Laryngeal Paralysis in Dogs
Drs. Foster & Smith Educational Staff

What is laryngeal paralysis?
Laryngeal paralysis is a disorder in which the nerves that control the muscles and cartilage that open and close the larynx (voicebox) do not function properly, causing voice changes and difficulty with eating or breathing. The larynx is located in the back of the throat. Air moves from the mouth or nose through the larynx, and into the trachea (windpipe). Normally, the laryngeal cartilages (also known as the arytenoid cartilages) are pulled open during breathing. In laryngeal paralysis, these cartilages do not open and close properly, making it difficult for the animal to take in air normally.

What causes laryngeal paralysis?
Laryngeal paralysis occurs most commonly in older, large breed dogs such as Labrador Retrievers, Golden Retrievers, Saint Bernards, and Siberian Huskies. Usually, the larynx is normal at birth, but over time, the nerves and muscles that control the laryngeal cartilages lose function. In most of these cases, the cause for this condition is unknown. Less commonly, laryngeal paralysis can occur as a hereditary condition in puppies. In these cases, signs of breathing difficulty will usually be seen by 2 to 6 months of age. Affected puppies may have difficulty swallowing and breathing, they may gag frequently, and their bark often sounds abnormal. Breeds affected by a hereditary form of laryngeal paralysis include the Dalmatian, Bouvier des Flandres, Siberian Husky and English Bulldog. The inherited form of laryngeal paralysis in Dalmatians is often part of a larger condition called 'laryngeal paralysis-polyneuropathy complex.' In cases where the condition is congenital (inherited), it is recommended that the affected dog not be used for breeding.

Laryngeal paralysis can also be the result of damage to the nerves and/or muscles of the larynx due to a bite wound or other trauma. Sometimes laryngeal paralysis is associated with hypothyroidism. Laryngeal paralysis is rare in cats.

What are the signs of laryngeal paralysis?
The first sign of laryngeal paralysis is often a voice change: owners may report that their dog's bark sounds 'hoarse'. These animals make a lot of noise when they breathe in, and they may gag or choke when they eat. The signs are usually worse in hot and humid weather, during exercise, and in obese pets. The condition may become so severe that the animal cannot take in sufficient air: this can become a life-threatening situation.

How is laryngeal paralysis diagnosed?
With the dog under light anesthesia, a veterinarian examines the larynx. If an animal has laryngeal paralysis, the laryngeal cartilages will not open as wide as they should as the animal inhales.

How is laryngeal paralysis treated?
In most cases, surgery is needed. The most common type of surgery for this condition is a procedure called an 'arytenoid lateralization,' sometimes also known as a 'laryngeal tie-back' surgery. This involves putting one or more permanent sutures in place to hold the arytenoid cartilage open so that adequate air can pass through. Most dogs do quite well after this surgery, although there is a small risk of bleeding during the surgery, aspiration (inhalation) of stomach contents during surgery, or aspiration of food and water after the surgery. The surgery is usually only done on one side, which provides increased airflow with less risk of aspiration.