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## **Neuromuscular Disorders**

Weakness and/or atrophy of the muscles of the limbs and/or head, problems with eating or drinking, and respiratory distress are clinical signs that may indicate your pet has a problem with its “neuromuscular system”. In severe cases, your pet may actually become paralyzed and may have severe difficulty breathing. Before we can determine the exact cause of the signs (i.e. the diagnosis), we must perform a neurological exam and diagnostics tests in order to determine which region of the neuromuscular (NM) system is affected. Neuromuscular disorders may be due to problems with:

- The peripheral nerves – aka “Neuropathies” or “Polyneuropathies”
- The muscles – aka “Myopathies”
- The NM junctions – aka “Junctionopathies”

Based on the exact part of the NM system affected, a list of diseases (the so called list of “differential diagnoses”) can be generated. The “differential diagnoses” for any given patient can be narrowed down based on basic information:

- The patient’s age and breed
- Whether the condition came on suddenly or slowly and its progression
- Whether or not discomfort is present

The most common **Neuropathies** include an autoimmune disorder called “polyradiculoneuritis” (aka “coonhound paralysis”), “endocrine neuropathies” secondary to disorders like diabetes, “cancer-associated neuropathies”, and age-related “degenerative neuropathies”. The most common **Myopathies** include an autoimmune disorder called polymyositis and a less severe variation called masticatory myositis that involves only the head muscles. Finally, the most common **Junctionopathies** include “tick paralysis” and myasthenia gravis, the most common NM disorder.

## **Diagnostics**

Blood counts, chemistry profiles, and special antibody testing may help to sort out the neuromuscular disorder affecting your pet. Often, spinal fluid analysis and ultimately biopsies of the muscles and nerves are necessary to make a definitive diagnosis.

## Summary

Typically pets are presented to us with a NM problem that may be explained by any one of several disease processes. Your pet's breed, age, and clinical signs allow us to narrow the possibilities. Advanced diagnostics typically are necessary to reach a definitive diagnosis. ***Once the definitive diagnosis has been made, we can develop treatment options that may include medical, radiation or surgical therapies, or combinations thereof.*** The definitive diagnosis also allows us to provide you with a prognosis.