



## Stenotic Nares (Narrow Nostrils) in Dogs

- Stenotic nares (pinched nostrils) is a common abnormality found most commonly in brachycephalic dogs, which are dogs that have a short wide head, such as English bulldogs, Boston terriers, pugs and Pekingese.
- Because of their anatomy, dogs with brachycephalic syndrome have an increased resistance to airflow through their upper respiratory tracts – the mouth, nose and larynx.
- Other abnormalities may also be present in these dogs, including an overlong soft palate, laryngeal collapse and eversion of the laryngeal sacculles, which are tissues behind the vocal folds that can evert into the lumen and cause obstruction of air movement.
- Stenotic nares are caused by congenital malformation of the cartilages of the nose, secondary to selective breeding of dogs with short noses.
- Although stenotic nares are present at birth, clinical signs of respiratory difficulty often do not begin until the animal is several years old.
- Either sex may be affected.
- Increased airway resistance from brachycephalic syndrome over a prolonged period can lead to progressive respiratory difficulty. As the large negative pressure of the increased effort to inhale continually draws it in, the larynx becomes weaker. Eventually, the larynx collapses, causing the animal to be unable to move a sufficient amount of air into the lungs. Affected animals often appear blue (cyanotic) and can die.

### Symptoms:

- Noisy breathing (especially when the animal breathes in)
- Exercise intolerance
- Cyanosis (blue appearance of the gums, due to lack of oxygen)
- Fainting

### Diagnosis:

- The diagnosis of brachycephalic syndrome may be suspected based on your pet's breed and his clinical signs. Stenotic nares are relatively simple to diagnose by simply looking at the size of the opening into the nostril.
- However, the other components of brachycephalic syndrome are less obvious and typically require light, general anesthesia or heavy sedation for diagnosis.
- Because affected animals may have several of these abnormalities present at one time, your veterinarian will either examine your pet under anesthesia or refer you to a specialist for the examination.
- Diagnostic tests are also necessary to determine the general health of your pet. In addition to obtaining a medical history and performing a general physical examination, other diagnostic tests may be necessary, including:
  - Auscultation of the chest with a stethoscope, in order to help exclude the concurrent presence of other causes of respiratory difficulty.
  - Chest radiographs (X-rays), to be sure that the heart and lungs appear normal.

#### **Treatment:**

- Treatment is divided into medical management and surgical management.

#### **Medical Management:**

- If your dog has only mild signs, you may be able to manage him conservatively without surgery by preventing the dog from having an excessive respiratory effort. This requires that you:
  - Prevent your pet from becoming overweight or obese
  - Avoid excessively stressful situations, such as exercise during hot, humid weather
  - Avoid using a neck collar and use a harness instead
  - Although mild cases are often managed medically, the risk for progression of severe airway disease exists. Close monitoring of your pet for worsening of clinical signs is imperative.

#### **Surgical Management:**

- Surgical management, if performed before severe clinical signs develop, is relatively easy and carries a favorable prognosis. When surgery is delayed until later in the course of the disorder, the prognosis is more guarded.
- The surgical procedure for this condition involves widening of the opening through the nostrils, by removing a small piece of the wall of each nostril. This can be done with a scalpel or a surgical laser.
- Resection of an overlong soft palate and resection of everted laryngeal sacculles may be performed under the same anesthesia.

#### **Home Care and Prevention:**

- If you opt for medical management, be sure to watch for any evidence of worsening of the clinical signs. If your dog has trouble breathing or blue gums, or if he collapses, see your veterinarian immediately.
- If surgical therapy is done, special care may not be required; however, you should always monitor your pet for recurrence of clinical signs.
- Because stenotic nares is a congenital (present at birth) anatomic disorder, prevention is not possible. Little is known about the inheritance of this condition.