



## Seizures

A seizure is the sudden onset of electrical firing of the neurons in the brain. Seizures, often called convulsions, result in the muscles tensing and relaxing (tonic-clonic), which will often look like the animal is paddling with their limbs and neck outstretched. The pet generally loses consciousness and is unaware of their surroundings. They may urinate, defecate, vocalize or salivate unconsciously. Seizures can occur when the pet is awake or during sleep.

Many pets have a pre-ictal phase (period prior to the seizure) in which they will have odd behavior such as hiding, pacing or seeking attention. There is often a post-ictal phase (period following the seizure) in which the pet remains tired, has difficulty walking, seems unable to see or have other odd behaviors.

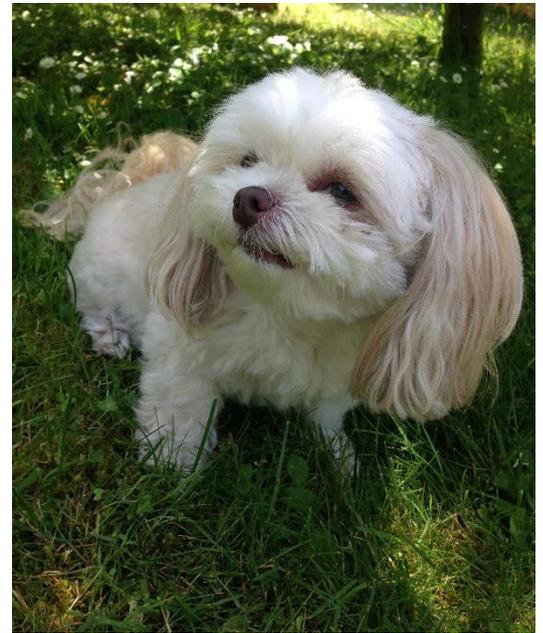
### Types of seizures

Focal or partial seizures can be difficult to diagnose as they do not involve the entire body and may or may not have a loss of consciousness. They may include involuntary twitching of body parts or times of strange behavior.

Grand mal or generalized seizure is the most recognized type of seizure. It results in convulsions which involve the entire body in spasms. These may last a few seconds to a few minutes.

Cluster seizures are when a pet experiences a grand mal seizure and is in the post-ictal recovery phase, or a short time thereafter, and the pet experiences another seizure. These seizures require treatment or medication.

Status epilepticus is a grand mal seizure that will not end until medication is administered. These seizures are the most dangerous as chronic firing or electrical stimulation of the brain can lead to permanent neurological changes, oxygen deprivation, hyperthermia or death.



### Causes for seizures

#### Extra-cranial causes (reasons outside of the brain)

- Toxin exposure
- Metabolic causes (low blood sugar, electrolyte imbalances, liver failure)

#### Intra-cranial causes (reasons within the brain)

- Congenital malformations
- Inflammatory or infectious disease
- Vascular disease / Trauma
- Cancer
- Epilepsy



## Diagnosics

Extra-cranial causes such as metabolic reasons can be tested for with blood panels. Some infectious agents can be detected with blood tests. A cancer screen with x-rays of the chest and/or ultrasound of the abdomen can be done if cancer is of high suspicion to look for primary tumors that would have spread to the brain.

Advanced imaging or referral to a veterinary neurologist is often needed to further investigate intra-cranial causes and receive a definitive diagnosis.

## Epilepsy

Epilepsy is an idiopathic disease that is made by ruling out all other possibilities. The onset of epileptic seizures typically occur before the age of 5 and can be as young as 8 weeks old. Occasionally, pets are older than 5 years at diagnosis.

Epilepsy can be seen in any breed but certain breeds have a greater predilection.



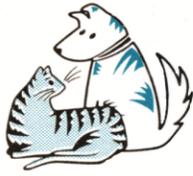
- German Shepherds
- Belgian Shepherds
- Keeshond
- Beagle
- Dachshund
- St. Bernard
- Cocker Spaniel
- Irish Setter
- Boxer
- Siberian Huskey
- Springer Spaniel
- Alaskan Malamute
- Border Collie
- Sheltie
- Miniature poodle
- Fox Terrier
- Labrador retriever
- Golden retriever

## Anti-seizure medications

There are many options for anti-seizure medications available today. Some will be more effective than others as single drug therapy, others are better used in multi-drug therapy. Anti-seizure medications may have side effects such as tiredness, ataxia (walking as if drunk), decreased or increased appetite, increased thirst and urinations. Certain medications need routine blood monitoring to ensure ongoing health of the organs and therapeutic drug levels are maintained.

Anti-seizure medication are administered on a daily basis ongoing. Breaks in administration can result in seizure activity. Emergency anti-seizure medications may be recommended to have at home for use during a seizure event.





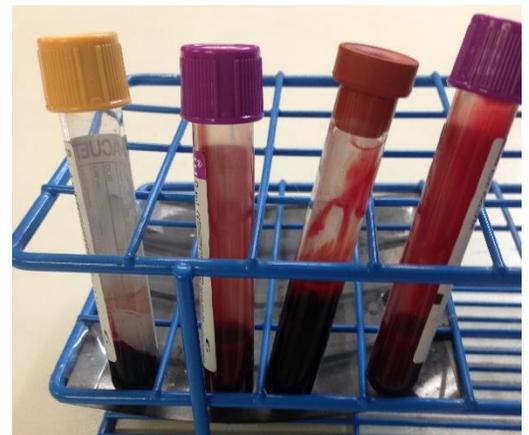
## What to do when a seizure occurs

- Ensure the area is safe for the pet, remove any dangerous objects or blankets that can inhibit breathing
- Start timing how long the seizure occurs
- NEVER put your hands in the pet's mouth
- Reach for the emergency medications to give as directed
- If the seizure continues beyond 5-10 minutes-SEEK VETERINARY ATTENTION IMMEDIATELY

## Expectations

Even well managed pets who have seizures may still experience break through seizures. A pet that has a seizure less than once every 60 days is considered well managed.

Some patients will respond well to anti-seizure medications and have very few seizures after starting the medications, while others continue to have seizures despite their medications. These pets require additional anti-seizure medications.



## What to expect

Medical progress exams with your veterinarian will be recommended 3-4 weeks after starting anti-seizure medications. At this stage therapeutic bloodwork is often performed to ensure that the medication dose is adequate and no further seizures have occurred. It is very common for dosages to require adjustments in the first few months of starting medications after which repeat blood monitoring will be needed. Once a dose has been established, medical progress exams will be recommended every 6 months to ensure the health of your pet, management of the seizures and blood monitoring.

## Prognosis

The long-term prognosis for pets with seizures will vary depending on the underlying cause of the seizure activity. Many pets with epilepsy continue to lead normal lives when well-maintained on their medications.

It can be scary to manage seizures in a loved pet. Your veterinary team at Nanaïmo Veterinary Hospital wants to work with you to help improve your pet's quality of life. We want to work together to help you maintain the bond you have with your pet. We are here to support you and your pet along this journey.

Please contact us with any questions or concerns that you may have at 250-758-3985 or by email at [nveth@shaw.ca](mailto:nveth@shaw.ca)