dose using D10 as needed CBG \geq 40 mg / dL