



Epilepsy

What is epilepsy?

Epilepsy is a brain condition that causes recurrent seizures.

Nerve cells in the brain send and receive information to each other via electrical activity. Seizures occur when there is a sudden, abnormal increase in the brain's electrical activity, and for a short time, the brain goes into a short circuit. This results in a seizure episode.

What are common misconceptions about epilepsy?

The following misconceptions are debunked below:

- Your child will **NOT** die if he or she bites his or her tongue during a seizure.
- Epilepsy is **NOT** caused by an evil spirit.
- No health foods can stop or prevent seizures.
Note: There is no scientific evidence that foods rich in vitamins will reduce the occurrence of seizures.
- Your child's epilepsy is **NOT** a result of something that you or someone else has done.
Note: It is nobody's fault that your child has epilepsy.
- Epilepsy is **NOT** a contagious disease.

What causes epilepsy?

Epilepsy can be caused by anything that affects the brain. Some examples include brain infection (meningitis or encephalitis), head injuries, complications that happened before or during birth, brain tumour or inherited brain disorders such as tuberous sclerosis.

It may or may not run in the family. Everyone inherits a “seizure threshold” at birth, which is the point at which we may have a seizure if the brain is sufficiently irritated. People with lower seizure thresholds have increased tendency of having seizures. This means that although two children may receive almost identical injuries to the brain, the one with the lower seizure threshold is more likely to develop epilepsy.

Occasionally, no definite cause can be found. Some forms of epilepsy are due to the imbalance in the neurotransmitters (brain chemical) or specific receptors in the brain nerve cells.

What can trigger more seizures?

- Lack of sleep is a common cause of increased frequency of seizures.
- Poor compliance with daily intake of epilepsy medicine is often the reason why children with epilepsy have more seizures.
- Flashing light or flickering light for children with some types of epilepsy.
- Illness or fever.

Do seizures cause brain damage?

Seizures can result in brain damage if it is prolonged for more than an hour. If your child has seizures occurring one after another (cluster of seizures) without regaining consciousness or a seizure that does not stop after 30 minutes, it constitutes a medical emergency requiring immediate medical attention and treatment.



What should I do when my child is having seizures?

- Administer rectal diazepam, buccal or intranasal midazolam to your child if convulsive seizure last more than 5 minutes. It will take 15-20 minutes for the medication to take effect.
- Keep calm.
- Loosen his or her clothing.
- Turn your child to the side to drain anything in his/her mouth to prevent choking.
- Put something flat and soft under the head if possible.
- Move items like sharp objects or furniture away to prevent your child from injuring him/herself.
- **Do not** try to hold his/her tongue down with a spoon or any other objects.
- **Do not** try to bring your child around by slapping, shaking or splashing water on him/her.
- **Do not** give your child anything to drink.
- **Do not** hold down or restrain your child in any way.
- Stay with your child until his/her breathing is normal and he/she regain consciousness.
- Remember that your child may be irritable and tired following a seizure. Make a special effort to be calm and reassuring afterwards.
- If your child is having a “wandering around” seizure, keep calm and tell other people what is happening. Talk in a quiet, friendly voice and gently guide your child away from anything that could hurt him/her.
- It is important to take note of the type and duration of the seizures.

What precautions do I need to take?

- Children or adolescents with epilepsy should avoid sports like rock climbing or gymnastics where falling from a height can occur.
- When swimming, ensure one to one supervision for your child at all times.

- It is safer for your child to take a shower instead of bathing in a bathtub to prevent possible drowning in the event a seizure occurs during bath time.
- It is advisable to wear a helmet for activities like cycling.

How is epilepsy treated?

- Your child will need to start taking an antiepileptic drug for a period of time, usually for a minimum of two years if there are no breakthrough seizures. The antiepileptic drug controls your child's seizures and is not addictive.
- For the antiepileptic drug to work properly, it has to be kept at a steady level in the blood. The level has to be high enough to prevent seizures. Your child may need blood tests from time to time to ensure the drug dosage is right.
- Drugs do not remain in the body permanently. Like the food we consume, medicines are converted and eliminated by our bodily processes. To maintain the medicine level in the body, your child has to take the medication at the prescribed time each day and regularly.
- Not having a seizure means the drug is working. It does not mean that your child should stop taking his/her prescribed medication.
- Seizures do not occur in most children again if they take their medication regularly. If your child starts having seizures again despite a long period of control with medication, it does not mean that the epilepsy is getting worse. It happens because the physical makeup of your child changes as he/she grows. As a result, his/her medication may have to be adjusted.
- The process of reducing your child's medication or even taking him/her off completely should only be undertaken with the doctor's close supervision. Do not try it on your own.

