



## Collapsing Trachea



The trachea is made up of cartilaginous rings that are connected to one another by fibrous material. This allows the trachea flexibility so it can move easily as the head moves and can keep the airway open at all times. The back side (towards the spine) of the cartilaginous rings is not complete, leaving a muscle and membrane to complete the ring and the breathing tube. In patients that have a collapsing trachea, the cartilage rings have weakened and become narrower and misshapen. The muscle and membrane that complete the ring will then sag inward. This can occur at any point of the trachea along the neck or in the chest.

Tracheal collapse is most commonly seen in small breed dogs and occurs most commonly around middle age.

### Signs of tracheal collapse

- Cough, often sounding like a “goose honk”
- Progressively worsening cough
- Non-productive cough (dry)
- Cough that occurs with excitement or exercise or when pulls on collar
- Cough worse in hot weather

### Why the cough?

The cough occurs due to the narrowing of the trachea which causes more turbulence of the air. The loose membrane will vibrate with breathing. The cough will worsen as negative pressure from breathing will increasingly narrow the trachea and exaggerate the loose membrane, making it even looser. In severe cases it can result in laryngeal collapse, chronic bronchitis or collapse of the bronchial airways.

### Diagnosis

The “goose honk” cough is a very strong indicator for tracheal collapse. A cough can often be elicited with gentle palpation of the trachea. X-rays of the trachea are needed to assess the width of the tracheal opening at times of inspiration versus times of expiration. Patients with tracheal collapse will show normal tracheal size on expiration but a collapsed trachea on inspiration.

Bronchoscopy (a camera that is used to go into the airways) or fluoroscopy can also be used to make the diagnosis.

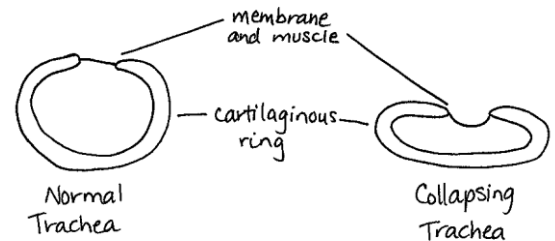


Figure 1: A cross section view of the cartilage of the trachea. The collapsing trachea has weak cartilaginous rings and loose connective membrane.



## Treatment

Cough suppressants are the mainstay for treatment. If the cough can be controlled then further progression of the disease can be slowed. There are some patients that may only require over the counter cough suppressants; however, most will need stronger prescription medications.

As the disease progresses, anti-inflammatories are often used. If a patient is overweight, weight loss is recommended.

In some cases, a stent can be placed to open the trachea from the inside. Unfortunately, many patients do not qualify for this treatment due to the location of collapse. Stents are placed in the tracheal portion outside the chest.

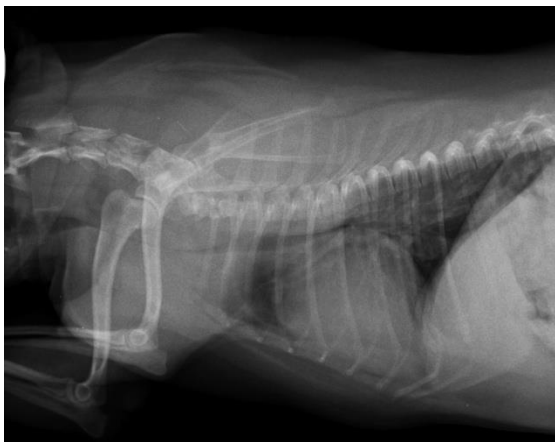


Figure 2: Radiograph of a dog with tracheal collapse, Notice the narrowing where the trachea enters the chest. This is best seen on inspiration.

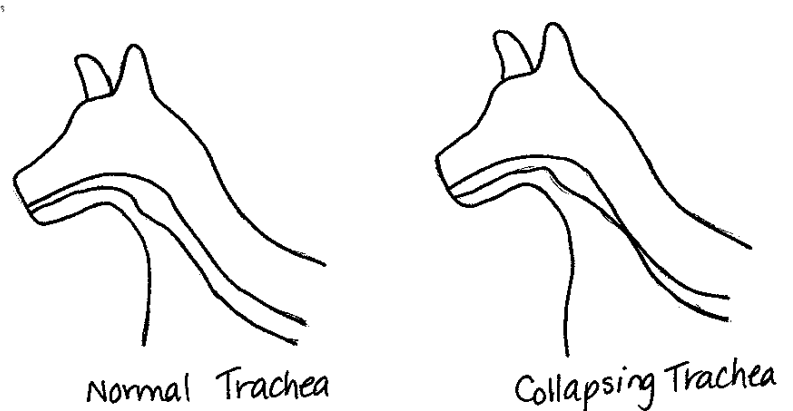


Figure 3: A side view of the trachea. The collapsing trachea has weakened and collapsed in one section.

## Prognosis

Many dogs do well for long periods of time with medical management. The prognosis is guarded for patients that do not respond to medical treatment.

It can be scary to learn of a diagnosis of collapsing trachea in a loved pet. Your veterinary team at Nanaimo Veterinary Hospital wants to work with you to help improve your pet's quality of life. We want to work together to help you maintain the special bond you have with your pet. We are here to support you and your pet along this journey. Please contact us with any questions or concerns that you may have at 250-758-3985 or by email at [nveth@shaw.ca](mailto:nveth@shaw.ca)