

Swiss Run Greater Swiss Mountain Dog

SEIZURE

What is a Seizure?

Any involuntary behavior that occurs abnormally may represent a seizure. Seizures are classified into several categories:

- Grand mal seizures – This is the most common form of seizure in small animals. The entire body is involved in stiffness and possibly stiffness/contraction cycles. The animal loses consciousness and may urinate or defecate. They may paddle with their feet and have chewing gum motions with their jaw.
- Partial seizures – This form of seizure originates from some specific area in the brain and thus involves the activity of a specific region of the body. For example, an eye twitch is in actuality a form of seizure activity. Partial seizures may generalize to involve the whole body.
- Psychomotor seizures – This type of seizure is predominantly behavioral with the animal involuntarily howling, snapping, circling, etc. It may also manifest as simply as your pet staring off into space with a dazed look. This abnormal behavior may be followed by a generalized seizure.

Causes:

Seizures may be caused by situations within the brain (such as trauma, infection or cancer), or by situations outside of the brain (such as low blood sugar, metabolic toxins or poisons). The first step to determining why your pet is having seizures is to perform bloodwork. This will rule out those situations outside of the brain. If the bloodwork is normal, the next step is determined by the age of the pet:

- **ANIMALS LESS THAN ONE YEAR OF AGE:** Seizures are usually caused by infection in the brain. Analysis of cerebrospinal fluid would be important for diagnosis.
- **ANIMALS BETWEEN AGES 1 AND 5:** In these animals, usually no cause can be found and the term “epilepsy” is applied. Epilepsy simply means seizure disorder. If seizures are occurring frequently enough, medication is used to suppress them.
- **ANIMALS MORE THAN 5 YEARS OLD:** In this group, seizures are usually caused by a tumor growing inside the brain. A CAT scan or MRI would be the next step to diagnosing the problem. Most such tumors are operable if found early, but special referral is necessary for this procedure.

Treatment

The drug of choice to suppress seizure activity is Phenobarbital. It is an inexpensive drug that is usually dispensed in pill form. Because it can be harmful to the liver, it is necessary to monitor liver values with yearly bloodwork. It takes 1-2 weeks to build up a blood level capable of suppressing seizures. After 2-3 weeks, your veterinarian will want to run a Phenobarbital blood level to determine if it is in the required range. 20-30% of epileptic dogs cannot be controlled with Phenobarbital alone and another drug must be added to their therapy.

Common side effects of Phenobarbital:

- Sedation – animals may become quite stuporous as they get used to this drug. This effect is temporary, lasting until the patient's metabolism adjusts (usually no longer than a few days).
- Excessive thirst and urination – These side effects are annoying and, unfortunately, permanent if they occur. If these side effects become too objectionable, the Phenobarbital dose will have to be lowered and another medication added for seizure control.

When is it an Emergency?

It is a lucky pet that never has another seizure after beginning medication; but an occasional breakthrough seizure (as disturbing as it may be to watch) is rarely of serious concern. There ARE however, some emergency situations:

- Seizure activity non-stop for 5 minutes or more (this is called “status epilepticus”)
- More than 3 seizures in a 24 hour period

If either of these situations occur, please call your veterinarian immediately. Your observation of the seizure may assist the veterinarian. Begin a log of when the pet has a seizure, what the pet was doing before the seizure, and what it did after the seizure. Did the seizure start in a specific area of the body (e.g., face twitch)? Did the pet's behavior before the incident indicate that a seizure was going to occur? How long did the seizure last? Did the pet lose consciousness, fall over, or make paddling movements? What were the pet's eye movements (side to side, up and down, straight ahead, or glazed)? If possible, someone in the household should videotape an episode for documentation for the veterinarian. Keeping track of this information will help in the future decrease the amount of seizure you pet may have.

From an owner's perspective, epilepsy is an extremely challenging disease to manage. Oftentimes, Swissys do not respond well to drug therapy and continue to experience seizures and fatalities despite increasing medications. These medications have a high degree of toxicity and side effects, and require dogs to be carefully and continuously monitored. Management of an epileptic dog often severely impacts the lifestyle of the owner.

Canine genetics researcher, Dr. George Padgett, recently analyzed our health survey data and concluded that at least 39% of GSMDs carry the genes to produce epilepsy. A high priority must be placed on reducing this carrier rate in our breed. Sadly, even the most concerned breeder can produce puppies that develop epilepsy. Those who reveal cases of the disease and strive to eliminate carriers demonstrate a very high degree of ethical breeding.

Many matings carry an inherent risk to produce epilepsy. Those risks can be reduced if breeders utilize information about epilepsy in the relatives of prospective mates, and remove all known carriers from the breeding population. Offspring of affected dogs should not be bred, and care should be taken in selecting mates at low risk for carrying the genes for the disease. Healthy dogs known to have affected relatives should only be bred to dogs with good depth of normalcy in the pedigree. Making education on epilepsy a high priority is another key element in our effort to reduce this disease. Maintaining contact with homes and reporting cases of epilepsy to owners of littermates could positively affect future breeding decisions.

The GSMDCA stands committed to supporting research on epilepsy. The GSMDCA has also received permission from the Canine Health Information Center (CHIC) to add veterinarian certified reported cases of epilepsy to our CHIC database for the Swissy. In addition, our club maintains a health database that will hopefully soon begin to list dogs affected with epilepsy. These projects are a result of the outstanding commitment of our Health Committee and members of the GSMDCA.