When should I bring my child to the Children's Emergency?

- When the seizure lasts more than 5 minutes.
- When your child has two or more seizures in a row without regaining consciousness.
- When your child does not wake up from the seizure even after the seizure has stopped for more than 30 minutes.

What is sudden unexpected death in epilepsy?

Sudden unexpected death in epilepsy (SUDEP) is the sudden, unexpected death of someone with epilepsy, who was otherwise well. It affects one in 1,000 people per year and has a higher occurrence for those with uncontrolled seizures. The cause of SUDEP is unknown as it usually occurs in the night or during sleep that leave little to no evidence of a seizure before death. Being compliant with medication and avoiding triggers such as lack of sleep will reduce the risk of SUDEP.



Useful Links

www.epilepsy.com.sg

Singapore Epilepsy Foundation is a non-profit organisation dedicated to promote public awareness and education on topics surrounding epilepsy for the welfare of people with epilepsy.

www.epilepsycare.org

Epilepsy Care Group (Singapore) is a non-profit, volunteer-based organisation that addresses the needs of persons with epilepsy and their caregivers in Singapore.

About the National University Centre for Women and Children

National University Centre for Women and Children (NUWoC) is a national university specialist centre that aims to empower women, children and their families to lead healthier lives. We provide comprehensive medical and surgical services ranging from pre-conception to child and maternal health.

NUWoC comprises the Department of Obstetrics & Gynaecology (O&G) and Khoo Teck Puat – National University Children's Medical Institute (KTP-NUCMI) of National University Hospital. It focuses on the right-siting of appropriate services in the community and builds complementary services in National University Health System's (NUHS) centres of excellence – Ng Teng Fong General Hospital and Alexandra Hospital.

Through a generous gift from the Estate of Khoo Teck Puat, KTP-NUCMI established an integrated outpatient facility with medical, diagnostic and rehabilitation services for children. We are also the only public specialist centre in Singapore that offers paediatric kidney and liver transplant programmes.

For more information about us, visit www.nuh.com.sg/NUWoC

Children's Emergency (24-hr)

Location NUH Main Building, Zone F, Level 1
Contact +65 6772 5000

KTP-NUCMI

Location NUH Main Building, Zone E, Level 2
(Accessible via Kent Ridge Wing, Zone C, Level 2, Lift Lobby C)
Operating Hours 8.30am – 5.30pm (Mon to Fri), 8.30am – 12.30pm (Sat)
General Enquiry +65 6772 5736
Appointment Line +65 6908 2222
Email ktpnucmi_appt@nuhs.edu.sg

9a Viva-University Children's Cancer Centre

Location NUH Medical Centre, Zone B, Level 9
Operating Hours 8am – 5.30pm (Mon to Fri)
Appointment Line +65 6772 5030
Email cbccappt@nuhs.edu.sg

NUH Children's Urgent Care Clinic @ Bukit Panjang

Location Junction 10, #01-22
Operating Hours 9am – 11pm daily (including public holidays)
General Enquiry +65 6219 1538
Email childreucc@nuhs.edu.sg

NUH Child Development Unit @ JMC

Location Jurong Medical Centre, Level 2
Operating Hours 8.30am – 5.30pm (Mon to Fri)
Appointment Line +65 6665 2530 / 2531
Email cdu@nuhs.edu.sg

NUH Child Development Unit @ Keat Hong

Location Keat Hong Community Club, #03-01
Operating Hours 8.30am – 5.30pm (Mon to Fri)
Appointment Line +65 6769 4537/4637
Email cdu@nuhs.edu.sg

Clinic A22 NUWoC Children's Clinic @ NTFGH

Location Ng Teng Fong General Hospital
Tower A – NTFGH Clinics, Level 2
Operating Hours 8.30am – 5.30pm (Mon to Fri)
Appointment Line +65 6908 2222
Email appointment@nuhs.edu.sg

National University Hospital

5 Lower Kent Ridge Road, Singapore 119074

OneNUHS Hotline: (65) 6908 2222

OneNUHS General Enquiries: contactus@nuhs.edu.sg

OneNUHS Appointments: appointment@nuhs.edu.sg

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