



## Upper Airway Syndrome/ Brachycephalic Syndrome

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Upper airway syndrome is a condition seen most prominently in the brachycephalic breeds. By definition, 'brachycephalic' is a cat or dog with a short wide head. Some common brachycephalic breeds are the Bulldog, Pug, Pekingese, Persian and Boston terrier. Common signs of this syndrome are loud, rattling sounds or snoring noises during ventilation, especially on inspiration. More severely affected dogs show poor exercise tolerance, collapse with excitement, or cyanosis (a bluish color of the gums due to lack of oxygen in the blood). Dyspnea (difficulty breathing) is also seen with only small amounts of physical activity or an increase in ambient temperature. Conditions of upper airway syndrome: elongated soft palate, stenotic nares, and everted laryngeal sacculles, can be surgically corrected. A small or microtrachea unfortunately cannot be corrected surgically.

**Elongated soft palate:** An elongated soft palate is the most common anatomic abnormality reported in dogs with upper airway syndrome. The soft palate extends into the laryngeal glottis and interferes with the free passage of air from the mouth or nose into the larynx requiring increased inspiratory effort. These dogs are particularly noisy breathers and may snore when sleeping. Surgical correction involves resection of redundant tissue. Although complications associated with resection of the elongated soft palate may include hemorrhage, pharyngeal edema, and aspiration pneumonia, use of a surgical laser drastically reduces these side effects. The patient is noticeably improved upon recovery.

**Everted laryngeal sacculles:** Eversion of the laryngeal sacculles is also seen in upper airway syndrome patients. Surgical treatment involves resection of the everted tissue with a surgical laser; this procedure is usually performed at the same time as elongated soft palate resection.

**Stenotic nares:** Another common condition in upper airway syndrome is stenotic nostrils or 'nares', where the animal has extremely small nares which creates a situation similar to you trying to breathe with your nostrils pinched shut. This can also be repaired surgically by reducing the bulk of the lateral nasal cartilage resulting in a nostril of larger diameter. This is a great procedure for the surgical laser and sutures are not necessary. The incision is usually depigmented at the time of suture removal, and pigment usually returns in 1-2 months.

Your pet may not require all these surgical corrections; they may need one, two or all, depending on the breed, conformation and physical examination under anesthesia by our experienced veterinarians.