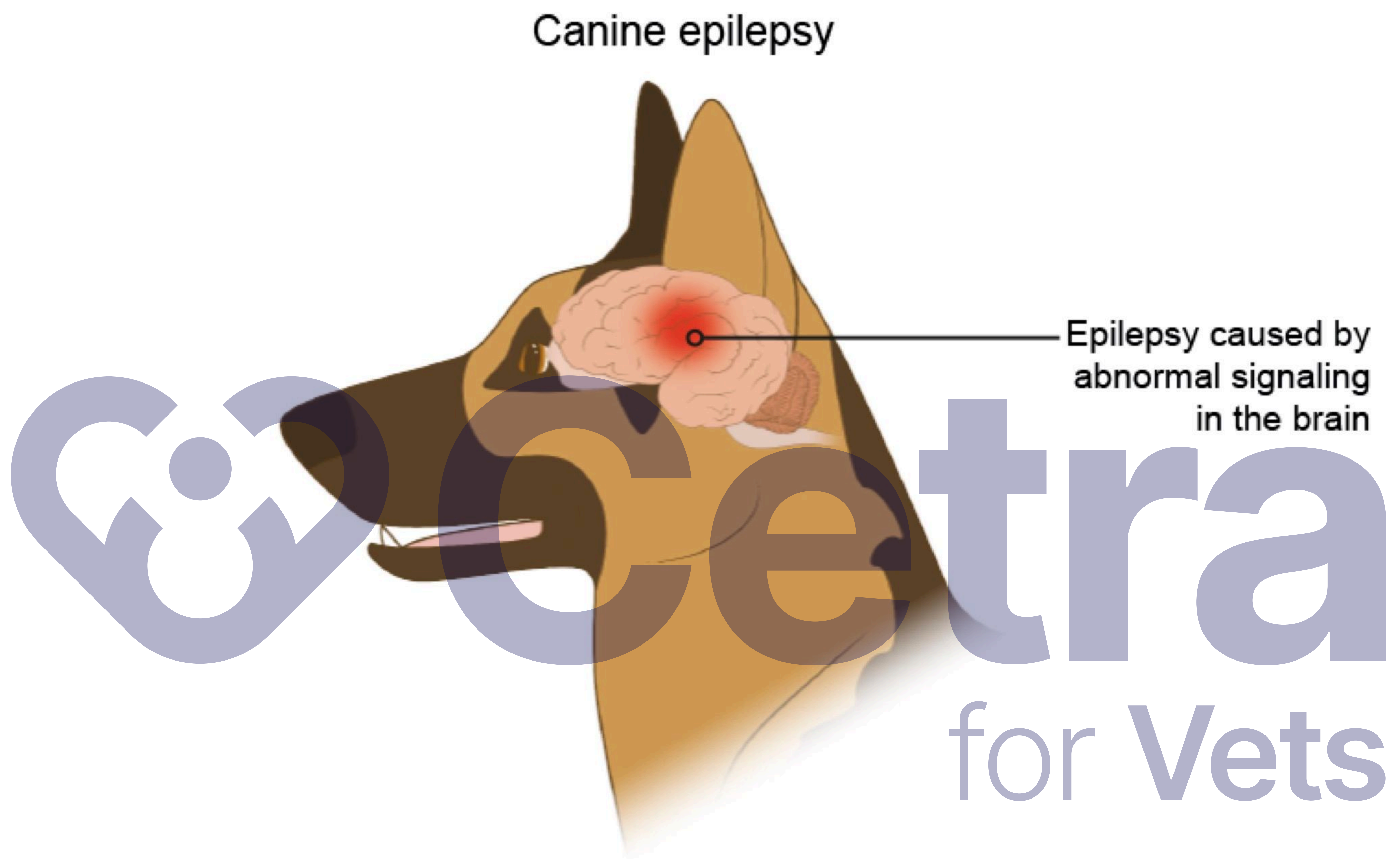


Canine Epilepsy

Canine epilepsy is a common neurological disorder (a disease that affects the brain, spinal cord and/or nerves) that causes seizures (fits) in dogs. It is typically a lifelong condition. The frequency and severity of seizures differ between dogs with the condition.



Causes

Different areas of the brain communicate using electrical signals conducted by special cells called neurons. Neurons relay these electrical impulses as information, enabling movement, thoughts, sensation, and behaviour. In epileptic dogs, these electrical impulses can act abnormally, causing temporary dysfunction in behaviour and movement as the messages across the brain are scrambled. Seizures are generally painless and do not necessarily cause damage unless they are uncontrolled.

