

New York-Presbyterian Brooklyn Methodist Hospital
Division of Neurology and Pharmacy Department
ADULT Status Epilepticus Treatment Guideline

The following is a guideline for the initiation of sequential interventions if seizures continue / do not break:

<p>0- 2 min Stabilization Phase</p>	<p>Stabilize patient (airway, breathing, circulation) Time seizure from onset Obtain baseline vital signs, IV access, 12-lead EKG, fingerstick blood glucose Labs: CBC, BMP, ABG, AED levels*, Toxicology screen</p> <ul style="list-style-type: none"> • *Available in-house: Carbamazepine, Phenobarbital, Phenytoin, Valproic Acid • *Send-out levels: Gabapentin, Lamotrigene, Levetiracetam, Topiramate, Lacosomide, Perompanel
<p>2-10 min Initial Therapy Phase</p>	<p><input checked="" type="checkbox"/> Lorazepam 4 mg IVP at over at least 2 minutes ($\leq 2\text{mg}/\text{min}$) STAT, may repeat dose <u>ONCE after 5 minutes</u></p> <p><input type="checkbox"/> Midazolam 10 mg IM, STAT, single dose only</p>
<p>10-40 min Second Therapy Phase- 1st AED LD</p>	<p><input checked="" type="checkbox"/> Levetiracetam 3000 mg IVPB over 15 minutes, STAT</p> <p><input type="checkbox"/> Valproic Acid 40 mg/kg IVPB, maximum rate of 6 mg/kg/min, STAT</p> <p><input type="checkbox"/> Fosphenytoin 20 mg PE/kg IVPB, maximum rate of 150 mg PE/min, STAT (needs EKG monitoring and BP checks during Loading Dose)</p> <p><input type="checkbox"/> Lacosamide 400 mg IVPB over 15 minutes, STAT</p>
<p>40-60 min Second Therapy Phase- 2nd AED LD</p>	<p><i>Use <u>DIFFERENT AED than first AED agent used</u></i></p> <p><input checked="" type="checkbox"/> Valproic Acid 40 mg/kg IVPB, maximum rate of 6 mg/kg/min, STAT</p> <p><input type="checkbox"/> Fosphenytoin 20 mg PE/kg IVPB, maximum rate of 150 mg PE/min, STAT (needs EKG monitoring and BP checks during Loading Dose)</p> <p><input type="checkbox"/> Lacosamide 400 mg IVPB over 15 minutes, STAT</p> <p><input type="checkbox"/> Levetiracetam 3000 mg IVPB over 15 minutes, STAT</p> <p><i>Start maintenance dose of AED <u>6 hours after loading dose</u></i></p>
<p>> 60min Third Therapy Phase- Refractory Status Epilepticus</p>	<p><i>All continuous infusions should be ordered as "fixed rate" orders:</i></p> <p><input checked="" type="checkbox"/> Midazolam</p> <ul style="list-style-type: none"> • LD: 0.2 mg/kg IV bolus • CI: 5-30 mg/hour (<i>note dosing unit</i>) <p><input type="checkbox"/> Propofol</p> <ul style="list-style-type: none"> • LD: 2 mg/kg IV bolus • CI: 30-200 mcg/kg/min (<i>note dosing unit</i>) <p><input type="checkbox"/> Ketamine</p> <ul style="list-style-type: none"> • LD: 3 mg/kg IV bolus • CI: 3-10 mg/kg/hour <p><input type="checkbox"/> Pentobarbital</p> <ul style="list-style-type: none"> • LD: 5 mg/kg IV bolus • CI: 0.5- 5 mg/kg/hr <p><input type="checkbox"/> Magnesium Sulfate</p> <ul style="list-style-type: none"> • LD: 4 gram IV bolus • CI: 2 gram/hour

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- Epilepsy consult
- Video EEG Monitoring

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- ICU Transfer
- Intubation (if not already done)
- Vasopressors (on standby)
- Video EEG Monitoring

Abbreviations

- ABG: arterial blood gas
- AED: antiepileptic drug
- BMP: basic metabolic panel
- CBC: complete blood count
- CI: continuous infusion
- EEG: electroencephalogram
- EKG: electrocardiogram
- IM: intramuscular
- IV: intravenous
- IVP: intravenous push
- IVPB: intravenous piggyback
- LD: loading dose
- PE: phenytoin equivalents

References

1. Glauser T, et al. Glauser T, Shinnar S, Gloss D, et al. Evidence-Based Guideline: Treatment of Convulsive Status Epilepticus in Children and Adults: Report of the Guideline Committee of the American Epilepsy Society. *Epilepsy Currents*. 2016;16(1):48-61. doi:10.5698/1535-7597-16.1.48.
2. Brophy GM, et al. Guidelines for the evaluation and management of status epilepticus. *Neurocrit Care*. 2012 Aug;17(1):3-23.
3. Gaspard N, et al. Intravenous ketamine for the treatment of refractory status epilepticus: a retrospective multicenter study. *Epilepsia*. 2013 Aug;54(8):1498-503.
4. Lexicomp Online®, Lexi-Drugs®, Hudson, Ohio: Lexi-Comp, Inc.; January 31, 2017.