

## Laryngeal Tieback



One of the most useful and efficient ways to convey information to you about your pet is via the written word. We carefully craft these notes to give you helpful information and accurate expectations around your pet's surgical experience.

**Please read this.** *Please save it and read it during each stage of the recovery process.* Surprises make for a stressful time for everyone.

Photo and video examples may be found on our website: [www.directvetsurg.com](http://www.directvetsurg.com) in the Pet Owner Portal under "DVS Resources".

Your pet has had a Unilateral Cricoarytenoid Lateralization, or "Tieback" performed to treat laryngeal paralysis. This surgery involves changing the anatomy of the larynx (the opening to the windpipe) and permanently fixing it in a semi-open position (with a suture prosthesis) to improve airflow to the lungs. Because the airway opening may be paralyzed on one side and is now fixed in the open position on the other, your pet is indefinitely at some risk for aspirating fluid into the lungs and developing pneumonia. (This complication may occur in up to 20% of patients, but can resolve with early and aggressive treatment.)

### GENERAL INFORMATION

Please keep a note of your questions as you and your pet progress thru recovery and address them to your primary care veterinary team. Our surgery group will contact your primary care team on **Day 2** (after their phone follow-up with you) and **Day 14** (after your recheck visit with them) to check in on your pet's progress and see if you have had any concerns or questions. This method will maintain continuity in care and an accurate patient medical record.

### First few days postop

#### MONITORING

Please keep your pet in a comfortable, safe, indoor location without free access to stairs for the next 24 hours as he/she recovers from anesthesia and surgery.

Keep your pet cool and quiet for the next 6 weeks. Try to *prevent situations that create excitement and especially barking* (which stresses and may break the surgical implants). You may take your pet for 5 minute walks in cool weather during this restricted period.

Do not have your pet wear a neck collar during the first two weeks.

Your pet may be groggy for the next few days. He or she may whine or appear more anxious than usual; this may indicate pain/discomfort or side-effects of the medications. Please call your primary care veterinary team for assistance with medication adjustments or return for exam and additional pain medications as needed.

Monitor appetite and attitude. *If both do not steadily improve over the next 2-3 days*, please call your primary care veterinary team or return for progress evaluation and problem-solving.

You can expect your pet to have a bowel movement within 5 days. Some animals take longer than others depending on when they last ate prior to surgery and when they started eating after surgery. It may be abnormal in color and consistency for 2-3 days. If you have any concerns, please speak with your primary care veterinary team.

Please confirm that your pet has urinated within 24 hours of returning home. If he/she does not, or you notice any problems related to urination, please speak with your primary care veterinary team.

Closely supervise your pet's movements over the first 3-4 days when s/he will be groggy from anesthetics and pain medications. Limit activities to necessary events only (on leash/out to go to the bathroom; access to food/water.)

## MEDICATIONS

It is likely that you have been prescribed one or more medications (given by mouth) for your pet over the first 2-3wks of recovery. During the discharge appointment or shortly thereafter, please make sure you understand:

- what each medication is being used to treat,
- what side-effects may develop, and
- whether or not the medication should be refilled and continued.

## BANDAGE CARE

A clear, plastic bandaid may have been applied to the incision (Tegaderm). This will protect the incision from infection from the environment and a wayward pet tongue! It is useful for up to 7-10 days. You may remove it like a "bandaid" at any time. If it is hard to peel off, waiting longer may make for easier removal. There is no urgency in taking it off.

## **Week 1-2 postop**

### MONITORING

Please look at the incision twice daily. It should be dry, slightly red along the margins, slightly swollen/thick on the edges with a light crust down the center. Over several days, it should lose redness and swelling.

Problems to call your veterinarian about:

- gapping (the edges should be exactly touching)
- ongoing or new discharge (other than small amount of crusting)
- swelling (other than slightly raised skin near edges).

Some bruising is normal and will resolve in 5-7 days.

The occasional patient will have more extensive bruising and/or swelling on day 2-3. If this develops, please let your primary care veterinarian know; a visit or sending photos will help them characterize the issue and decide on a course of action. The vast majority of the time, this is a transient issue that will follow a typical 5-7 day course resolving.

### TEST PENDING

If there were any samples removed for testing, they will be submitted and results usually will be available in 5-7 days. Your primary care team will contact you with test results and make any treatment changes as needed.

### PROGRESS EXAMS

Please return to your primary care clinic in 10-14 days for a progress exam. Skin healing will be evaluated, sutures (if present) will be removed, use of the limb will be assessed and any questions you have will be addressed.

### FEEDING

Do not feed your pet after surgery until he/she is clearly awake and moving around normally (12-24 hours).

To prevent stomach upset and possible vomiting, feed your pet his/her normal food. If it is dry kibble, cover with water to make it slippery and easier to swallow. Some pets will need help eating initially when their throats are sore after surgery; you can form the dog food

(soaked until soft) into meatballs and feed one at a time. Have them standing up when you feed and encourage them to walk around during and after eating; this will help stimulate their gastrointestinal tract to move food along normally and reduce the chance of vomiting or regurgitation.

There are various opinions among veterinary professionals and pet owners regarding the best way to feed a patient recovering from laryngeal surgery like this. No scientific studies have clearly demonstrated the best approach; we must rely on common sense and an individual patient's response to eating to determine what is right for them.

Feeding your pet by hand (in the form of small "meatballs") may prevent large mouthfuls of food. There may be less chance of food getting caught in the throat.

Elevating your pet's food and water dishes to a height such that he/she does not need to bend over to eat and drink may prevent the "tossing" of food and water to the back of the throat to be swallowed; there may be less chance of food and water getting caught in the throat. This position also may prevent regurgitation of stomach liquids during a "head down" position.

