

Seizure Activity (121)

Adults	Pediatrics (13 years and under)
Public Safety First Aid Procedures: Only	Public Safety First Aid Procedures: Only
<ul style="list-style-type: none"> Remove nearby objects to prevent injury to Patient. Place patient in recovery position on left side Give Oxygen if available Request Fire/EMS 	<ul style="list-style-type: none"> Remove nearby objects to prevent injury to Patient. Place patient in recovery position on left side Give Oxygen if available Request Fire/EMS
BLS Procedures: EMT's and Paramedics start here	BLS Procedures: EMT's and Paramedics start here
<ul style="list-style-type: none"> Support ABC's Give Oxygen only if SpO2 < 94% or if in respiratory distress Blood Glucose Check, if hypoglycemic enter Diabetic Emergency Protocol (112) If Focal seizure, place patient in position of comfort, rapid transport, or ALS Rendezvous If full body tonic/clonic seizure, prepare to support respirations, provide cooling measures if febrile Spinal motion restriction if trauma is suspected Rapid transport or ALS rendezvous for repetitive or prolonged seizure activity 	<ul style="list-style-type: none"> Support ABC's Give Oxygen only if SpO2 <94% or if in respiratory distress Blood Glucose check, if hypoglycemic enter Diabetic Emergency Protocol (112) If Focal seizure, place patient in position of comfort, rapid transport, or ALS Rendezvous If full body tonic/clonic seizure, prepare to support respirations. If febrile seizure, start cooling measures. Acetaminophen 15 mg/kg PO after seizure has ended and patient can safely swallow. Spinal motion restriction if trauma is suspected Rapid transport or ALS rendezvous for repetitive or prolonged seizure activity
ALS Prior to Base Hospital Contact: Paramedic only	ALS Prior to Base Hospital Contact: Paramedic only
<ul style="list-style-type: none"> Monitor/SpO2/Blood Glucose Check. IF ACTIVELY SEIZING GIVE MIDAZOLAM PRIOR TO BLOOD GLUCOSE CHECK Active Seizure <ul style="list-style-type: none"> ➤ No IV/IO access: Midazolam initial dose 5mg <40kg OR 10mg >40kg IM/IN ONLY MAX 1 mL per nare. ➤ IV/IO access: Midazolam 0.1mg/kg IV/IO MAX of 5mg. Repeat doses shall be weight-based Midazolam 0.2mg/kg IM/IN MAX 5mg OR 0.1mg/kg IV/IO MAX 5mg. If patient Actively Seizing and is PREGNANT OR POST PARTUM (up to 30 days after delivery) give Magnesium Sulfate 4-6 grams slow IV drip over 5-10 minutes. If patient continues to seize give Midazolam 10mg if >40kg OR 5mg if <40kg IM/IN ONLY MAX 1 mL per nare 	<ul style="list-style-type: none"> Monitor/SpO2/Blood Glucose check IF ACTIVELY SEIZING GIVE MIDAZOLAM PRIOR TO BLOOD GLUCOSE CHECK, if hypoglycemia or narcotic overdose enter appropriate protocol Active Seizure: <ul style="list-style-type: none"> ➤ No IV/IO access: Midazolam initial dose <ul style="list-style-type: none"> ○ 10mg >40kg IM/IN MAX 1 mL per nare. ○ 5mg <40kg IM/IN MAX 1 mL per nare. ○ <13kg 0.2 mg/kg IM/IN MAX 1 mL per nare ➤ IV/IO access: Midazolam 0.1mg/kg IV/IO MAX of 5mg. Repeat doses shall be weight-based Midazolam 0.2mg/kg IM/IN MAX 5mg OR 0.1mg/kg IV/IO MAX 5mg. If patient Actively Seizing and is PREGNANT OR POST PARTUM (up to 30 days after delivery) give Magnesium Sulfate 2 grams slow IV drip over 15 minutes. If patient continues to seize give Midazolam

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<ul style="list-style-type: none"> If active seizure lasts longer than 10 minutes may repeat dose 1 time, BASE for further direction If Midazolam not available give Diazepam 5 mg/IV/IO if seizure lasts longer than 10 minutes may repeat dose 1-time BASE for further direction 	<p>10mg if >40kg OR 5mg if <40kg IM/IN ONLY MAX 1 mL per nare</p> <ul style="list-style-type: none"> If Midazolam not available give Diazepam 0.3 mg/kg IV/IO MAX dose 5 mg OR Rectal 0.5 mg/kg. MAX dose 10 mg If seizure lasts longer than 10 minutes may repeat dose 1 time. BASE for further direction
Base Hospital Contact Required	Base Hospital Contact Required
<ul style="list-style-type: none"> Midazolam or Diazepam beyond 2 doses 	<ul style="list-style-type: none"> Midazolam or Diazepam beyond 2 doses

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Special Considerations

1. Consider Naloxone in situations of potential drug abuse or if no history of seizure disorder.
2. Seizures present in several forms. A generalized motor seizure (Grand Mal) is the most common witnessed in the field. Generalized motor seizure activity frequently affects a victim's ability to breathe. Proper assessment of the patient's airway and ventilatory status is critical to the field management of these patients.
3. **If IV access has not been established:** the initial dose of Midazolam for active seizure for patients with a weight under 13kg 0.2 mg/kg. Patients with weight under 40kg initial dose is 5mg. For a patient with a weight over 40kg initial dose of Midazolam is 10mg. Initial dose shall be **IM/IN ONLY** with a MAX of 1 mL per nare. Initial IM/IN dosing should be administered immediately for active seizures. Intramuscular administration is preferred for all patients. Weight based dosing for Midazolam 0.2mg/kg IM/IN **OR** 0.1mg/kg IV shall be used for subsequent dosing. **Do not attempt IV access during an active seizure.**
4. **If IV access has been established** use IV dose of Midazolam 0.1mg/kg for initial active seizure. **Do not attempt IV access during an active seizure.**
5. Midazolam is associated with a higher degree of respiratory depression than Diazepam, be prepared to manage the airway with the administration of any benzodiazepine. Midazolam IM is the preferred first line therapy for pediatric patients. Be sure to wait approximately 10 minutes before repeating doses by IM route. Midazolam has been shown to have an onset of action of 10 minutes with peak action in 30 min.
6. Midazolam given intranasal has a volume limit of 1 mL per nare. More than 1 mL per nare will simply run off and not be absorbed. Midazolam concentration of 5 mg/mL vial is preferred as the volume limit will not be reached with a max single dose of 10mg, however multiple

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concentrations of the drug are to be avoided in MICU inventory due to potential medication errors.

7. Diazepam is preferably administered IV push, but in the pediatric patient it may be administered via the rectum if IV access is not available.
8. Status epilepticus is manifested by two or more seizures without regaining consciousness in between seizures or continuous seizure activity without cessation.
9. The highest risk for patients with continuous generalized seizures (status epilepticus) is hypoxia. Airway and ventilation to resolve hypoxia is a high patient care priority. ET intubation and ventilation should be used if indicated.