

Excellent  
medicine  
with heart  
mind and soul



## LARYNGEAL PARALYSIS

The larynx is the opening of the trachea (wind pipe). The normal larynx opens wide when breathing in and closes when swallowing to prevent aspiration of material into the trachea and lungs.

Laryngeal paralysis (LP) is a progressive condition. LP develops when the muscles that normally pull open the larynx do not function properly. This muscle dysfunction is caused by degeneration of the nerves that innervate the muscles that open the larynx. Adult large and giant breeds are most commonly affected. Underlying causes are: hypothyroidism, cervical trauma, thyroid tumor, previous cervical surgery, a peripheral neurologic disease and most commonly, unknown causes. Hereditary forms are reported in the Bouvier, Siberian Husky and Dalmation.

### CLINICAL SIGNS OF LARYNGEAL PARALYSIS






-  Progressive difficulty breathing
-  Noisy breathing
-  Exercise intolerance
-  Change in the character of the bark (or meow)
-  Sometimes presents as an emergency patient with heat prostration or signs of upper airway obstruction

Figure 1



Figure 2



1. Close up view of the canine larynx that has been diagnosed with laryngeal paralysis. The opening is too narrow.
2. Close up view of the canine larynx after surgery. The opening is larger allowing your pet to breath more normally.



### DIAGNOSIS

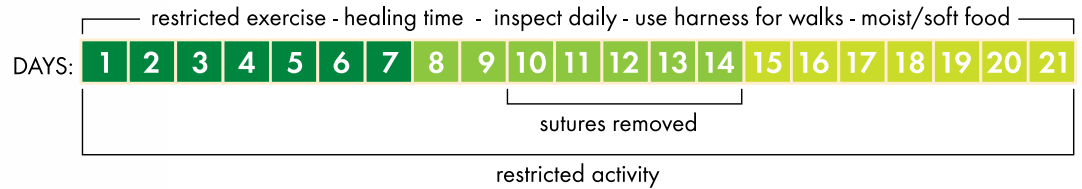
Confirmation of laryngeal paralysis requires examination of the laryngeal function under light sedation (**see Figure 1**). Ancillary diagnostic tests such as x-rays of the chest and neck, blood work including a thyroid level and a thorough examination of the neck should also be performed to rule-out other underlying problems.

### PROCEDURE

- Surgery is the only effective long term treatment for laryngeal paralysis.
- Many surgical procedures have been reported; most effective is the laryngeal tie-back procedure.
- The incision is made on the left side of the throat to expose the laryngeal cartilage.
- The origin and insertion of the paralyzed muscle is identified.
- Two sutures are used to permanently hold open one half of the larynx.
- Incisions are then closed and the larynx is observed to confirm an open airway (**see Figure 2**).

# LARYNGEAL PARALYSIS

## POSTOPERATIVE CARE



Discourage your pet from scratching at the surgery incision. Inspect the incision daily and report any increase in swelling, persistent discharge or bleeding, or loss of sutures to us. Clean gently with a small amount of warm water as necessary. Keep the incision clean and dry at all times. Schedule a suture removal appointment in 10-14 days. Restrict your pet's activity level during the first 3 weeks after surgery. Confine to a small room or kennel when unsupervised. When supervised, running, jumping and unleashed outdoor activity should be limited as much as possible. Avoid the use of a collar while walking your pet for the first 3 weeks after surgery. We recommend using a harness instead. Your pet's food should be moistened/softened for the first 3 weeks after surgery.

## PROCEDURE

- Complications from laryngeal tie-back surgery are uncommon. It is normal to see a slight cough and an inability to bark as a long term sequel to the surgery.
- SEROMA: Occasionally we see an incisional complication called a 'seroma.' This is a fluid filled pocket that causes no harm, but can be alarming. These usually resolve on their own over several weeks.
- ASPIRATION PNEUMONIA: Dogs with laryngeal paralysis are predisposed to developing aspiration pneumonia. The incidence of aspiration pneumonia is 15%. If recognized and treated early and aggressively, most cases of pneumonia are not life threatening. In some cases, we use antacids as a medication to decrease the frequency and severity of the pneumonia.
- Rarely, the suture from the tie-back will break or pull out necessitating reoperation.
- SIGNS OF COMPLICATIONS: The complications listed above are relatively uncommon. You should report excessive cough, lethargy, and poor appetite to your veterinarian if noticed. These may be early warning signs of pneumonia. You should report any sudden reoccurrence of difficulty breathing to your veterinarian.

## PROGNOSIS

The prognosis for dogs with laryngeal paralysis that undergo surgical repair is good. At least 85% of dogs return to a good quality of life with improvement in their breathing and return to activity. Dogs with underlying disorders may also have a good prognosis depending on the other disorders that may be present. The occurrence of aspiration pneumonia is low and can usually be treated.



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