GATEWAY
VETERINARY SURGERY

MY PET NEEDS CORRECTIVE AIRWAY SURGERY - NOW WHAT?

WHAT IS BRACHYCEPHALIC OBSTRUCTIVE AIRWAY SYNDROME (BOAS)?

Certain breeds of dogs and cats are prone to difficult, obstructive breathing because of the shape of their head, muzzle and throat. BOAS refers to ***the combination of elongated soft palate, stenotic nares, everted laryngeal saccules, and tonsils*** all of which are commonly seen in these brachy breeds. Dogs with elongated soft palates generally have a ***history of noisy breathing***, especially upon inspiration (breathing inward). Some dogs will retch or gag, especially while swallowing. Exercise intolerance, cyanosis (blue tongue and gums from lack of oxygen), and occasional collapse are common, especially following over-activity, excitement, or excessive heat or humidity. Obesity will aggravate the problems. Many dogs with elongated soft palates prefer to sleep on their backs. This is probably because this position allows the soft palate tissue to fall away from the larynx. The signs associated with stenotic nares are similar but can also include reverse sneezing, swallowing too much air when eating, and esophageal reflux of GERD.

- **Elongated soft palate** is a condition where the soft palate is too long so that the tip of it protrudes into the airway and interferes with movement of air into the lungs. Often this causes your pet to snore.
- **Stenotic Nares** are malformed nostrils that are narrow or collapse inward during inhalation, making it difficult for the dog to breathe through its nose.
- **Everted Laryngeal Saccules** is a condition in which tissue within the airway, just in front of the vocal cords, is pulled into the trachea (windpipe) and partially obstructs airflow.
- **Enlarged Tonsils** are common in these breeds due to chronic inflammation and reflux resulting from the pressure gradient created by the narrow airways.
- **Tracheal hypoplasia** is a narrow trachea (windpipe). This condition cannot be treated, however addressing the other airway issues may help the pet breathe better.

DO ALL BRACHY ANIMALS REQUIRE CORRECTIVE SURGERY?

In our experience over many years of treating these patients, the vast majority of patients that we see significantly benefit from surgery. They are more comfortable following surgery, breathe more easily, and are more active throughout their life. 90% of bulldogs and Frenchie's need a soft palate resection, especially if they have good air movement through their nose indicating the breathing issue is oral and not totally nasal. The nose is always stenotic; it's just a matter of being completely closed or not. Their faces change more from 6 months to a year, so if the dog is not severely affected in the nose (ie. can breathe with mouth closed through nose when calmly sitting) then we suggest waiting on the nose until after 6 months-1 year of age. But some of the nostrils are completely closed and almost no air passes or can be felt when placing fingers in front of the nares on an awake dog. The risk of doing a nose too early is that it may need to be revamped later in life as the face pushes it more rostral.

DIAGNOSTICS

- **Physical Exam:** Stenotic nares are easily observed on physical examination. A brief exercise test may be performed to assess change in their breathing. Also at this time, we will evaluate the Body Condition Score (BCS) based off of a scale of 1-9 (1= underweight, 5= normal, 9= obese). Definitive diagnosis of elongated soft palate, tonsil enlargement and laryngeal collapse can only be made under anesthesia and will be performed intra-operatively.

- **Respiratory examination:** An evaluation will be performed to determine the grade of function rating the respiratory noise, inspiratory effort and dyspnea/cyanosis/syncope (0= Normal, 5= Severe)

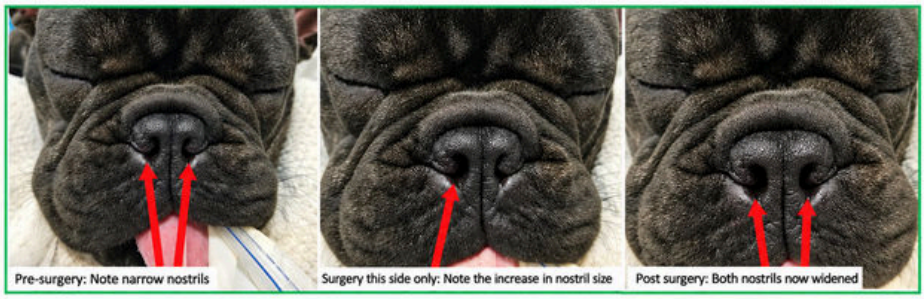
- **BRisk:** Evaluate their brachycephalic risk for postoperative complications.) This score is a 10-point, 6-feature, objective tool used to predict the risk of major complications or death in brachycephalic dogs undergoing corrective surgery for BOAS.

