

## SEIZURES

Watching your dog having a seizure can be a very distressing event for most owners. Unfortunately, seizures are quite common in dogs, it is normal to examine several dogs every month due to onset of seizures. Most seizures have finished by the time of presentation at the clinic, and the dog will be normal on examination.

What is a seizure?

A seizure is a period of uncontrolled electrical activity within the brain, it is also commonly known as a convulsion. Status epilepticus is repeated or prolonged seizure activity.

Seizures consist of three components:

The first phase is the pre-ictal phase or aura. In this period, the dog is aware or can feel changes associated with the oncoming seizure. The behavioural changes observed may include nervousness, hiding, seeking owner (being 'clingy'), restlessness, whining, shaking or salivating. This phase is not always present, or may not be recognised. It may last a few seconds to a few hours.

The second phase is the ictal phase, where the seizure/convulsion occurs. During this phase, the muscles of the body contract strongly and most dogs will fall on their side and appear to be temporarily paralysed whilst shaking. Often the head is drawn backwards. The dog will often 'paddle' their legs, or may just appear to be rigidly stiff. They may 'champ' their jaws repetitively (looking like biting or snapping). The dog may also involuntarily urinate, defaecate and/or salivate. This phase will generally last anywhere from a few seconds to 5 minutes.

The final phase is the post ictal phase. The dog may appear to be confused, disorientated or restless and may salivate and pace aimlessly. They may appear to be suffering from blindness, bumping into objects, have a ravenous appetite and pant heavily. This period may last a few minutes to a few hours.

### Causes

The causes of seizures are grouped broadly into causes within the brain and extracranial causes (ie disorders occurring outside the brain).

The main extracranial causes of seizures include low blood sugar (may occur in diabetic patients who have been given too much insulin, or occasionally this will occur in very small or young patients eg Chihuahua puppies), low calcium levels in the blood (most common in lactating bitches), organ failure (eg kidney or liver) or poisons/toxins (the most common being snail bait).

Most of the causes of seizures we see are due to intracranial disorders (ie within the brain). Epilepsy is by far the most common cause of seizures in dogs. Most epilepsy is described as 'idiopathic', meaning the cause of it is unknown (ie there are no structural lesions within the brain). There are many breeds of dogs which may be at increased risk of developing epilepsy; these include Beagles, German Shepherds, Australian Shepherds, Boxers, Cocker Spaniels, Collies, Border Collies, Dachshunds, Golden Retrievers, Irish Setters, Irish Wolfhounds, Keeshonds,

Labrador Retrievers, Poodles, St Bernards, Shetland Sheepdogs, Siberian Huskies, English Springer Spaniels, and Corgis. Epilepsy is most common in young to middle aged dogs, but can occur at any age. Epilepsy can be well controlled with anti-convulsant medication, however this is not started until the dog is having seizures regularly (ie more than one a month) due to the side effects of the medications. It is rare for a dog to die during a seizure, although if the seizure is prolonged the body temperature may rise to dangerous levels leading to irreversible damage/death.

The second most common cause of seizures in dogs unfortunately is brain tumours. These may be primary brain tumours, or secondary tumours that have spread locally (eg from nasal cavity) or distantly from other parts of the body (known as metastasis). Other less common causes include viruses (eg distemper), fungal diseases, protozoal diseases (eg Neospora, Toxoplasma), inflammatory (eg meningitis or encephalitis), trauma or a cerebral vascular accident (eg blood clot, bleeding on the brain).

What should I do if my dog is having a seizure?

Although a seizure may look very dramatic, during it the dog is completely unaware of what is happening, and they don't feel any pain. Dogs are not at risk of swallowing their tongues, it is not recommended that you put your hands anywhere near their face or mouth as you will be at risk of being (accidentally) bitten. It is unusual for a dog to hurt itself during a seizure. If appropriate, move any furniture or other items out of the way. It is best to try to stay calm and wait until the seizure finishes. Trying to handle or reassure the dog during the seizure has little benefit, as they will not register your presence. It is usually best to leave your pet in a quiet, dark place where it is unlikely to injure itself until it regains its bearings. If your dog does have a seizure, it is recommended that you consult your veterinarian.

*By Dr Emma Robb BVSc Beach Street Veterinary Clinic*