

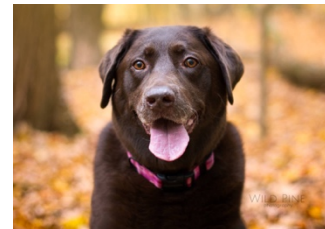
## Idiopathic Laryngeal Paralysis in Dogs

Written for Owners of Dogs Enrolled in the Laryngeal Paralysis Genetics Study

Our goal is to understand the genetic basis and neuropathologic progression of Idiopathic Laryngeal Paralysis. Thank you for being part of this important work.

### Overview:

Laryngeal paralysis is a common disease of older dogs, particularly older Labrador Retrievers. The condition was first described in the 1950s and termed “laryngeal paralysis” because the most concerning and obvious aspect of the condition was the dog’s larynx (a.k.a. “voicebox”) being paralyzed. During normal breathing, a dog’s larynx will open for air to pass through; when paralyzed, dogs can have a hard time getting enough air into their lungs. This is often most noticeable when a dog is active or excited. However, for most dogs, “laryngeal paralysis” is much more complicated as it affects more than just a dog’s ability to breathe. As is typical of a disease condition that is not well understood, there are many names that are used to describe this disease (e.g. LarPar, GOLPP); for simplicity’s sake, we will refer to the disease as “idiopathic laryngeal paralysis” in this handout.



### Causes

There are many potential reasons why a dog may develop laryngeal paralysis. The majority of laryngeal paralysis cases are idiopathic, meaning the underlying cause is not known. Examples of some other causes of laryngeal paralysis include surgical procedures in the neck that damage nerves that supply the larynx, and cancer. Data from our laboratory indicates that in the Labrador Retriever, idiopathic laryngeal paralysis is a genetic disease. It is not clear whether idiopathic laryngeal paralysis has the same genetic cause in other breeds that also get the disease, such as the Golden Retriever.

### Idiopathic laryngeal paralysis is more than just a breathing problem

Idiopathic laryngeal paralysis is not primarily a disease of the larynx. What we identify as laryngeal paralysis in affected dogs is generally just one sign of a degenerative polyneuropathy (disease where many nerves degenerate). Studies have shown that in addition to the nerve that supplies the larynx, nerves that supply both the forelimbs and hindlimbs are also diseased. Additionally, dogs with idiopathic laryngeal paralysis can have problems swallowing food, indicating that the disease also affects the esophagus.

### What are the signs?

Signs of idiopathic laryngeal paralysis can vary between dogs. Most commonly dogs start to have signs of the disease between 9 and 12 years of age. Typical signs include:

- The development of a hoarse-sounding or “honking” bark
- Loud breathing, particularly during exercise or excitement
- Hindlimb weakness, which is often mis-diagnosed as “hip problems.” Signs include:
  - Scuffing of hind feet
  - Exercise intolerance (getting tired quickly while walking or playing)
  - Being slower to rise or use stairs and not being able to jump as well as when younger
- Regurgitation
- A loud hacking cough

## **What to do if your dog is showing these signs**

Please go to a veterinarian and talk about whether your dog has evidence of idiopathic laryngeal paralysis. If you are concerned that your dog is affected and your regular veterinarian is not sure, consider seeing a board-certified veterinary neurologist or veterinary surgeon for further evaluation.

## **How is laryngeal paralysis diagnosed?**

The clinical signs and presentation of idiopathic laryngeal paralysis are often easily identified, particularly in older dogs of certain breeds. Diagnostics may include a neurologic examination, which can indicate that other nerves, particularly those in the hindlimb, are diseased. A laryngeal exam is sometimes performed to support the diagnosis and is always undertaken before surgical intervention. Nerve conduction velocity studies can be used to evaluate nerve function but are uncommonly utilized. The reality is that there is no perfect way of diagnosing idiopathic laryngeal paralysis because we cannot test for an underlying cause. However, for many dogs a combination of age, breed, history, clinical signs and physical/neurologic examination is enough to make a clinical diagnosis.

## **Medical Treatment**

As with humans who have similar disease processes, there are currently no disease-modifying therapies available for dogs with idiopathic laryngeal paralysis. There is increasing interest in using anti-depressant or anti-anxiety medications, such as Doxepin or Trazadone, to help dogs with this disease. There are currently no studies evaluating the use of these medications in dogs with idiopathic laryngeal paralysis.

## **Surgical Treatment**

A variety of procedures exist to help open the paralyzed larynx, with the goal of preventing severe and potentially fatal respiratory distress and/or heatstroke as a result of the dog being unable to breathe adequately. It is important to talk to your veterinary surgeon about the risks and benefits of surgical intervention to determine whether such a procedure is right for you and your pet.

## **Disease progression**

Regardless of whether your dog has an airway opening procedure, laryngeal paralysis is a degenerative condition. Episodes of severe respiratory distress or aspiration pneumonia are common complications. Sadly, idiopathic laryngeal paralysis can be life-limiting and have substantial negative effects on a dog's quality of life. With that said, dogs can live many happy years with idiopathic laryngeal paralysis, provided that it is managed. It is important to talk to your veterinarian about idiopathic laryngeal paralysis to learn more about management advice and what to look for as the disease progresses.

**We would like to thank you for being part of our team.** Your continued support is critical.

Sincerely,

The members of the Comparative Genetics Research Laboratory,  
Susannah (Susie), Alex, Jackie, Mehdi, Gabi, Shelby, Margaret,  
Ryan, Nyah, and Peter



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