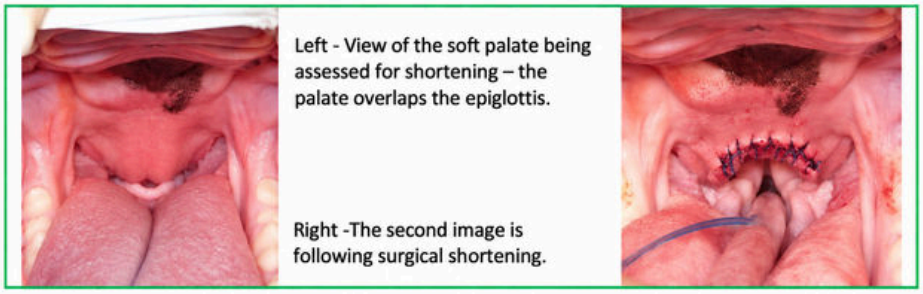
- **OFA Respiratory Function Grading Scheme (FTGS):** a standardized, non-invasive assessment that measures the severity of BOAS in dogs.

- **Radiographs:** Chest x-rays will be taken of the neck and chest to evaluate a tracheal score, lower airway and lungs. Normal dogs have a tracheal score of 30%+. BOAS pets typically score much lower but ideally should be around 18%-20%. If the score is too low, it may be recommended that they are referred to a 24-hour hospital for around the clock monitoring post-operatively.

- **Bloodwork:** We will run bloodwork to make sure your pet is healthy enough to undergo anesthesia.

SURGICAL CORRECTION & TREATMENT





- **Weight Management:** Dietary changes will be advised to help keep them at an ideal lean weight.

- **Stenotic Nares:** surgical widening of the nares, by removing part of the nose folds and thickened anchoring tissues, will help improve airflow. A scope is also used to assess for turbulent abnormalities.

- **Soft Palate:** surgical removal of the excess tissue to relieve the obstruction of the larynx. At this time, the tonsils or laryngeal saccules may be removed.

AFTERCARE

Patients are closely monitored in hospital post-operatively. In some cases, it may be recommended that your pet is transferred to a local 24hr hospital for concurrent medical monitoring if the inflammation from surgery is still severe and causing difficulty breathing. Our overall goal is to have them recover at home to avoid any additional stress and to rest calmly and comfortably, but if that is not the case, we will help facilitate transfer to an overnight facility.

WHAT TO WATCH FOR:

- **SMILE breathing:** lips pulled back, significant respiratory distress or panting with the tongue curled up and out of the mouth.
- **Gum color:** we want to see pink. If gums look murky, muddy, grey, blue or purple, seek emergency veterinary treatment immediately.

COMMON SYMPTOMS:

Vocalization, panting, coughing, retching, regurgitation and vomiting are all common and do not require emergency veterinary intervention UNLESS there is also respiratory distress. If there is respiratory distress, please seek emergency veterinary treatment immediately.

OUTCOME

The overall prognosis is good for young animals. They generally will breathe much easier and with significantly reduced respiratory distress. Their activity level can markedly improve. Older animals may have a less favorable prognosis, especially if the process of laryngeal collapse has already started. Occasionally a second procedure may be needed to take more tissue if your pet is still having problems after complete healing in 2-3 months. Again, weight management is imperative in the successful outcome of this surgical revision and quality of life. But they are not normal and may need lifelong medications to help with GERD or GI signs.