






Pediatric Seizures




- I. Follow **General Pre-Hospital Care -Treatment Protocol**.
- II. For focal seizure contact Medical Control
- III. **IF PATIENT IS ACTIVELY SEIZING (GENERALIZED TONIC CLONIC):**
 - A. Protect patient from injury.
 - B. Maintain airway and provide supplemental oxygen
 -  C. Administer **midazolam** according to the MI-MEDIC cards
 - a. If MI-MEDIC unavailable administer **midazolam** 0.1mg/kg IM maximum individual dose 10 mg.
 - b. If IV established prior to seizure activity administer **midazolam** 0.05 mg/kg IV/IO maximum single dose of 5 mg.
 - c. Monitor SpO2, EKG and waveform capnography (per **End Tidal Carbon Dioxide Monitoring-Procedure Protocol**) after **midazolam** administration.
 - D. Consider trauma if evidence or suspicion of trauma treat according to applicable protocol in addition to stopping the seizure.
 -  E. Check blood glucose (may be MFR skill, see **Blood Glucose Testing-Procedure Protocol**).
 -  a. Start IV/IO if needed
 -  b. Administer **dextrose** according to MI-MEDICS CARDS when:
 - i. \leq 2 months old and blood glucose is <40 mg/dL
 - ii. \geq 3months old and blood glucose is <60 mg/dL
 - iii. If MI MEDIC cards are unavailable, utilize the table below


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

-  c. If unable to start IV, administer **glucagon** IM/IN (if available per MCA selection), (may be EMT skill per MCA selection).

Glucagon administration

Not included

| | | <u>Glucagon IM</u> | <u>Glucagon IN</u> |
|--|------------|--|--|
| | | A. Patients < than 5 years of age administer glucagon 0.5 mg IM | A. Patients < than 5 years of age administer glucagon 0.5 mg IM |
| | | B. Patients ≥ 5 years of age administer glucagon 1 mg IM | B. Patients ≥ 5 years of age administer glucagon 1 mg IM |
|  | Paramedic | <input type="checkbox"/> | <input type="checkbox"/> |
|  | Specialist | <input type="checkbox"/> | <input type="checkbox"/> |
|  | EMT | <input type="checkbox"/> | <input type="checkbox"/> |

-  d. If seizure persists 10 minutes after initial dose of **midazolam** and correction of low blood glucose repeat one time **midazolam** (per MCA selection)

Pre radio **midazolam** administration (without Medical Control contact)



Post radio **midazolam** administration (contact Medical Control prior to administration).

i. 0.1mg/kg IM maximum single dose of 10 mg

OR

ii. If IV already available 0.05 mg/kg IV/IO maximum single dose of 5 mg.



F. If seizures persist after second dose, consider underlying causes and contact Medical Control for further instructions.

IV. For PATIENT NOT CURRENTLY SEIZING, monitor and treat known underlying causes, if possible:



A. Check blood glucose (may be MFR skill, see **Blood Glucose Testing-Procedure Protocol**) and treat as outlined above (III. E.)

a. If patient is altered and able to swallow – administer **oral glucose** when:

i. ≤ 2 months old and blood glucose is <40 mg/dL

ii. ≥ 3months old and blood glucose is <60 mg/dL

B. Check temperature and refer to **Pediatric Fever-Treatment Protocol** if applicable.

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- C. Monitor oxygenation and mental status, administer oxygen to maintain 94%, including ventilatory support as needed according to the **Airway Management-Procedure Protocol**
 - a. For patients with respiratory depression and high suspicion opioid involvement, administer **naloxone** per **Opioid Overdose Treatment and Prevention-Treatment Protocol**.
 - D. Consider trauma, if evidence or suspicion treat according to applicable protocol.
 - E. Keep environment safe for the child, padding around the patient, if possible

NOTE:

- 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 amp;
 - c. To obtain **dextrose 25%**, discard 25 ml out of one amp of D50, then draw 25 ml of **NS** into the D50 amp
 - b. May utilize 10% for all ages 5 ml/kg (0.5 gm/kg) up to 250 ml, according to **Dextrose-Medication Protocol**.
- 2. To avoid extravasation, a patent IV must be available for IV administration of **dextrose**. **Dextrose** should always be pushed slowly (e.g., over 1-2 minutes).

Medication Protocols

Dextrose

Glucagon

Midazolam

Naloxone