

Epilepsy and exercise

Epilepsy is a brain disorder characterised by recurring seizures or fits. Seizures are caused by sudden flurries of electrochemical activity in the brain, which disrupt the 'conversation' between neurones. There are various types of seizures. In many cases, a seizure comes on suddenly without warning, so a person with epilepsy needs to make sure their exercise and sporting activities are as safe as possible at all times. Consult with your doctor or epilepsy association for further information.

Exercise and seizures

Some people with epilepsy avoid exercise because they are afraid they will have a seizure during the activity. However, it is extremely rare for a person to have an epileptic seizure while exercising. Rather than triggering seizures, physical activity can actually reduce the risk. Research has found that most people with epilepsy experience improved electroencephalograph (EEG) readings during and after exercise. The reasons for this are unknown, but theories include:

- The heavy breathing associated with exercise stops the build-up of carbon dioxide in the blood (hypercapnia).
- Stress is a known seizure trigger, and regular exercise is a highly recommended way to manage stress.
- The release of 'feel good' brain chemicals (neurotransmitters) during exercise may calm the brain.
- The degree of concentration needed during sport may focus the brain so that seizures are less likely.
- The benefits of regular exercise, such as improved fitness and wellbeing, may contribute to a reduced seizure risk.

Exercise safety issues

Be guided by your doctor, but general safety suggestions include:

- Before starting any new exercise program, consult with your doctor or specialist.
- Avoid known seizure triggers.
- Always take your medication as prescribed.
- Ensure you keep an adequate supply of medication.
- Make sure your sporting companions are aware of your condition, and know what to do if you have a seizure.
- Always wear a medical alert bracelet.
- Wear protective gear appropriate to your sport, such as helmet or knee pads.
- Always wear a life jacket when involved in water sports.

- Activities such as contact sports, scuba diving, bungee jumping and boxing are dangerous and should be avoided.
- Avoid solo aerial sports such as hang gliding and skydiving.
- Avoid high altitude activities such as mountain climbing.
- Let family/friends know your walking/jogging/exercise route before you leave and how long you will be out

Activities to avoid in the case of uncontrolled seizures

In addition to the above, people with uncontrolled seizures need to avoid certain activities altogether, including:

- Motor sports
- Horseback riding
- Gymnastics
- Ice activities, such as skating or hockey
- Skiing
- Solo water sports, such as sailing or wind surfing.

Water safety

Water safety is particularly crucial, because a person who experiences a seizure while alone in water will almost certainly drown. Suggestions include:

- Be alert to hidden dangers. For example, you are more likely to drown in the bath than in the sea.
- Swim with companions who are aware of your condition, and who are physically strong enough and know what to do if you have a seizure.
- Swim in supervised areas, such as in a public pool with an attendant, or at the beach between the flags where lifeguards are on patrol.
- Tell the pool attendant or lifeguard that you have epilepsy. You may need to brief them on how best to help you, if they don't already know.

See over ...

Epilepsy drugs and sporting performance

Anti-epileptic drugs (AEDs) help to manage epilepsy, but some of the side effects can influence your sporting performance, including:

- Some AEDs cause fatigue, vision problems such as blurred vision, or problems with concentration or coordination.
- Physical exercise can alter the levels of AEDs in the blood. People taking AEDs who exercise regularly need to be monitored by their doctor or specialist.
- Performance-enhancing drugs such as anabolic steroids should be strictly avoided, as they interfere with AED levels in the blood.

Exercise-related epilepsy triggers

It is important to exercise sensibly. You could trigger a seizure minutes or hours after exercise if you unnecessarily strain your body. Exercise-related risk factors could include:

- Extreme fatigue
- Lack of sleep
- Dehydration
- Electrolyte loss (due to severe dehydration)
- Hyperthermia (elevated body temperature)
- Hypoglycaemia (low blood sugar levels).

Avoiding exercise-related epilepsy triggers

Suggestions include:

- Drink plenty of water before, during and after exercise.
- Don't push yourself to the point of physical exhaustion.
- If you are feeling very hot and tired, slow down or stop.
- Make sure you have at least two rest days every week.
- Make sure your diet is nutritionally adequate.
- Get plenty of rest and good quality sleep.
- Take all steps to avoid head injuries.
- Don't abuse alcohol.
- Make sure you take your medication according to your doctor's directions.

Where to get help

- Your doctor
- Neurologist
- Epilepsy Foundation of Victoria Tel. (03) 9805 9111
- Epilepsy Assist Helpline Tel. 1300 852 853
- Victorian Epilepsy Centre Tel. (03) 9288 3650 or (03) 9276 2059
- Children's Epilepsy Program, Royal Children's Hospital Tel. (03) 9345 5661
- 'Go for your life' Infoline service Tel. 1300 73 98 99

Things to remember

- Most people with epilepsy experience improved electroencephalograph (EEG) readings during and after exercise.
- Take all necessary safety precautions while exercising.
- Anti-epileptic drugs can influence sporting performance.

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