Feeding from a ground-level position may allow food that becomes caught in the back of the throat to fall out easier.

Some dogs are very fast eaters; this behavior may predispose to food getting caught in the throat. Slow down their eating with simple changes, such as feeding smaller amounts in multiple bowls and locations, or more frequently.

Rare patients with known history of regurgitating very soon after eating (commonly diagnosed as "megaesophagus") should be fed while in a very upright position, i.e. standing on back legs or sitting up on haunches in "begging" position. They should remain in this position for up to 30 minutes to prevent regurgitation of stomach contents. Please discuss a feeding routine with your veterinarian if regurgitation problems are suspected.

## RECOVERY MONITORING & COMPLICATIONS

When your pet initially comes home, please count his/her breathing rate and take his/her rectal temperature, both when resting. This will be your baseline for comparison as you monitor your pet's recovery.

Aspirating fluid that is regurgitated up from the esophagus/stomach, and breathed into the lungs is a common complication of this disease and post-operative course. If aspiration occurs, usually the first thing noticed is your pet is "just not right". Pay attention to these subtle things. Specific signs are 1) increased body temperature, 2) loss of appetite, 3) increased breathing rate and effort and 4) lethargy; you may also hear and see a deeper, moist sounding cough.

***\*\*Please call and return for a progress exam immediately (or go to an emergency hospital if overnight or weekends) if you notice these changes. The earlier we catch aspiration pneumonitis/pneumonia, the easier it is to treat; this can be a life-threatening complication. \*\****

You may expect some light coughing with drinking and eating after surgery. This will usually diminish with time.

Your pet's voice (i.e. his/her bark) will always remain hoarse and raspy. You will hear a louder than normal breathing sound when panting, but it should be quieter than his/her pre-operative status.

A potential complication of this procedure is the breakdown of the suture prosthesis; this can occur immediately or over months. Do your best to prevent barking and any pulling/restraint on neck. The strength of the throat cartilages where the sutures are tied dictate the strength of the correction; we don't have a lot of control over this variable. If you notice a return of the loud panting and breathing difficulty with excitement and heat, please return to your veterinarian for re-evaluation.

If your pet's personality-type challenges these restrictions, discuss options for medicinal-assistance for your pet to make restrictions easier to manage (i.e. Trazadone, Gabapentin, Tramadol, other).

## **Longterm lifestyle**

Even with this surgical airway correction, you should consider your dog to have a compromised, poorly functioning airway. *Avoid strenuous activities, especially during hot weather, for the rest of his/her life.* Dogs must pant to cool themselves; dogs with laryngeal paralysis (even with a Tieback) will not be able to cool themselves adequately and can experience heatstroke and breathing crisis.

Dogs with laryngeal paralysis and a surgical tieback may not be able to tolerate swimming. Their airway is open, so water can go down into the lungs easily. Use caution and monitor closely during open water swimming; always use a lifevest to help keep head higher in the water and reduce swimming effort.

Over the long term, you should *use only a chest harness or head halter for restraint when walking your pet*. Please do not restrain with neck collar; a collar may be used for identification.

Ideally, maintain your pet's weight near normal his/her whole life. Any breathing condition can be made worse with excess chest and abdomen fat; less body fat will relieve some of this breathing stress. Good parameters to monitor body condition are: 1) you should be able to feel the ribs and pelvic bones, but not see them; 2) your pet should have an "hour glass" figure when viewed from above looking down; 3) your pet should have a tucked-up belly when viewed from the side.

Most or all dogs will develop esophagus problems over time. This is likely related to the initial nerve disease process that caused the larynx to be paralyzed. We are prescribing a medication to stimulate stomach movement ("motility"); this will keep stomach fluids low and less likely to reverse up the esophagus.

This motility medication may stop being effective enough at some point in the future. If you notice your dog

- 1) "burping up" liquid,
- 2) swallowing and smacking lips frequently,
- 3) sitting up suddenly and huffing or swallowing rapidly,

he/she may need an adjustment to the motility medications to reduce the chance of regurgitation and aspiration pneumonia. Please consult with your primary care veterinarian if these signs or obvious regurgitation of liquid/food is seen. \*\*It is strongly recommended as a preventative treatment to use these medications.

Additionally, there is a known association between laryngeal paralysis and rear leg weakness. The exact cause of both conditions is not known but presumed to be part of the same nerve degenerative disease process. If you notice weakness problems, please have your pet evaluated to determine if this is related to this underlying disease process. (This is often mistaken as "arthritis" and joint pain, but is instead a true weakness and painless.) Longterm use of antioxidant-type supplements may be preventative for this disease; no strong data supports good treatment plans. High dose fish oil and Vitamin E

are easy over-the-counter options that may show some benefit; please discuss with your primary care veterinarian.

The majority of owners are very pleased with the outcome of surgery for laryngeal paralysis. Your dog will need to be monitored for signs of aspiration pneumonia for the rest of his/her life and some modifications in activity may be necessary. Most importantly, your pet should now be able to breathe more easily and live a more comfortable lifestyle.

### **Checklist:**

#### HOME MONITORING AND PROGRESS CHECK-IN WITH VETERINARY TEAM

- ☐ Pet attitude and appetite—Are these improving daily? What are your observations? What are your specific concerns?
- ☐ Pet mobility—Is this improving daily? What are your observations? What are your specific concerns?
- ☐ Incision health—Is redness and swelling going away? Is there discharge or moisture? (Photos taken close-up and at different angles are helpful for your primary care veterinary team.)
- ☐ Pet pain level—What are your observations? What are your specific concerns?
- ☐ Other

Based on your own experience through this, we welcome and encourage suggestions to this information that may help future patients and their people. Pay it forward! ([directvetsurg@gmail.com](mailto:directvetsurg@gmail.com))

--The DVS Crew