

Treating prolonged or repeated seizures and status epilepticus

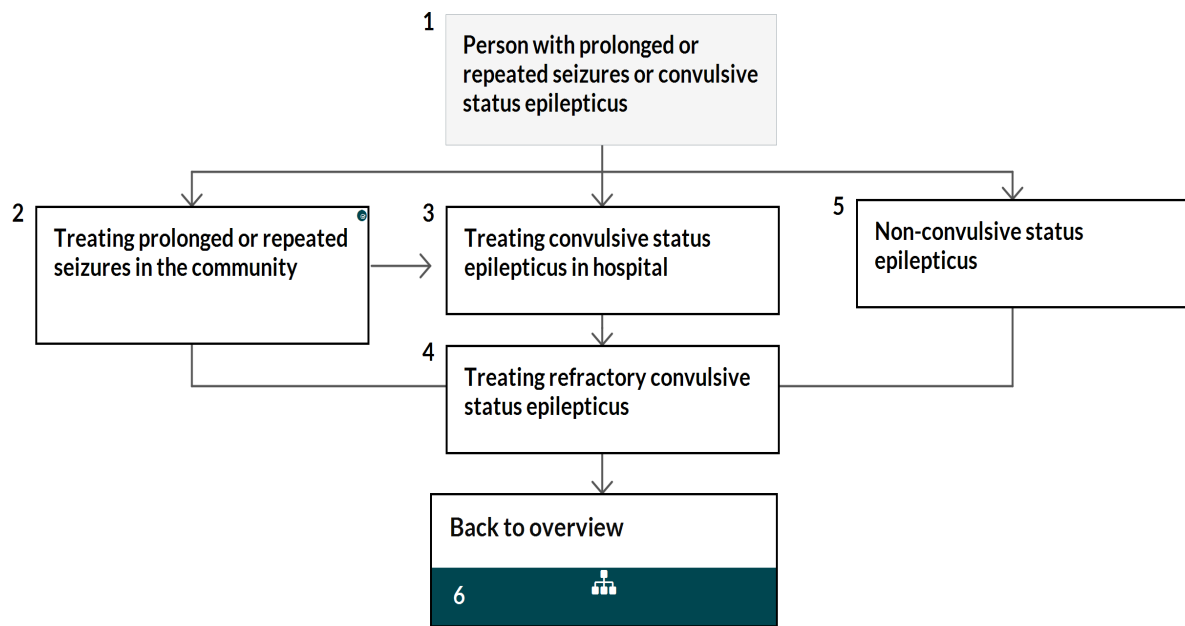
NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

<http://pathways.nice.org.uk/pathways/epilepsy>

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This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



1 Person with prolonged or repeated seizures or convulsive status epilepticus

No additional information

2 Treating prolonged or repeated seizures in the community

In January 2012, the use of rectal diazepam as described below was off label (see the [BNF](#) or [BNFC](#) for details). See [prescribing medicines at NICE website](#).

Give immediate emergency care and treatment to children, young people and adults who have prolonged (lasting 5 minutes or more) or repeated (three or more in an hour) convulsive seizures in the community.

Only prescribe buccal midazolam or rectal diazepam for use in the community for children, young people and adults who have had a previous episode of prolonged or serial convulsive seizures.

Administer buccal midazolam as first-line treatment in children, young people and adults with prolonged or repeated seizures in the community. Administer rectal diazepam if preferred or if buccal midazolam is not available. If intravenous access is already established and resuscitation facilities are available, administer intravenous lorazepam.

Treatment should be administered by trained clinical personnel or, if specified by an individually agreed protocol drawn up with the specialist, by family members or carers with appropriate training.

Care must be taken to secure the child, young person or adult's airway and assess his or her respiratory and cardiac function.

Depending on response to treatment, the person's situation and any personalised care plan, call an ambulance, particularly if:

- the seizure is continuing 5 minutes after the emergency medication has been administered
- the person has a history of frequent episodes of serial seizures or has convulsive status epilepticus, or this is the first episode requiring emergency treatment or
- there are concerns or difficulties monitoring the person's airway, breathing, circulation or other vital signs.

Quality standards

The following quality statements are relevant to this part of the interactive flowchart.

6. Prolonged or repeated seizures (children and young people)
6. Prolonged or repeated seizures (adults)

3 Treating convulsive status epilepticus in hospital

For children, young people and adults with ongoing GTC seizures (convulsive status epilepticus) who are in hospital, immediately:

- secure airway
- give high-concentration oxygen
- assess cardiac and respiratory function
- check blood glucose levels and
- secure intravenous access in a large vein.

Administer intravenous lorazepam as first-line treatment in hospital in children, young people and adults with ongoing GTC seizures (convulsive status epilepticus). Administer intravenous diazepam if intravenous lorazepam is unavailable, or buccal midazolam if unable to secure immediate intravenous access. Administer a maximum of two doses of the first-line treatment (including pre-hospital treatment).

If seizures continue, administer intravenous phenobarbital or phenytoin as second-line treatment in hospital in children, young people and adults with ongoing GTC seizures (convulsive status epilepticus).

See also the suggested protocols in [appendix F of the guideline](#).

4 Treating refractory convulsive status epilepticus

In January 2012, the use of midazolam, propofol or thiopental sodium as described below was off label (see the [BNF](#) or [BNFC](#) for details). See [prescribing medicines at NICE website](#).

Follow the suggested protocols in [appendix F of the guideline](#) for treating refractory convulsive status epilepticus in secondary care.

Adults

Administer intravenous midazolam, propofol or thiopental sodium to treat adults with refractory convulsive status epilepticus. Adequate monitoring, including blood levels of AEDs, and critical life systems support are required.

Children and young people

Administer intravenous midazolam or thiopental sodium to treat children and young people with refractory convulsive status epilepticus. Adequate monitoring, including blood levels of AEDs, and critical life systems support are required.

All people

As the treatment pathway progresses, the expertise of an anaesthetist/intensivist should be sought.

If either the whole protocol or intensive care is required the tertiary service should be consulted.

Regular AEDs should be continued at optimal doses and the reasons for status epilepticus should be investigated.

An individual treatment pathway should be formulated for children, young people and adults who have recurrent convulsive status epilepticus.

5 Non-convulsive status epilepticus

Non-convulsive status epilepticus is uncommon and management is less urgent. A suggested protocol can be found in [appendix F of the guideline](#).

6 Back to overview

[See Epilepsy / Epilepsy overview](#)

Glossary

AEDs

(anti-epileptic drugs: medication taken daily to prevent the recurrence of epileptic seizures)

Convulsive status epilepticus

(a convulsive seizure that continues for longer than 5 minutes, or convulsive seizures that occur one after the other with no recovery between; this is an emergency and requires immediate medical attention)

GTC seizures

(a seizure of sudden onset involving generalised stiffening and subsequent rhythmic jerking of the limbs, the result of rapid widespread engagement of bilateral cortical and subcortical networks in the brain)

Non-convulsive status epilepticus

(a change in mental status or behaviour from baseline, associated with continuous seizure activity on EEG, which is also seen to be a change from baseline)

Specialist

(for children and young people: a paediatrician with training and expertise in epilepsy; for adults: a medical practitioner with training and expertise in epilepsy)

Sources

[Epilepsies: diagnosis and management](#) (2012 updated 2021) NICE guideline CG137

Your responsibility

Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful

consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of

implementing NICE recommendations wherever possible.

Medical technologies guidance, diagnostics guidance and interventional procedures guidance

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.