

The image shows a large, white, serif 'RX' logo centered within a dark gray square. The 'R' and 'X' are connected at the top.

Drug Name: Dextrose 50% in Water
Trade Name: Dextrose, D50, D50W, Glucose

Class:

- Monosaccharide, principal form of carbohydrate used in the body.

Mechanism of Action:

- Increases serum blood glucose levels

Indications:

- Hypoglycemia confirmed by glucometer
- Coma or seizure of unknown etiology
- Refractory cardiac arrest (controversial)

Contraindications:

- Intracranial Hemorrhage
- CVA
- Closed Head Injury

Precautions:

- Can precipitate severe neurologic impairment in alcoholic patients (Wernicke-Korsakoff's syndrome)
- This is related to thiamine deficiency and thiamine should be given before D50 in these cases
- If smaller veins are used, local venous irritation may occur.
- Infiltration may cause necrosis

Dosage:

Adults:

- ½ to 1 full amp slow IV (25 to 100 ml of 50% solution)

Pediatrics:

- Birth to 3 months; use D10 10ml/kg slow IV/IO push
- >3 months; use D25 4 ml/kg slow IV/IO push
- See Pediatric Hypoglycemia Protocol (PM-6)

Onset:

- Can be a minute or less to see immediate improvement, usually 5-20 minutes to see complete resolution of signs and symptoms.

Duration:

- Depends on the degree of hypoglycemia. Sometimes long acting insulin may cause a recurrence of hypoglycemia after the initial glucose is metabolized

Side Effects:

- Pain, warmth, burning upon administration.
- Phlebitis, sclerosis, and thrombosis of vein can occur
- Rhabdomyositis
- Infiltration can cause necrosis & extravasation

Interactions:

- None significant

DRUG: DEXTROSE 50%

RX

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PEARLS:

- Symptomatic hypoglycemia nearly always means an altered mental status. Altered mental status often means a scene safety issue. **Make sure you are aware of your environment**, have the assistance you need, and leave if you become uncomfortable.
- Check a glucometer reading before administering D50 if at all possible. Repeat at least 10 minutes after.
- Use a reasonably large bore IV & and a reasonably large vein.
- Run fluid wide open while administering D50. Check venous patency often.
- Also, it is acceptable to revive a hypoglycemic patient without using the full dose. This is done based on the promptness of the patient response.
- If the patient refuses transport it is required to get them something substantive to eat and that someone will be with them for awhile.
- Commonly, there is an explanation for hypoglycemia if you look for it. Poor compliance, increased stress, decreased sleep, illness, change in insulin regiment, etc.
- If a patient becomes symptomatically hypoglycemic from oral hypoglycemics, they should generally be transported.
- The effects of long acting insulin are difficult to predict. Therefore the effects of an intentional overdose on long acting insulin, are prolonged and beyond the normal capability of the paramedic to treat and release.
- Also if a patient's family, friends, or relatives are present, they can be a good source of information about the patient's habits and their normal recovery from hypoglycemia.
- Follow the Diabetic Treat and Release protocol for diabetics who do not desire transport.