

Brachycephalic Obstructive Airway Syndrome (BOAS)

BOAS

There are certain breeds that are described as brachycephalic due to their short muzzle and flattened face. These often include dog breeds, such as English Bulldogs, French Bulldogs and Pugs, or cat breeds such as Persians or Scottish Fold. Patients presenting with BOAS will have narrowed nostrils, long soft palates and narrow windpipes (tracheal hypoplasia). This leads to obstruction of the flow of air through the upper airways, which can lead to secondary changes such as laryngeal collapse, swelling of the airways and eversion of the laryngeal sacculles.

What are the signs of BOAS?

Patients will experience exercise intolerance, snoring/noisy breathing, hyperthermia (over heating), regurgitation and in severe cases, collapse and occasionally sudden death. Clinical signs occur from a young age and worsen over time as secondary changes occur and exacerbate the obstruction of airflow further.

Surgical management of BOAS

Surgery aims to improve the airflow through the upper airway by widening the airways and allowing adequate oxygen to reach the lungs, reducing panting and overheating.

There are three parts to BOAS surgery and your surgeon will assess your pet to see if all or just some parts of the surgery are required.

- Widening of the nares (nostrils) by removing a wedge of excess tissue from the alar fold of the nose.
- Staphylectomy, or resection of excessive soft palate tissue.
- Laryngeal saccullectomy to remove the everted laryngeal sacculles which can obstruct the entrance to the trachea.

BOAS surgery performed before secondary changes carries an improved outcome in comparison to more chronic cases with severe secondary changes.



Adjunctive Conservative Management of BOAS

Many BOAS patients have a hypoplastic (narrow) trachea, which cannot be resolved surgically. To help prevent excessive collapse of the trachea, monitoring your pet to ensure they are not overweight, is an important step in conservative management of this condition.

Post-Operative Care

Exercise Restriction:

Exercise restriction will be required for 14 days following BOAS surgery. Canine patients can be taken to the garden for no more than 5 minutes to toilet. They should be on a lead at all times to prevent over exertion, but must be walked on a harness and not a collar to avoid excessive pressure to the neck. Feline patients should be kept indoors for 14 days following surgery.

Up to 75% of BOAS patients will experience regurgitation and/or vomiting. Patients will be prescribed antacids (for example Omeprazole) to take before and after surgery, to reduce the risk of regurgitation. In many cases, regurgitation and/or vomiting is reduced following BOAS surgery.

Potential Complications:

There is a risk of swelling immediately following BOAS surgery, which could necessitate a patient to be hospitalised and a tracheostomy tube to be placed. The use of steroids at the time of surgery greatly reduces the risk of swelling. Acute, severe swelling is not a common occurrence but careful monitoring is required immediately post-operatively.

Resection of too much of the soft palate carries a risk of reflux of water and food into the nasal cavity causing rhinitis, where resection of too little carries a risk of the need for a repeat surgery.

Outcome

Improvement in BOAS signs is expected once post-operative swelling reduces. In some cases this can take up to 4 weeks.

Patients who are obese are unlikely to have a significant improvement in BOAS clinical signs.

Weight management is important in the short and long term following BOAS surgery.

Avoiding the use of collars and instead using a harness and lead, is recommended for long term management.

It is sensible to avoid exercising BOAS patients in hot weather in the long term to prevent heat stress and hyperthermia.

