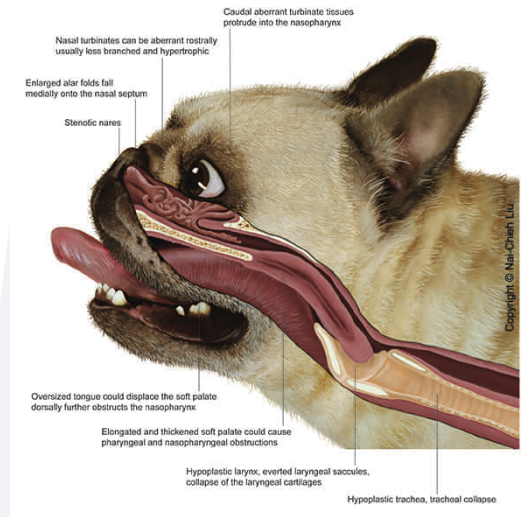


Brachycephalic Obstructive Airway Syndrome (BOAS)

The condition

BOAS is a condition described in brachycephalic dogs (English Bulldogs, French Bulldogs, Pugs, Shih-Tzus) and cats (Persians). These breeds have a shorter muzzle and more compact skull structure, while the amount of soft tissue remains similar to that in a non-brachycephalic breed, thereby confining important airway tissues. The defining features include narrow nostrils, an elongated soft palate, collapsed laryngeal soft tissue and a narrow trachea, each resulting in decreased airflow to the lungs.

The most common clinical signs of BOAS are loud breathing, snoring, exercise intolerance, hyperthermia, regurgitation and sudden collapse.



Above: Anatomical features of BOAS.
Courtesy of Cambridge BOAS
Research Group.

Surgical treatment of BOAS

Improvement of the airflow is the main goal of the surgery.

The operation consists of removal of the excess soft tissue from the upper airway, thus allowing for greater airflow and respiratory function.

Patients suffering with BOAS will most commonly require the following:

1. **Widening of the nares (nostrils)** This is achieved by excision of the excess tissue. There are two main methods: a wedge resection (stitches present) and the Trader's technique (stitches not present).
2. **Soft palate shortening and thinning** (staphylectomy) An intra-operative evaluation determines the appropriate amount of soft tissue to be removed. Removal of too much tissue may cause food and water to reflux through the nose, which could result in complications (e.g. cough, nasal discharge) due to irritation. If too little tissue is removed, the initial symptoms may persist.

Some patients may also require:

3. **Tonsillectomy** This is the surgical excision of the tonsils.
4. **Laryngeal sacculles resection** This procedure entails the surgical excision of any excess, collapsed soft tissue inside the larynx.

Osteotomy – a radial (circular) cut is made in the top part of the tibia, and the weight bearing surface is rotated. After sufficient rotation, the fragment is secured with a TPLO plate and screws. This new position changes the angle of weight bearing, preventing the previous sliding motion between the bones.

BOAS is a multifactorial condition, and certain aspects of this syndrome cannot be treated with surgery. These include an overly large tongue relative to the size of the mouth (relative macroglossia), and a narrow windpipe (hypoplastic trachea).

Pets diagnosed with BOAS require lifelong management – the key components are weight control, exercise restriction and avoiding warm and humid environments.

Post-operative care



Your pet will be monitored closely following recovery from general anaesthesia, and when deemed appropriate and safe, discharged from hospital.

The majority of patients are able to be discharged on the same day, and receive medication to administer at home during the remaining recovery period. This usually includes anti-inflammatory pain relief and antacid medication.

To support an optimal recovery, your pet will need to be rested and restricted from exercise during the first 2 weeks following surgery. Short 5-minute toilet breaks, 2-3 times daily can be taken slowly and on the lead. It is important to use a harness instead of a neck collar.

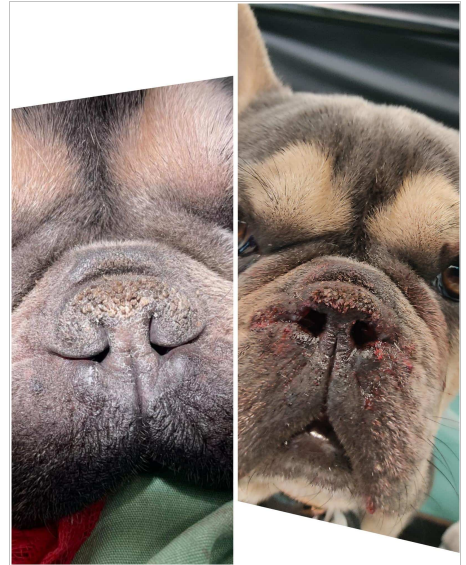
Risks and potential complications

BOAS corrective surgery carries potential risks and complications. Some patients may develop gastrointestinal symptoms such as retching and regurgitation after surgery. This could be due to post-operative inflammation and swelling, while in some patients these signs may be exacerbated by the suture material used for soft palate surgery. Severe post-operative swelling is an uncommon complication and will occasionally require an emergency procedure to restore airflow; this is called temporary tracheostomy tube placement.

Studies currently suggest a 5% mortality rate after BOAS surgery. The risk is decreased when the surgery can be performed as an elective procedure in younger pets, as opposed to older patients who may also have comorbidities, or when the procedure is done as an emergency.

Long-term improvement of quality of life in BOAS patients will also heavily rely on lifestyle management. Studies show that after surgery, patients maintaining a slim body condition and a routine of moderate exercise can expect a better outcome in the long term.

BOAS corrective surgery can be very rewarding for the majority of patients. If combined with lifelong management, most patients will enjoy significant improvements in respiration, level of activity and quality of life.



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Following this advice should help your pet recover quickly however if you have any questions, please contact your veterinary practice.