

Neuropathic Pain in Dogs and Cats: An Overview



Neuropathic pain in pets is a specific type of pain caused by damage or disease affecting the nervous system responsible for sensing touch, temperature, and pain. Unlike general pain, it requires clear evidence of an injury or condition affecting the nervous system. Symptoms alone aren't enough to classify pain as neuropathic.

Central Neuropathic Pain in Pets

This type of pain originates from damage to the central nervous system, which includes the brain and spinal cord.

- **Common Causes:** In dogs and cats, central neuropathic pain may result from spinal cord injuries, syringomyelia, intervertebral disc disease, or brain conditions such as strokes or infections.
- **How It Happens:** Damage interferes with the pathways that carry pain signals to and from the brain. These pathways can become overactive or fail to regulate pain signals properly.
- **What You Might Notice:** Symptoms may include muscle weakness, difficulty walking, or abnormal reflexes depending on where the damage is located. Pets may also vocalize, seem restless, or resist handling.

Peripheral Neuropathic Pain in Pets

Peripheral neuropathic pain arises when the peripheral nervous system—the network of nerves outside the brain and spinal cord—is affected.

- **Common Causes:** Causes in pets include nerve trauma or compression (e.g., due to surgery, injury, or altered anatomy)
- **How It Happens:** Damaged nerves may misfire, sending pain signals when they shouldn't. Immune activity or changes in pain-sensitive nerve proteins can also contribute.
- **What You Might Notice:** Affected pets may lick or chew at a limb, have muscle wasting, or display changes in posture or movement.

Small Fibre Neuropathy in Pets

This condition affects the small nerve fibers responsible for pain and temperature sensation, as well as controlling functions like sweating and heart rate.

- **Common Symptoms:** In pets these conditions are not well described, but could present as abnormal sensitivity to touch, licking or chewing at paws, or general discomfort.
- **Possible Causes:** Causes can include diabetes, immune-mediated diseases, or unknown (idiopathic) factors.
- **Treatment:** Addressing the underlying cause is key. Medications such as gabapentin or amitriptyline are often prescribed, possibly alongside topical treatments.

Managing Neuropathic Pain in Dogs and Cats

Management strategies for pets with neuropathic pain depend on the underlying cause and symptoms:

- **Medications:** Common options include anti-inflammatory drugs (NSAIDs), corticosteroids, gabapentin, or amitriptyline.
- **Specialised Treatments:** Peripheral neuropathic pain may be managed with nerve blocks.

- **Non-Medical Approaches:** Physical rehabilitation, acupuncture, low-level laser therapy, TENS, and PEMF can complement medical treatments.

By addressing the underlying cause and tailoring pain management strategies, pets with neuropathic pain can experience significant relief and a better quality of life.