

# Michigan MEDICATION SECTION DEXTROSE

Initial Date: 07/19/2023

Revised Date: Section: 9-19R

## **Dextrose**

Pharmacological Category: Glucose-Elevating Agent

Routes: IV/IO

#### Indications:

1. Hypoglycemia

2. Altered mental status

#### Precautions:

- 1. Ensure patent line, extravasation may cause significant tissue damage.
- 2. Dextrose should be pushed slowly (e.g., over 1-2 minutes).

## **Expected effects:**

- 1. Increased blood glucose level
- 2. Improvement in altered mental status.

#### Notes:

- 1. Instructions for diluting dextrose
  - a. To obtain dextrose 10%, discard 40 mL out of one amp of D50, then draw up 40 mL of NS into the D50 ampule.
  - b. To obtain dextrose 12.5%, discard 37.5 mL out of one amp of D50, then draw 37.5 mL of NS into the D50 ampule
  - c. To obtain dextrose 25%, discard 25 mL out of one amp of D50, then draw 25 mL of NS into the D50 ampule
- 2. May utilize 10% for all ages 5 mL/kg (0.5 gm/kg) up to 250 mL

#### **Dosing: ADULT ALTERED MENTAL STATUS**

Indication: Patient is demonstrating signs of hypoglycemia, blood glucose is < 60 mg/dL. <u>Adults</u> administer:

1. Dextrose 25 gm IV, titrate to fully awake and oriented.

#### **Dosing: ADULT SEIZURES**

Indication: Seizure patient with blood glucose < 60 mg/dL

Adults administer:

1. Dextrose 25 gm IV

### **Dosing: PEDIATRIC ALTERED MENTAL STATUS**

Indication: Patient is demonstrating signs of hypoglycemia and blood glucose as follows:

- 1. 2 months old or younger and blood glucose is <40 mg/dL
- 2. 3 months old or older and blood glucose is <60 mg/dL

#### Pediatrics administer:

1. Dextrose according to MI MEDIC cards



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#### 2. If MI MEDIC cards are not available use chart below:

## **Dosing: PEDIATRIC SEIZURES**

Indication: Pediatric seizure patient and blood glucose as follows:

- 1. 2 months old or younger and glucose is <40 mg/dL
- 2. 3 months old or older and glucose is <60 mg/dL

### Pediatrics administer:

- 1. Dextrose according to MI MEDIC cards
- 2. If MI MEDIC cards are not available utilize the chart below.

## **Dosing: PEDIATRIC CARDIAC ARREST**

Indication: Pediatric patients in cardiac arrest with a blood glucose is less than 60 mg/dL Pediatrics administer:

- 1. Dextrose according to MI MEDIC cards
- 2. If MI MEDIC cards are not available utilize the chart below.
- 3. If chart is not available administer dextrose 0.5 g/kg

| Color  | Age       | Weight       | Dose  | Concentration | Volume |    | Concentration | Volume |
|--------|-----------|--------------|-------|---------------|--------|----|---------------|--------|
| Grey   | 0-2       | 3-5 kg       | 2.5g  | Dextrose      | 20 mL  | OR | Dextrose 10%  | 25 mL  |
|        | months    | (6-11 lbs.)  |       | 12.5%         |        |    |               |        |
| Pink   | 3-6       | 6-7 kg       | 3.25g | Dextrose 25%  | 13 mL  | OR | Dextrose 10%  | 33 mL  |
|        | months    | (13-16 lbs.) |       |               |        |    |               |        |
| Red    | 7-10      | 8-9 kg       | 4.25g | Dextrose 25%  | 17 mL  | OR | Dextrose 10%  | 43 mL  |
|        | months    | (17-20 lbs.) |       |               |        |    |               |        |
| Purple | 11-18     | 10-11 kg     | 5g    | Dextrose 25%  | 20 mL  | OR | Dextrose 10%  | 50 mL  |
|        | months    | (21-25 lbs.) |       |               |        |    |               |        |
| Yellow | 19-35     | 12-14 kg     | 6.25g | Dextrose 25%  | 25 mL  | OR | Dextrose 10%  | 63 mL  |
|        | months    | (26-31 lbs.) |       |               |        |    |               |        |
| White  | 3-4       | 15-18 kg     | 8g    | Dextrose 25%  | 32 mL  | OR | Dextrose 10%  | 80 mL  |
|        | years     | (32-40 lbs.) |       |               |        |    |               |        |
| Blue   | 5-6 years | 19-23 kg     | 10g   | Dextrose 25%  | 40 mL  | OR | Dextrose 10%  | 100 mL |
|        |           | (41-50 lbs.) |       |               |        |    |               |        |
| Orange | 7-9       | 24-29 kg     | 12.5g | Dextrose 50%  | 25 mL  | OR | Dextrose 10%  | 125 mL |
|        | years     | (52-64 lbs.) |       |               |        |    |               |        |
| Green  | 10-14     | 30-36 kg     | 15g   | Dextrose 50%  | 40 mL  | OR | Dextrose 10%  | 150 mL |
|        | Years     | (65-79 lbs.) |       |               |        |    |               |        |

## Used in the Following Protocols

Altered Mental Status (Section 3 Adult Treatment)

Seizures (Section 3 Adult Treatment)

Pediatric Altered Mental Status (Section 4 Obstetrics and Pediatrics)

Pediatric Seizures (Section 4 Obstetrics and Pediatrics)

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Pediatric Cardiac Arrest – General (Section 6 Pediatric Cardiac)