

Class

Antihypoglycemic, Carbohydrate

Pharmacologic properties

Dextrose is a simple monosaccharide also known as glucose. It provides calories for metabolic needs, sparing body proteins and loss of electrolytes. Dextrose is a hypertonic solution that is readily excreted by the kidneys producing diuresis.

Indications

- Hypoglycemia - Blood Glucose Level < 50 mg/dL asymptomatic patient or < 70 mg/dL symptomatic patient [Protocol 36](#), [Protocol 36P](#).
- Hypoglycemia - Blood Glucose Level < 60 mg/dL for suspected stroke or acute brain injury [Protocol 13](#)

Contraindications

- Stroke or acute brain injury (intracranial hemorrhage) with glucose > 60 mg/dL

Precautions

- May theoretically precipitate Wernicke-Korsakoff syndrome if given without thiamine in chronic alcohol dependence and malnutrition

Side Effects/Adverse Reactions

- Thrombosis, sclerosing if given in a peripheral vein
- Tissue irritation if infiltrates (extravasation) leading to tissue necrosis.
- Hyperglycemia
- Hypokalemia

Dosage and Administration

Adult

- 10 gm (100 mL) of Dextrose 10% IV/IO infusion with a macro drip set
 - May be repeated once if BGL remains below 80 mg/dL upon reassessment.
- **OR**
- 12.5 gm (25 mL) of Dextrose 50% IV/IO bolus
 - May be repeated once if BGL remains below 80 mg/dL upon reassessment.

Pediatric

- 0.5 gm/kg (5 mL/kg) of Dextrose 10% (Max dose 10 gm (100 mL)) infusion with a macro drip set
 - For D50 dilution, obtain a D50 prefilled syringe, discard 40 mL and draw up 40 mL of NS to yield concentration of Dextrose 10% to be administered IV/IO bolus.
 - May be repeated once if BGL remains below 80 mg/dL upon reassessment.