

Celebrating 10 years



FACT SHEET

Health and Welfare Issues Associated with Brachycephalic Dogs

Increasing Global Popularity of Brachycephalic Dogs

- In 2017, the American Kennel Club listed two brachycephalic breeds (French Bulldogs and Bulldogs) in its top 10 most popular breeds, and eight brachycephalic breeds (French Bulldogs, Bulldogs, Boxers, Cavalier King Charles Spaniels, Shih Tzus, Boston Terriers, Mastiffs, and Pugs) are in the top 31 most popular breeds.
- The numbers of AKC-registered Bulldogs and French Bulldogs increased by 69% and 476%, respectively, from 2006-2016.
- Brachycephalic breeds comprise three of the top six most popular breeds in the United Kingdom. Registrations of the French Bulldog have grown almost tenfold in 6 years; this breed was the most popular dog in the UK in 2018.
- There are 24 dog breeds with brachycephalic conformation. In addition to those noted above, brachycephalic breeds include: Affenpinscher, Brussels Griffon, Dogue de Bordeaux, Japanese Chin, