

Medical emergencies:

seizures

CPD:
ONE HOUR

CPD questions

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Emma Hammett¹ discusses how to help someone experiencing a fit or seizure in the dental practice.

A staggering one in 20 people will experience some sort of seizure in their life, therefore it is possible that one of your patients may well experience one in your dental practice.

A seizure is defined as a fit or convulsion that occurs when a sudden burst of electrical activity in the brain temporarily interferes with the normal messaging processes. The brain controls the whole body, so depending on where the

seizure occurs in the brain, different parts of the body may be affected.

There are many different types of seizures and a multitude of causes. Any head injury or stress to the brain can cause fitting, as can brain tumours, meningitis, malaria, eclampsia in pregnancy, poisoning, lack of oxygen, raised body temperature, epilepsy as well as drug and alcohol use and withdrawal...

It is possible that someone experiencing a cardiac arrest may appear to have a seizure as their brain struggles with depleted oxygen – always ensure they are breathing.

It is particularly common for babies and young children to experience febrile convulsions. These are seizures triggered by a rise in temperature when the child is unwell. These seizures don't usually cause any long-term problems and the child usually grows out of their pre-disposition.

Observing how someone behaves during a seizure can often be extremely helpful to aid the neurologist's diagnosis and treatment.

Different types of seizures

Fits, seizures or convulsions can take many forms. They may cause rigid out of control movements; the casualty may experience absence seizures where they become rigid and unresponsive; there may be full thrashing

around tonic/clonic fits; or anything in between.

How to help someone experiencing a tonic-clonic fit or generalised seizure

What might happen

Tonic phase – the casualty will collapse as they lose consciousness. The body goes stiff and rigid and they may cry out as if in pain. This is due to an involuntary action as the muscles force air out of the lungs – the casualty is not in pain and is usually unaware of the noise they are making. They can begin to appear blue around their mouth and finger tips.

Clonic phase – They may rigidly jerk around as the muscles alternately relax and tighten. They may make a snoring noise as the tongue flops to the back of the airway; they could be incontinent and might bite their tongue.

Post-ictal phase – Once the jerking stops, they may be confused, sleepy, agitated or relatively unresponsive (if you are worried about their airway put them into the recovery position).

Help for a generalised seizure in a dental practice

1. Clear all dental instruments away from the patient.
2. If the patient is on the dental chair: place the dental chair in a supported, supine position as near to the floor as possible. If the patient is not on the chair, ease them onto the floor and protect their head from injury by gently cushioning with a pillow or coat. Move things away from them to protect from injury.

¹ Emma Hammett RGN of First Aid for Life is an experienced nurse, trainer, first aid expert and published writer. First Aid for Life runs practical courses for medical professionals throughout London: training in Emergency Life Support, choking, fitting, anaphylaxis and AED. The course qualifies as verifiable CPD. It also offers online first aid courses to update and refresh knowledge between the practical training. <http://www.firstaidforlife.org.uk> emma@firstaidforlife.org.uk Tel: 020 8675 4036.

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If dental treatment has begun, try and ease the patient onto their side to reduce the possibility of them aspirating secretions and recent dental work.

3. Do not restrain the patient.
4. Do not put your fingers in his or her mouth (you might be bitten), or try and put anything in their mouth for them to bite on.
6. Time the seizure. Call the emergency services if the seizure lasts longer than five minutes or the patient experiences repeated seizures.
7. Loosen any tight clothes around their neck and loosen belts. Protect the patient's dignity.
8. Call the emergency services if the patient looks cyanotic [blue] from the onset.
9. Administering oxygen may be helpful.
10. If the seizure lasts longer than five minutes or for repeated seizures, administer buccal midazolam or appropriate emergency anti-epileptic drugs from your emergency drugs. Contact the emergency services if unsure.
11. Be aware of the possibility of compromised airway or uncontrollable seizure.

Once the seizure has finished, place the patient in the recovery position, on his or her side. These guidelines should also be followed:

1. Do not undertake further dental treatment that day.
2. Try to talk to the patient to evaluate the level of consciousness during the post-ictal phase.
3. Do not attempt to restrain the patient, as he or she might be confused.
4. Do not allow the patient to leave the practice until you are sure they have made a full recovery.
5. Contact the patient's family, if he or she is alone.
6. Do a brief oral examination for sustained injuries.
7. Depending on post-ictal state, discharge the patient home with a responsible person, to his or her family physician or call the emergency services.

