### Types of Status Epilepticus

<table>
<thead>
<tr>
<th>Convulsive Status</th>
<th>Non-Convulsive Status</th>
<th>Focal Status</th>
<th>Absence Status</th>
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<tbody>
<tr>
<td>≥ 5 minutes of continuous convulsive seizure OR ≥ 2 discrete seizures between which there is incomplete recovery of consciousness.</td>
<td>≥ 10 minutes of continuous seizure OR ≥ 30 total minutes of ictal EEG activity in any given hour. These patients are at risk for convulsive status.</td>
<td>Focal epileptic seizure that lasts ≥ 30 minutes OR repeated focal epileptic seizures (≥ 30 minutes) with incomplete recovery between seizures.</td>
<td>Prolonged, generalized absence seizure that usually last for hours to days. Cardinal symptom is altered level of consciousness.</td>
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Convulsive status is the most common type of status epilepticus (SE). > 50% of SE episodes occur in children with no prior seizure history.

### Common Etiologies of Status Epilepticus

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<th>Acute Symptomatic (17-52%)</th>
<th>Remote (16-39%)</th>
<th>Other</th>
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<tbody>
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<td>CNS infection</td>
<td>Hemorrhage</td>
<td>&gt; Idiopathic (5-19%)</td>
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<td>Metabolic (hypoglycemia, hyperglycemia, hyponatremia, hypocalcemia)</td>
<td>Non-compliance with AEDs</td>
<td>Trauma</td>
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<td>Stroke</td>
<td>Overdose</td>
<td>Prolonged febrile convulsions (23-30%)</td>
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<td>Toxins</td>
<td>Sleep deprivation</td>
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### Management of Status Epilepticus in Hospital

**Goal:** stop the seizure and prevent brain injury. Then determine the underlying cause.

**1st line – 10 minutes**
- **AIRWAY** support
  - BREATHING – assess breathing, 100% O₂, monitor O₂ saturation
  - CIRCULATION – BP, pulse
- Establish IV ACCESS
- Rapid GLUCOSE test
- Position child on their side to prevent aspiration

**1st line therapy (see below)**
- IV ESTABLISHED
  - Lorazepam IV
  - Midazolam IV
  - Diazepam IV
  - Repeat x1 within 5 minutes
- Seizure stops

**Seizure stops within 10 minutes**
- YES
  - Monitor, follow-up investigations

**NO IV ACCESS**
- Lorazepam buccal or PR
- Midazolam buccal, intranasal, or intramuscular
- Seizure stops

**2nd line therapy**
- Use phenobarbital if fosphenytoin/phenytoin used.
- Use phenobarbital or phenytoin if phenobarbital already used. Other considerations: IV valproic acid or IV levitiracetam.

**2nd line agents:**
- Fosphenytoin IV, IM
- Phenytoin IV, IO
- Phenobarbital IV

**If still seizing after 5 minutes**
- If still seizing
  - Repeat x1 within 5 minutes
  - Use phenobarbital or phenytoin if phenobarbital already used. Other considerations: IV valproic acid or IV levitiracetam.

**Refractory Status Epilepticus:** unresponsive to 2 different antiepileptic medications (eg: benzodiazepine and phenytoin)

- If no seizures for 24-48 hours: taper midazolam
- Seizure stops

**Seizure stops**
- YES
  - Monitor, follow-up investigations

**Consult ICU team. Rapid sequence intubation. Monitor ABCs continuously. Midazolam continuous infusion. Maintain phenobarbital and phenytoin at therapeutic levels.**

**By 35-45 minutes**
- Establish goals with guidance from Peds Neurology and Peds Critical Care

**By 1 hour**
- 45 minutes
- Consider Thiopental/Pentobarbital bolus and continuous infusion.