

DEXTROSE

PHARMACOLOGY & MECHANISM OF ACTIONS:

- ❑ Carbohydrate
- ❑ Glucose is the body's fuel
- ❑ Its use is regulated by insulin, which transports glucose from the bloodstream into cells, and glucagon, which mobilizes stored glucose into the bloodstream.
- ❑ It produces most of the body's quick energy

INDICATIONS:

- ❑ Hypoglycemic states usually associated with insulin shock, or oral hypoglycemic medications in diabetics.
 - Adult: <60mg/dL
 - Child: <45mg/dL
 - Infant: <30mg/dL

CONTRAINDICATIONS:

- ❑ Suspected CNS bleeding

ADMINISTRATION:

	ADULT		PEDIATRIC
A - EMT	<ul style="list-style-type: none"> ❑ 12.5 to 25 g IV/IO ❑ Repeat as needed 	A - EMT	<p><i>1 to 8 years of age:</i></p> <ul style="list-style-type: none"> ❑ 1 – 2 ml/kg (0.5 g/kg) of D₂₅W IV/IO diluted 1:1 with NS <p><i>Under 1 years of age:</i></p> <ul style="list-style-type: none"> ❑ 1 – 2 ml/kg (0.5 g/kg) of D_{12.5}W IV/IO diluted 1:1 with NS

PRECAUTIONS & SIDE EFFECTS:

- ❑ Higher concentrations of Dextrose should be administered through an IV line flowing NS, and a minimum of 250cc's of fluid infused to prevent irritation to the vascular system.
- ❑ Effect is delayed in elderly patients with poor circulation.
- ❑ Dextrose may precipitate Wernicke's encephalopathy in alcoholics (depleted thiamine stores). Give with caution, after 100 mg IV thiamine has been given, in patients suspected of alcoholism or chronic malnutrition.
- ❑ Even D₂₅W is very hyperosmolar and may be sclerosing to peripheral veins, especially small veins. In addition, repeated administration may result in a hyperosmolar state, which has been associated with intra ventricular hemorrhage in the premature infant.
- ❑ If extravasation of IV dextrose occurs, stop administration. Place cold compress, and look for alternative site, or consider glucagon. IV should be secure and free return of blood into the syringe or tubing should be checked 2-3 times during administration.

SPECIAL NOTES:

- ❑ Glucose is an important agent in the resuscitation of infants and children. During cardiac resuscitation of an infant or child, a rapid field glucose test should be obtained and glucose administered if hypoglycemia is present. It may also be indicated in infants and children who fail to respond to the usual resuscitation measures. Infants suffering traumatic injuries should also receive glucose testing and appropriate treatment.