Laryngeal Paralysis

What Is Laryngeal Paralysis?
The larynx is the structure at the back of the throat (at the entrance to the trachea) that opens to allow airflow in and out of the trachea and lungs. It also closes to prevent the entry of food and liquids into the lungs during swallowing. Also known as the voice box, the larynx enables dogs to bark and howl.

Laryngeal paralysis is a condition in which the cartilage and vocal folds of the larynx are unable to open fully during breathing, making inhalation especially difficult.

The condition can be inherited in some breeds, such as Bouvier des Flandres, Siberian Huskies, and Dalmatians. In these cases, the condition usually occurs within the first 6 months of life.

More often, laryngeal paralysis is an acquired disease that occurs in large-breed dogs later in life. St. Bernards, Newfoundlands, Labrador retrievers, golden retrievers, and Irish setters are often affected. Laryngeal paralysis rarely occurs in cats.

What Are the Signs of Laryngeal Paralysis?
Laryngeal paralysis usually develops slowly, and signs of the condition may be noted before an emergency situation occurs. Signs of laryngeal paralysis include:

- Excessive or loud panting
- Changes in the sound of the bark, such as a hoarse or raspy bark
- Noisy breathing
- Difficulty breathing in warmer temperatures or after exertion or excitement
- Reluctance to walk or exercise due to difficulty breathing

Sometimes this condition is not diagnosed until the dog is in respiratory distress. When this occurs, the dog will struggle for breath, especially with inhalation. This crisis can lead to:

- Blue gums
- Collapse
- Sudden death

In cases of laryngeal paralysis, the cartilage and vocal folds of the larynx are unable to open fully, making breathing difficult.

Dogs brought to the veterinary clinic in respiratory distress may need oxygen therapy, steroids to reduce swelling and inflammation of the throat, sedatives, and cage rest before additional diagnostics or treatments can be performed. In severe cases, a temporary tracheostomy tube (a tube inserted into the trachea from the outside of the neck), may be needed to facilitate breathing.

What Causes This Condition?
Most cases of acquired laryngeal paralysis are idiopathic, meaning that the cause is unknown. Trauma,
inflammation, or cancer in the neck or chest may affect the nerves controlling the larynx and lead to laryngeal paralysis. Certain disorders affecting the muscles and nerves may also contribute to this condition.

It has been suggested that hypothyroidism (a decrease in thyroid hormone) may predispose some dogs to laryngeal paralysis. However, supplementation with thyroid hormone usually does not resolve the condition.

How Is This Condition Diagnosed?
The best way to diagnose laryngeal paralysis is to observe the larynx while the dog is under anesthesia. Usually, the veterinarian will notice that one or both sides of the larynx do not open normally when the dog inhales.

The veterinarian may also want to perform diagnostic tests to determine if there are underlying diseases or complications that can occur as a result of laryngeal paralysis. Blood tests may be recommended to screen for other diseases. Radiographs (x-rays) are helpful to rule out potentially cancerous masses in the neck and chest.

It is common for dogs with laryngeal paralysis to develop pneumonia from accidentally inhaling fluids or food particles when struggling to breathe. Dogs with laryngeal paralysis are also more likely to develop megaesophagus, an enlargement of the esophagus, which can also lead to pneumonia and may indicate other nerve or muscle abnormalities.

How Is Laryngeal Paralysis Treated?
Surgery is the best option for treating laryngeal paralysis. In the most common procedure, one side of the cartilage is tied back with sutures, creating a larger opening for air in the larynx.

Most dogs do quite well after this procedure. However, there is still a slight risk that the dog may inhale fluids or food particles, since the cartilage and vocal folds remain somewhat open during swallowing. The long-term outcome is better for dogs that do not have underlying muscle or nerve disorders.

If the condition is mild or the pet is not a candidate for surgery, clinical signs can sometimes be minimized by reducing exposure to stress, heat, or exertion. Medication to reduce inflammation can be helpful. Keeping weight under control can help to facilitate easier breathing. Keeping affected dogs in cooler areas of the house and minimizing the amount of time they spend outside during hot weather can also reduce breathing difficulties.