Phone for an ambulance:

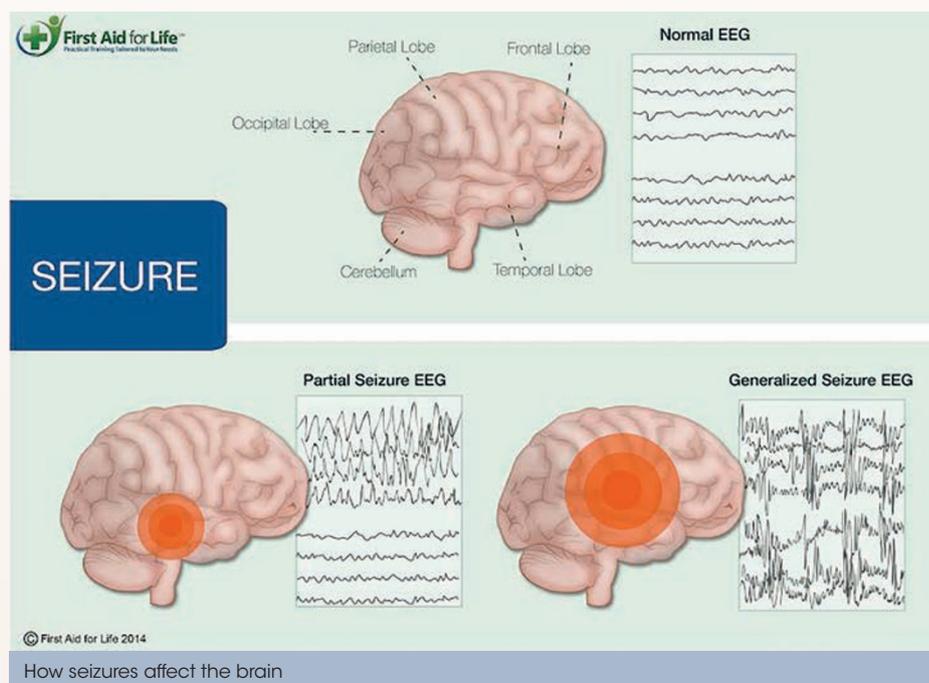
- If they are blue and appear not to be breathing
- If it is their first seizure
- If the seizure lasts for more than five minutes
- If they have another seizure immediately afterwards
- If they are injured
- If they are known to have seizures and this one is different
- If you are worried at all
- If they are unresponsive for more than five minutes after the seizure.

Important:

- Never put your fingers or anything in their mouth to try and prevent them biting their tongue – as this will cause serious injury
- Do not try and move them unless they are in immediate danger
- Do not restrain their movements whilst they are fitting
- Do not give them anything at all to eat and drink until fully recovered
- Never try and 'bring them round'.

patients to be susceptible to gingival bleeding) and so dentists and dental hygienists should be particularly aware of these medications and offer additional advice around oral hygiene.

Repeated generalised tonic-clonic seizures may cause minor oral injuries, as patients may bite their tongue, but these seizures also often lead to tooth injuries and occasionally maxillofacial trauma. Enzyme-inducing antiepileptic drugs (eg phenytoin, phenobarbital, carbamazepine) can alter the metabolism



Epilepsy and specific information all dental professionals should know

A diagnosis of epilepsy is made when someone has had at least two unprovoked seizures, that cannot be attributed to any other cause.

The management of an epileptic fit is exactly the same as managing any other fit. The person experiencing the fit may have an aura (a sound, taste, smell, sensation) in advance of the fit that they recognise as an indication of an imminent seizure and this can often give them sufficient warning to get themselves onto the floor and alert someone to help. Usually repeated seizures will follow a similar pattern, which can make the fits a bit more predictable. They may be taking medication to help control their seizures and dentists should ensure they have patients' up to date medical records that include information on medication being taken, the reason for the prescription and whether there have been any changes in the last year.

Specific dental considerations with anti-epileptic medication

Some antiepileptic drugs such as phenytoin and carbamazepine can cause gingival hyperplasia and gingival bleeding (valproate can also lead

and clearance of vitamin D and have been associated with osteopenia and osteomalacia, meaning patients on these medications can be at increased risk of fracture.

Some drugs frequently prescribed by dentists may jeopardise seizure control due to their interaction with anti-epileptic medication. For example, metronidazole, antifungal agents (such as fluconazole) and antibiotics (such as erythromycin) are known to interfere with the metabolism of certain antiepileptic drugs.

For a copy of the poster used as an illustration with this article, please email emma@firstaidforlife.org.uk.

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