

Seizures and Status Epilepticus



Definition:

One of the following:

1. Continuous seizures for >5 minutes
2. Two or more discrete seizures between which patient does not regain consciousness

Start

1. **Establish team leader and call for HELP.**
2. **Check pulse and vital signs.**
 - If pulseless, initiate Advanced Cardiovascular Life Support.
3. **Start supplemental oxygen; set up suction.**
4. **Obtain intravenous (IV) or intraosseous access.**
5. **Perform focused physical exam.**
 - Pupillary exam
 - Cardiopulmonary exam
6. **Check glucose via finger stick; if <70 mg/dL, give 50 mL dextrose 50%.**
7. **Obtain diagnostic testing.**
 - Complete blood count, basic metabolic panel, magnesium level, phosphorus level, liver function tests, antiepileptic drug levels
 - Urine toxicology
8. **If febrile, treat with rectal acetaminophen, 650 mg.**



Immediate Treatment

Many seizures will spontaneously remit in 2 minutes; initial supportive management may be appropriate.

Once seizures have continued for >2 minutes, IV benzodiazepines should be administered.

- **IV lorazepam, 4 mg, can repeat once**
- **IV diazepam, 10-20 mg every 1 minute**
- **Intramuscular midazolam, 10 mg if IV access unavailable**

If seizures continue, **urgent neurology** consultation and choose among the following agents:

- **Fosphenytoin, 20 PE/kg at 100-150 mg/min (max 1500 PE)**
- **Phenytoin, 20 mg/kg at 50 mg/min (monitor for hypotension and cardiac arrhythmias)**
- **Valproic acid, 20 mg/kg at 6 mg/min (max 3000 mg)**
- **Levetiracetam, 20 mg/kg at 100 mg/min (max 4500 mg)**
- **Phenobarbital, 15 mg/kg at 50-75 mg/min**
- **Simultaneously prepare IV infusion of midazolam and propofol**

If seizures continue:

- **Intubate**
- **Midazolam, 0.2 mg/kg bolus, followed by 0.1 mg/kg/h**
- **Propofol, 1-2 mg/kg bolus, followed by 20 µg/kg/min**
- **Transfer to ICU and initiate video electroencephalographic monitoring**