

Canine epilepsy explained

Just like humans, dogs and cats can experience fits, convulsions or seizures at some point in their lives; sometimes just out of the blue. Only when the seizures occur regularly, over a reasonably long period of time – and after other illnesses have been ruled out – will your dog be considered epileptic.

A common condition

Epilepsy is one of the most common neurological conditions among our canine friends: some studies estimate that up to 5 per cent of all dogs – around one in 20 hounds – are affected, and in some breeds this figure could be as high as 15 per cent.

Epilepsy is an unpredictable illness, which can be debilitating and dangerous for your dog if not properly managed. But as separate chapters will show, with veterinary care and the right treatment – alongside a good diet; exercise, and complementary therapies – your dog can still lead a happy, fulfilling life as part of the family.

An historic condition

The ancient Greek philosopher Hippocrates, the father of medicine,

believed epilepsy originated in the brain as the result of an imbalance of the four humours (bodily fluids): blood, phlegm, yellow bile and black bile. In our modern world, the condition is often described as an ‘electrical storm in the brain.’ The disease affects dogs and people in rather the same way.

The canine brain

A dog’s brain is a complex mass of nerve tissue, divided into three main areas: the cerebral cortex and its connections (cerebrum); the cerebellum, and the brain stem. The cerebral cortex is the nerve centre, governing learning; memory; hearing; touch; taste, and pain. The cerebrum, which is separated into left and right hemispheres, or lobes, is the part of the brain that malfunctions in epilepsy.

Within the cerebrum are millions of neurons, or nerve cells, which transmit impulses to each other via chemical substances, or hormones, known as neurotransmitters. There are two kinds of neurotransmitters: Inhibitory, which calm the brain and help to create balance, and excitatory, which stimulate the brain. While

Case history: Otto

Otto, 11, is owned by Veronica, who says –

"I think stress triggers Otto's fits. Not stress as we would think of it, but a case of 'everything not being quite right in his world.' He has always been a very contented dog: well behaved and happy. However, I do remember the first time he had a fit as a puppy, after he had been scratching at a stone in a hard piece of earth. He suddenly shook and went into a sort of trance. I comforted him, but when I picked him up I realised one of his claws was bleeding, and thought it was stress caused by this sudden pain.

"I remember he once had a fit when one of the grandchildren hurt herself and cried; another when we had been out in the car, and came home very late for his meal. He wolfed it down and went outside as usual, but had a fit on the path, which I think was triggered by tummy ache. I also wonder whether fits have been caused by general aches and pains; hunger or thirst.

Otto is doing well.



"However, some really good news!

After Otto's last annual check, the blood test showed a dramatic improvement. The vet had discussed Otto with a colleague, who said that this sometimes happens as the dog gets older. As a result, Otto now has only half a pill (he was taking 15mg of phenobarbitone every morning), together with half a high strength joint pill.

"He has not had a fit since, and although some mornings he has a snooze, mostly he is bouncing around. He has more energy than he has ever had, and is bright-eyed and happy. We've had two mile walks, and sometimes family walks of four-and-a-half miles, which he has enjoyed.

"However, we take a library book bag

with us and carry him in it when he wants a lift, usually after about two miles, then alternately carry him for half a mile, then walk. He seems to sense when the last mile is reached and strides out in front with the children."

few diagnostic tests on the function of the cerebral cortex (see chapter 1) – could be carried out, too.

The role of stress

Some dogs react badly to loud noises, or to people being angry, noisy or aggressive around them, and some owners believe

similar stressful situations could trigger a fit, so it's worth trying to make your dog's environment as calm and relaxing as possible. A few drops of lavender and essential oils, diluted with a little water and applied behind your dog's ears, perhaps at bedtime, could help him to relax, for example.



Bracken is living her life to the full.

Phyllis Croft Foundation

The Phyllis Croft Foundation, a charity named after the late Dr Phyllis Croft, who devoted her life to the study of epilepsy and brain disease, supports people caring for dogs with epilepsy.

And remember ...

Try to treat your dog as normally as possible. He won't sit around worrying about his epilepsy, so why should you?



*Border Collies are helping with research, too.
(Courtesy Animal Health Trust)*

dogs, as well as from those dogs over 8 years old who have never had a seizure.

The project is likely to take several years to complete, and if you own a Border Collie who suffers from epilepsy, and would be happy to donate a DNA sample from your dog (again, using a cheek swab), please contact Bryan McLaughlin (bryan.mclaughlin@aht.org.uk) for a DNA collection kit.

*Taking a swab for DNA testing.
(Courtesy Animal Health Trust)*



Case history: Goliath

Goliath is 8 and owned by Lynne. She says –

"Goliath is a male Irish Wolfhound who was diagnosed just before his third birthday due to a couple of single seizures, and who began medication just after this birthday, when he had two clusters in two weeks. He was put on phenobarbital, and the dose was adjusted over the next year. We are fairly steady at 105mg twice a day, getting bumped up to 120 or even 150 during the heat of summer, with the blessing of his vet. The dose has resulted in serum levels that are usually below the therapeutic range, but they have kept his seizures down to one every 18-24 months, so this is obviously an effective dose.

"Goliath is a companion pet. He was castrated much too young, and is mildly anxious, and doesn't like change or surprises. But as he has always been like that we don't know whether or not this is related to the epilepsy. His little brother (actually, a great-nephew) is intact, and a perfect example of the breed's temperament.

"Goliath is comfortable with dogs, cats, and most people, but is more self-confident when his little brother is with him, and will do anything if I am with him. The dogs were never trained, but learn quickly and understand what we want of them, and have taught us to understand them, to some extent."

Goliath and little friend.

