

Peripheral Neuropathy in Pets? Yes, Unfortunately.

Damaged nerves outside of the brain and spinal cord (peripheral neuropathy) is quite common in humans, affecting about 1 in 16 people. Unfortunately, [peripheral neuropathy](#) in pets is also not uncommon.

And just like humans, the exact [cause of peripheral neuropathy](#) in pets in many cases is not known. However, the most common cause of nerve damage is high blood sugar.

Peripheral neuropathy in pets is not usually a lone disease. Rather, it is a condition that develops due to another disease, like diabetes, or external factor, like an injury. It is not contagious.

Without treatment, peripheral neuropathy in dogs will progress in most cases. While not a life threatening condition, advanced progression can make it impossible for the animal to perform physical activity and significantly affect quality of life.¹

If your dog or cat is behaving unusually, continue reading to learn about peripheral neuropathy in pets.

What is Peripheral Neuropathy In Pets?

The word “neuropathy” literally means “damaged nerves.” Small nerve fibers tend to damage more commonly because they are most fragile without a protective outer covering, called a myelin sheath. Larger nerve fibers tend to have a fatty covering that not only protects the inner nerve fiber, but it also helps nerves to conduct communication more quickly.

When damage to this covering takes place, the communication signals can be slower and are often not perceived correctly by

the brain. Besides damage to the outer myelin layer, the inside of the nerve fiber can be inflamed, infected, or even cut into two segments.

Causes of Nerve Damage in Pets

Trauma & Chemicals

1. Compressed by an external cause, such as a mass, cancer, or joint misalignment
2. Traumatic injury, like a bite from another animal
3. Exposure to toxins. There are dozens of chemicals pets are routinely exposed to, such as insecticides, pesticides, fertilizers, and even rodent poisons that can be accidentally ingested by the animal and lead to neuropathy.⁴

Genetics

1. Sometimes the peripheral neuropathy will be inherited from one of the parents.⁶ If the dog's parents have the disease, then there is a high chance that the offspring may also develop the condition. The only way of preventing genetic peripheral neuropathy is to stop these animals from breeding.²
2. Some breeds have a higher likelihood of developing peripheral neuropathy.⁶

Disease & Nutrition

1. **Diabetes** When dogs develop long-standing diabetes, the

high levels of sugar in the blood will often lead to peripheral neuropathy. This type of neuropathy is progressive and the only way to prevent progression is to ensure that good control of blood glucose levels.⁵

2. **Autoimmune conditions** Sometimes, the body's own defensive cells will start to attack the nerve cells and damage the myelin, resulting in peripheral neuropathy.
3. **Musculoskeletal disorders** Big dogs are prone to arthritis late in life and sometimes arthritis may affect the spine which can cause narrowing of the spinal openings. As these openings narrow, the nerves will start to compress, often leading to pain, difficulty with ambulation and eventually can lead to disability.
4. **Infections** Sometimes the dogs or cats may acquire an infection caused by a virus, bacteria, or parasite which can lead to nerve damage. Pets often play in areas where there is dirt and feces and this is a common method of acquiring harmful organisms.
5. **Age** With advancing age the myelin covering over the nerves may disappear leading to neuropathy.
6. **Poor nutrition** If the pet lacks certain vitamins (especially B vitamins), this can lead to neuropathy.

Unfortunately in many of cases, the exact cause is ever found.

Types of Neuropathy

There are several types of neuropathy but they are most commonly classified into the following two categories:

1. Mononeuropathy is present when there is injury or damage to only one peripheral nerve.
2. Polyneuropathy is present when there is injury or damage to multiple nerves. Multiple nerve neuropathies tend to be a result of more systemic causes, like following ingestion of a toxin like heavy metals, infection, or a system disorder like diabetes.³

Types of Nerves

Nerves are divided into the following categories:

1. [Sensory nerves](#) carry sensations like pain, touch, and pressure.
2. [Motor nerves](#) help carry out muscle movements and provide balance.
3. [Autonomic nerves](#) regulate automatic functions, like blood pressure, digestion, heat regulation, secretion of tears, and so on.

What Are The Symptoms Of Peripheral Neuropathy?

Since animals do not talk, making a diagnosis of peripheral neuropathy can be very difficult. There may be no signs or symptoms in the early stages but as the disorder progresses, some signs and symptoms suggestive of peripheral neuropathy will appear.

[Symptoms of peripheral neuropathy](#) in pets depends largely on which of the three types of nerves that is damaged: sensory, motor, or autonomic.

Damage may also occur in a combination of nerve types.

