

# Management of Generalised Convulsive Status Epilepticus in Adults

## Stage 1

0 – 5 minutes

### Immediate Measures:

- Open and maintain airway
- Assess cardiac and respiratory function
- Check blood glucose
- Time seizure from onset
- Give oxygen
- Secure IV access in large veins
- Check temperature

## Stage 2

> 5 minutes

Give ONE of the following drugs depending on local availability. Do not mix benzodiazepines:

- **Lorazepam** up to 4mg IV (given as 2mg IV over 1 minute, if seizure not terminating give a further 2mg IV after 2-3 minutes)
- **Diazepam** 10 mg IV or rectally. Maximum rate 5mg/minute. Risk of respiratory depression. Give 5mg of Diazepam in the elderly or patients less than 50kg
- **Midazolam** 10 mg buccally, intranasally\* or intramuscularly\*\* (off-label). Give 5mg of Midazolam in the elderly or patients less than 50kg.  
\*Intranasal midazolam: Use the buccal preparation. Half the dose in each nostril. \*\*Intramuscular administration: use 10mg/2ml ampoules (stored in CD cupboard)

**Administer a repeat dose of benzodiazepine at 10 minutes if there is no response**

### Determine aetiology

- Any suggestion of hypoglycaemia: give 100ml of glucose 20% IV. If no IV access 1mg IM glucagon. Check blood glucose again after 10 minutes.
- Any suggestion of alcohol abuse or impaired nutritional status: give thiamine IV (refer to [local guidance](#) on preparation and dosing)
- Give usual antiepileptic drug (AED) treatment if not already given – can be given via nasogastric tube if airway secure (see [NBM epilepsy guidance](#))
- Consider appropriate antibiotic/antiviral if any concern about CNS infection
- Take bloods: U+Es, LFTs, FBC, Coagulation screen, Glucose, CK, Calcium, Magnesium, Blood culture, Blood gas, Alcohol and toxicology screen, AED levels.

## Stage 3

10 - 30 minutes

If status persists, give ONE of the following AED loading doses:

- **Intravenous Levetiracetam** (off-label) 60mg/kg, max: 4500mg/dose. See the main guideline for dosage and administration instructions OR
- **Intravenous Phenytoin** 18mg/kg, max: 1800mg/dose. See the main guideline for dosage and administration instructions OR
- **Intravenous Sodium valproate** (off-label) 25mg/kg, max: 2500mg/dose (**reproductive risks in all patients <55 years old – see below\***). See the main guideline for dosage and administration instructions

**Status Epilepticus is a clinical emergency and management is time critical, choice of AED should be according to local availability and information in Appendix 1 on indications and cautions.**

If seizure is not terminating call ICU to inform them of the patient and contact neurology via switchboard for advice.

If seizures continue or reoccur in patients who are haemodynamically stable then consider another stage 3 AED.

\*Sodium Valproate Reproductive Risks: **The primary aim in status epilepticus management is termination of seizures and preservation of life.** The MHRA have issued [advice](#) on use of sodium valproate in female and male patients under 55 years. Decisions regarding ongoing treatment once seizures are controlled must be in line with MHRA advice.

## Stage 4

30 – 60 minutes

If status persists at 30 – 60 minutes, see the full guideline on AthenA for details and seek specialist advice.

## Appendix 1: Indications and cautions for stage 3 antiepileptic drugs in the treatment of status epilepticus

Drug	May be preferred:	Cautions to consider:
<b>Levetiracetam</b>	<ul style="list-style-type: none"> <li>• Already taking Levetiracetam and suspected poor adherence</li> <li>• Alternatives contraindicated or previously ineffective</li> <li>• Favourable side effect and interaction profile</li> </ul>	<ul style="list-style-type: none"> <li>• Known allergic reaction</li> <li>• Reduce maintenance dose in renal impairment</li> <li>• Mood or behavioural disorder (may worsen symptoms)</li> </ul>
<b>Phenytoin</b>	<ul style="list-style-type: none"> <li>• Already taking Phenytoin and suspected poor adherence</li> <li>• Alternatives contraindicated or previously ineffective</li> </ul>	<ul style="list-style-type: none"> <li>• Bradycardia</li> <li>• Heart block</li> <li>• Porphyria</li> <li>• Known allergic reaction</li> <li>• Caution in liver disease</li> <li>• Administration via enteral tubes can be problematic</li> <li>• Therapeutic drug monitoring required</li> </ul>
<b>Sodium Valproate</b>	<ul style="list-style-type: none"> <li>• Already taking Sodium valproate and suspected poor adherence</li> <li>• Genetic generalised epilepsy</li> <li>• Mood disorder</li> <li>• Alternatives contraindicated or previously ineffective</li> </ul>	<ul style="list-style-type: none"> <li>• Reproductive risks in female and male patients &lt;55 years *see below</li> <li>• Pre-existing liver disease or pancreatitis</li> <li>• Known metabolic disorder predisposing to hepatotoxicity</li> <li>• Known allergic reaction</li> <li>• Mitochondrial disease</li> <li>• Avoid in patients prescribed carbapenem antibiotics</li> <li>• Porphyria</li> </ul>

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