First Afebrile Seizure in Children and Adolescents

This leaflet explains the incidence, risk of recurrence after a single seizure, investigations, management, seizure safety advice, First Aid and when to call an ambulance.

If you have any further questions, please speak to a doctor or nurse caring for your child.

- A seizure is a sudden disturbance in the brain which affects how a person acts. The symptoms involved and how your child recovers from them can be highly variable.
- Around 1 in 10 people will have a single seizure throughout their life.
- Some other conditions may mimic a seizure, so it is important to make a right diagnosis.
- The risk of recurrence of seizure, i.e. having a second seizure after the first seizure, varies depending on whether the seizure was provoked or unprovoked. Provoked seizure may happen after certain situations when the brain is disturbed and these may include a low blood sugar or infection.
- In a first seizure provoked by an acute brain insult like low sugar level, further seizures are less likely to occur. The chance of recurrence is about 3-10 %.
- A first seizure which is unprovoked may recur by 30-50% which means that almost one in two may have a further seizure over the next two years.
- Some children after a first seizure will go on to have further seizures and they may have a diagnosis of epilepsy.

- After a second unprovoked seizure the recurrent risk is increased at about 70-80%, justifying a diagnosis of epilepsy which means a tendency for recurrent seizure.
- Risk of having more seizures will go up in children who have night time seizures or having a diagnosis of cerebral palsy, developmental disorder or learning disability. The risk of recurrence could also be linked with other issues such as family history of epilepsy.
- All children with a first seizure require paediatric assessment and advice.

What tests do we need to do after a first seizure?

- A good and detailed clinical history from the child, parents / carers and eye witnesses is essential in making a diagnosis of a seizure disorder or epilepsy.
- A video footage of the paroxysmal episode or seizure will have a significant role in making the diagnosis.
- No investigations are routinely indicated.
- An Electrocardiogram (ECG) which measures the heart electrical activity should be considered on children with possible seizure.
- An Electroencephalogram (EEG) which measures the electrical activity of brain should not be routinely performed after a first afebrile seizure although occasionally EEG may be appropriate.
- Children without epilepsy may have an abnormal non-specific EEG change in 1 in 10 cases and or epileptiform activities without seizure in about 2-4% of children.
- Neuroimaging (MRI) is not routinely indicated after a first seizure.
- MRI is indicated in children with a focal seizure (except in those children who have changes compatible with centro-temporal spikes indicating Benign Rolandic Epilepsy).

What treatment to provide?

- After a single afebrile seizure all children need to be seen and assessed.
- Single Seizure information leaflet to be provided.
- After the first seizure, the biggest risk of having another seizure is within the next three to six months.
- Patients will need an emergency medication with buccal Midazolam or rectal Diazepam if a convulsive seizure has been long, i.e. five minutes or more or seizures repeated within a short period of time without any recovery in between, i.e. three seizures within an hour.

Follow the First Aid instruction with any seizure

- Stay calm.
- Protect the child from injury by moving harmful objects away from them.
- Begin timing how long the seizure lasts.
- If it is safe to do so, filming the seizure on a smartphone is helpful for any future medical review of the child.
- Stay with the child and give reassurance.
- If the child is on the ground, put something soft under their head and loosen anything that is tight around their neck.
- If the child is having convulsions, do not try to stop them from moving and do not put anything in their mouth.
- If the child is lying down, once the seizure finishes, roll the child onto their side until they are ready to sit up by themselves.
- Consider if an ambulance needs to be called.

When to call an ambulance

- If it is the child's first seizure
- The seizure lasts five minutes or more
- Another seizure quickly follows the first one

- The child remains unconscious or has trouble breathing after the seizure
- The child is hurt or injured
- The child does not seem to recover fully.

General safety after a seizure

- Take care around water. The child needs to swim with a supervising adult. This person needs to be able to swim well.
- Get your child to have showers instead of baths. Ensure they do not lock the door when using the bathroom.
- Always turn on the cold tap before the hot tap and lower the temperature of the hot water service at home.
- Take special care when using hot water or things that can cause burns.
- Activities involving heights are best avoided unless appropriate support is provided.
- When riding a bicycle or scooter, in addition to wearing helmets and protective guards, your child should always be accompanied by an adult.

Useful sources of information

Royal College of Paediatrics and Child Health
rcpch_following_a_first_seizure_without_fever_in_cyp_parent_a4_2019_v1.1.pdf
rcpch_following_a_first_seizure_without_fever_in_cyp_cyp_a4_2020_v1.1.pdf

Contact us

If you have any questions or concerns about your child's outpatient or clinic appointment, including planned admission, please contact your consultant's secretary or the Child Development Centre main desk on

020 8725 1896 (Monday to Friday, 9am to 5pm).

Child Development Centre
Ground Floor (Dragon Centre)
Lanesborough Wing

If you have questions or concerns about your child's medication and day to day management, please contact our epilepsy clinical nurse specialist on 020 8725 2829 or 07917 172730 (Monday to Friday, 9am to 5pm).

If you have any immediate concerns about your child's febrile convulsions outside of these hours, please contact your GP or NHS 111 or bring your child directly to A&E.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.stgeorges.nhs.uk

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Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).
Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.
Web: www.nhs.uk

NHS 111

You can call 111 when you need medical help fast but it's not a 999

emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones. **Tel:** 111

AccessAble

You can download accessibility guides for all our services by searching 'St George's Hospital' on the AccessAble website (www.accessable.co.uk). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.

Reference: NEU_FAS_LP_02 **Published:** January 2023 **Review date:** January 2025