Symptoms of Sensory Neuropathy in Pets

Clearly your pet cannot tell you sensations they are feeling when sensory nerves are damaged. But you may notice odd behaviors that may indicate sensory symptoms like:

- Loss of sensations, numbness
- Pain
- Tingling

- Disorientation when standing upright or walking
- Feelings of dizziness or imbalance

Symptoms of Motor Neuropathy in Pets

- Lack of exercise endurance
- Paralysis which may be complete or partial
- Loss of muscle mass
- Tremors
- Weak or absent reflexes
- Difficulty walking or limping
- Difficulty swallowing
- Weak or lethargic for no apparent reason

Symptoms of Autonomic Neuropathy in Pets

- Dry eyes, nose, and mouth
- Urine and fecal incontinence
- Constipation or diarrhea
- Low heart rate
- Diminished anal reflex

How Is The Diagnosis Of Peripheral Neuropathy Made?

In the majority of cases, there is a delay of many months or years in the diagnosis of peripheral neuropathy in pets. The signs and symptoms are often nonspecific and there is no one specific test to make the diagnosis.

Because there are many causes of peripheral neuropathy in pets, a proper history and thorough physical is necessary.

If you suspect your pet may have peripheral neuropathy, talk to your vet about possible tests to find out if there is an underlying condition that should be treated, like diabetes.

Rarely, one can measure the conduction rate of the nerve or

perform a nerve biopsy.

How Is Peripheral Neuropathy Treated In Pets?

The general treatment of peripheral neuropathy depends on the cause. For example, if the dog has vitamin deficiencies, then the dietary changes and supplements can be beneficial. Or if high blood sugar is detected, dietary changes must be made and possibly insulin medication given to manage the condition.

If there is a delay in the diagnosis of peripheral neuropathy and it becomes severe, the condition may be irreversible.

In such scenarios, one should focus treatment towards prevention of progression and maintaining animal safety.

The standard treatment of peripheral neuropathy involves undertaking the following measures.

Protection

The first step in the treatment of peripheral neuropathy is the protection of the body part or limb. If the dog has lost sensation, then it is important to protect the animal from excess heat or cold since they will not be equipped to protect themselves.

Infection is a risk factor with peripheral neuropathy when the blood vessels that supply nerves are damaged and unable to properly fight bacteria. Frequently check your pet for any cuts and properly clean and bandage any open wounds until fully healed.

If the animal is dragging a limb or paw, then the application of a brace or splint on the limb can protect the extremity from further physical damage.

In addition, if there is fecal or urine incontinence, good hygiene is essential to prevent infections.

Diet

A nutrient-dense diet, free of inflammatory ingredients such as that in typical people food, is important for the nerve health of your animal.

Not only can a healthy diet calm the symptoms of nerve damage, but can help to encourage nerve regeneration.

While the neuropathy may not be reversible, depending on the cause, a nutrient-dense diet may lessen the symptoms and prevent the progression of the disorder.

Organic pet food should be considered to lessen potential toxicities in conventional pet foods.

TIP: [Shop Only Natural Pet for a large selection of natural pet food.](#)

Supplements

Fish Oils

- Studies have shown slowing and reversing of damage
- Anti-inflammatory properties are useful in reducing pain
- Neuroprotective properties can help to stimulate neuron outgrowth

Coenzyme 10 (CoQ10)

- Powerful antioxidant
- Plays a key role in preventing nerve tissue damage from oxidative stress
- Reduces nerve damage pain

- CoQ10 is shown also in studies to prevent peripheral neuropathy and reduce neuron loss

Antioxidants

- Antioxidants prevent damage to cells and tissues, including those in nerves
- Important for fighting inflammation and strengthening the immune system

TIP: [Shop Only Natural Pet for an excellent selection of trusted pet supplements.](#)

Physical Therapy

Physical therapy is useful to regain muscle strength, mobility, and improve range of motion. Pets with peripheral neuropathy often show strong improvement with water-related exercises.

Massage

Massage is another remedy to treat neuropathy especially when the muscle has become stiff and non-functional. The massage of the extremities can be done manually or with the use of handheld devices.

Accupuncture

Acupuncture is also a useful therapy for the management of pain in animals but unfortunately, unlike in humans, large-scale studies documenting its benefits in animals are lacking.

CBD

While research is needed on the use of CBD for neuropathy in pets, pet owners are turning to CBD more frequently. CBD is

known to calm the nervous system, is anti-inflammatory, and is useful for reducing pain. CBD also is reported to be helpful in pets for issues like allergies, digestive issues, and anxiety.

Medication

The most common drugs used specifically for neuropathic pain in the veterinary setting are gabapentin and pregabalin, and sometimes tricyclic anti-depressants or anti-inflammatories.^{7,8} These medications do not cure peripheral neuropathy or stop the progression, they are used for management of symptoms.

Supportive care

In dogs or cats with advanced peripheral neuropathy, good supportive care is necessary to improve quality of life. If the rear or front legs do not work well, fitting the pet with an ambulatory device may be very helpful.

Takeaway

Overall, dogs and cats with peripheral neuropathy have the best outcomes when detected early and measures are taken to reverse damage, or at least prevent further damage. The key goal is to make sure that the animal does not suffer.