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Epilepsy

An animal that has recurrent seizures is epileptic. Epilepsy is a symptom rather than a diagnosis, as there are many different types and underlying reasons why an animal may have a seizure. There are many methods for classifying epilepsy but the commonest divides the condition into three groups

- **Primary Epilepsy** – Idiopathic (this means no detectable cause can be found using diagnostic tests). With this type, clinical signs are typically symmetrical – i.e. presenting in the same way on both sides of the body. There can be underlying risk factors that increase the likelihood of developing this type such as breed - Beagles, All Shepherds, Bernese Mountain Dogs, Boxers, Cocker Spaniels, Collies, Dachshunds, Golden Retrievers, Irish Setters, Irish Wolfhounds, Labradors, Keeshonds, Poodles, St. Bernards, Siberian Huskies, Springer Spaniels, Welsh Corgis and Wire Haired Fox Terriers are all more likely to develop epilepsy than an average cross-bred dog.
- **Symptomatic Epilepsy** – This is caused by a lesion or injury to the front part of the brain by, for example, a brain tumour, a blow to the head, or problems with blood supply to parts of the brain. Clinical signs are typically asymmetrical, occurring on only one side of the body.
- **Reactive Epilepsy** – This is caused by a disease process in another part of the body which has secondary effects on the brain such as liver disease or changes in body salts like sodium or potassium. With this type clinical signs are also typically symmetrical.

Epilepsy can occur in both cats and dogs but is much more common in dogs. It is one of the most common neurological conditions that we see dogs with about 1% of the general dog population affected.

Primary epilepsy is by far the most common cause of epilepsy in dogs that are under the age of six when they have their first seizure. In dogs over the age of six at the time of the first seizure, the other two causes are increasingly likely.

Seizures

A seizure is a transient disturbance of the nervous system caused by uncontrolled electrical discharges from nerve cells in the front part of the brain. A seizure can be divided into four phases, though an individual animal may only show some of them. The following describes a classic Grand Mal or generalised seizure:

- **Prodromal phase** – Usually not recognised in pets. It starts hours to days before the ictal phase (see later). Signs include insomnia, mental dullness, increased excitability or aggression

- **Aura** – This occurs minutes to hours before the ictal phase. An animal may hide, appear nervous or seek out its owner. He may be restless, whine, shake or salivate (drool saliva), as if he senses something is about to occur.
- **Ictal phase** – With a generalised seizure the animal will lose consciousness and all his muscles contract spasmodically and erratically. The animal usually falls over onto his side and paddles his legs, while seeming to be otherwise paralysed. His head will often be drawn backward. He may empty his bladder or rectum, and may salivate. This phase can last seconds to minutes.
- **Post-ictal phase** – This is the period immediately after the seizure. There is confusion, disorientation, salivation, pacing, restlessness and even sometimes temporary blindness. The severity of the seizure does not affect the length of the post-ictal phase. It can last from a few hours to a couple of days.

The ictal phase can present in several other ways e.g. focal seizures just affecting one part of the body like a limb or abnormal behaviour changes like fly-catching. The commonest form, however, is the Grand Mal seizure described above.

Though seeing your pet having a seizure can be very distressing, he is unaware of what is happening and will have no memory of the incident. **The most important thing is not to try and hold him.** It will not help your pet and will increase the chances of his injuring himself or you. Most seizures do not last very long – only a few seconds to a few minutes. It is very helpful to video the episode on a phone or camera and time how long it lasts. If your pet is having regular seizures, it will help to complete our [seizure diary](#). If the seizure stops in less than 5 minutes it is not an emergency and if we are closed you can wait till the morning to phone to make an appointment.

When is a seizure an emergency?

- 1) A seizure is continuous and lasts more than 5 minutes (referred to as status epilepticus), or
- 2) If the animal has a seizure, seems to regain consciousness, and then immediately has another one, and this goes on for more than 5 minutes (referred to as cluster seizures).

These are medical emergencies and you should call us on 020 8542 4524 immediately, even if it is the middle of the night or a weekend, to be put in touch with the emergency vet on duty. These types of seizure can cause oxygen and glucose to be used at a very rapid rate, starving the brain of these vital resources. The muscle tremors also generate heat which can raise the body temperature to dangerous levels. Finally carbon dioxide can build up in the blood stream making it become more acidic which can damage or affect numerous organ systems.

Will any test need to be done?

All animals will need to have a full clinical and neurological examination and have a full history taken to try and identify anything that might point to an underlying cause. Most animals will require a comprehensive blood test. Animals under the age of 6 that have normal blood values and symmetrical clinical signs with a classic seizure pattern will generally not require further tests. Most animals that are over the age of 6 with normal blood results or are under 6 with asymmetric clinical signs will need to be referred for an MRI scan.

Will my pet need medication?

This depends on whether an underlying cause has been identified, and how frequent or severe the episodes are. Some animals may have only one seizure and never have another. Generally if your pet has more than two seizures in a 6-month period, the seizures or the postictal phase are long or

severe, or the animal suffers from cluster seizures, then some form of medication to control them will be needed. This will normally be needed for the rest of their lives. There are many medications that can be used but the two most widely used are:

- Phenobarbitone (Epiphen) – This is the most effective drug available though it takes 3 weeks to reach a stable level in the blood stream. It is safe at therapeutic levels but can damage the liver if the blood drug level gets too high. Different animals' bodies will process the drug at different rates leading to different blood levels at the same dose given in different animals. Regular blood tests are therefore essential to monitor the drug blood level and ensure the dose is safe for that particular animal. It is a relatively cheap drug but has higher monitoring costs.
- Imepitoin (Pexion) – This is a newer drug. It has fewer side effects than phenobarbitone and it is only slightly less effective. It has a rapid onset of action. It requires no blood testing to monitor for side effects but it is moderately more costly.

The goal of treatment is to either stop the seizures entirely, or to reduce their frequency and/or severity to a tolerable level for your pet. Unfortunately in some animals it is not possible to completely eliminate seizure activity. Some animals can also become tolerant to the drug. This means that a drug that used to control the seizures no longer does so. Once this happens it is usually permanent. Once treatment has been started it is important not to stop it without veterinary advice, as it increases the likelihood that tolerance will develop. In some cases the treatment may need to be changed, and some animals may require more than one drug to control their seizures.

Animals on treatment will need a three monthly veterinary examination and assessment. Animals on phenobarbitone will require blood tests every three to six months, 12 hrs after the treatment is given. It is also very important to keep a diary of the seizures which can be downloaded from our website.

If you are at all concerned, or for any further information, please call us on 020 8542 4524.