There are three types of epilepsy in dogs:

- Idiopathic epilepsy – the cause of the epilepsy is not known. It is often thought to be due to a genetic predisposition.
- Structural epilepsy – brain function is impaired by a physical issue such as a tumour, poor blood supply, brain inflammation or kidney or liver dysfunction.
- Reactive seizures – can occur in response to both external toxins (such as poisoning) or dysfunction within the body (such as metabolic disease). These are usually temporary and do not reoccur once the cause has been resolved as the brain is healthy

Male dogs have been found to have an increased prevalence of epilepsy, particularly pedigree breeds such as Border Terriers and German Shepherds when compared to crossbreeds.

Symptoms

General symptoms of epilepsy include:



Seizures are categorised depending on how much of the brain is affected and their duration:

- Generalised seizures – where the whole brain is affected. Specific symptoms of a generalised seizure are loss of consciousness, rapid, involuntary movement, stiffness, urination and defecation.
- Focal seizures – where one specific part of the brain is affected. Symptoms specific to focal seizures include loss of function in one part of the body, muscle spasms, disorientation, confusion, hallucinations, and a potential loss of consciousness.

- Cluster seizures – when two or more seizures occur within 24 hours, they are classed as cluster seizures. It is advised that you contact your vet if your dog experiences cluster seizures as these could be the onset of status epilepticus, as described below.
- Status epilepticus – when a seizure lasts for five minutes or more, or the dog does not regain full consciousness between two seizures, it is known as status epilepticus. This is an emergency as status epilepticus can lead to brain damage and death if not addressed immediately.

Dogs with epilepsy may also experience increased anxiety and poor memory because of the condition.

Diagnosis

There are no specific tests that can diagnose epilepsy in dogs. Diagnosis is achieved by excluding all other potential causes first. Your vet may carry out the following procedures to reach a diagnosis:

- Examining your dog's blood and urine to check organ function, as dysfunction to other organs can cause seizures, particularly reactive seizures.
- Your vet may refer your dog to a referral practice for diagnostic imaging. MRI imaging can be used to examine the brain and check for tumours or any other structural abnormalities. Your dog may need to begin treatment to control the seizures before undergoing MRI as the procedure requires general anaesthetic.
- In some cases, a cerebrospinal fluid (fluid from the spinal cord) sample may be taken for analysis in the laboratory to check for signs of tumours or inflammation.

Treatment

Treatment aims to reduce the frequency and severity of seizures. It is not always possible to prevent seizures entirely, particularly in cases of idiopathic epilepsy.

Most dogs will be prescribed an anti-epileptic medication. This will need to be administered for the rest of the dog's life to manage the condition and reduce seizure frequency. For some medications, frequent blood testing is required to ensure that dosage is appropriate, and the body is still responding to the drug.

Adjusting your dog's diet has been found to help to control seizure frequency. Your dog's dietary requirements should be discussed with your vet, as the medication your dog is receiving, and the type of epilepsy experienced can influence dietary needs. The goal of a modified diet is to support brain function, reduce any potential side effects from the anti-epileptic medications and slow down the progression of the condition.

Surgery to correct a known underlying cause is available in some cases however, it is rarely carried out in dogs.

NEVER CHANGE OR STOP THE TREATMENT WITHOUT VETERINARY ADVICE

Outlook

Epilepsy is a lifelong condition for most dogs. A small minority of dogs may recover completely and not experience a seizure again (remission). The dog's outlook depends on the frequency and severity of seizures that the dog is experiencing. Dogs who experience seizures frequently or commonly have cluster seizures have been found to have a shortened life span overall. If the condition is well-managed, then the dog can experience a good quality of life.

Prevention

As the causes of epilepsy are often unknown, preventing the condition is not possible. If your dog has been diagnosed, there are several ways to help prevent a seizure:

- Ensure medication is given exactly as directed by your vet
- Take your dog for regular, three to six-monthly check-ups with your vet
- Avoid any known triggers, such as stress or tiredness

Short Guide for Dog Owners: What to Do in Case of a Seizure in Your Pet Dog

- Stay calm – remain calm to effectively assist your pet.
- Ensure safety – clear the area of hazards and move furniture if necessary.

- Avoid touching – keep hands away from your dog's mouth to prevent bites.
- Administer medication – if prescribed, provide intra-rectal muscle relaxant (diazepam) if the seizure lasts more than a minute.
- Observe and time – note the duration and characteristics of the seizure for your vet.
- Calm environment – reduce lighting and noise to minimize stress.
- Contact your vet – always consult your vet or an emergency vet after a seizure, even if your dog seems fine.

