

DEXTROSE 50% IN WATER (D₅₀W) (generic)

ACTION: Hyperglycemic; increases circulating blood sugar levels

INDICATIONS:

1. Suspected or known hypoglycemia (BS < 80 mg/dL)

CONTRAINDICATIONS:

1. Intracranial hemorrhage

PRECAUTIONS:

1. May cause CNS symptoms in the alcoholic patient.
2. Should not be used as a diagnostic agent in the patient with altered LOC unless the BS is known to be < 80 mg/dL or, if the BS cannot be determined, patient is known to be diabetic.
3. If CVA or head trauma is suspected as the cause of altered mental status, contact medical control physician prior to administration.

ADVERSE REACTIONS/SIDE EFFECTS:

1. May aggravate HTN and CHF
2. May cause tissue necrosis at injection site if infiltration occurs

ADMINISTRATION:

1. Blood sugar between 40 and 80mg/dL in a conscious, alert patient, give 50% dextrose orally or ½ amp IV/IO and recheck a blood sugar. Administer remaining amp if no change.
2. Blood sugar < 40 mg/dL with or without altered LOC:
 - A. Establish IV/IO of NS TKO in large vein.
 - B. Administer D₅₀W (25 grams) IV/IO x 1.
3. Repeat BS measurement.
4. Further orders must come from monitoring physician.

PEDIATRIC CONSIDERATIONS:

1. Do not give to patients < 12 years without Medical Control Physician order.
2. Initial dose is 0.5 - 1.0 g/kg IV/IO. A maximum concentration of 25% dextrose in water (D₂₅W) should be infused. D₅₀W must, therefore, be diluted 1:1 with NS to achieve D₂₅W. For example, to administer 10 g. to a 20 kg. Child, mix 20 cc D₅₀W with 20 cc NS and infuse slowly via IV/IO. Mixing the solution in a Buretrol may be necessary.
3. A maximum concentration of 10% dextrose in water (D₁₀W) should be used in neonates. D₅₀W must, therefore, be diluted 1:4 with NS to achieve D₁₀W. Neonatal dosage is 5 - 10 cc/kg of D₁₀W administered over 20 minutes.

SPECIAL NOTES:

1. All patients whose hypoglycemia is due to oral hypoglycemic agents should be transported. Medical Control Physician consult required before patient can refuse transport.
2. If infiltration occurs, notify physician at receiving hospital immediately upon arrival so that antidotal therapy can begin immediately.
3. ALS services: In patients with BGL < 40 mg/dL, IV/IO dextrose and/or glucagons are considered first/second line treatments.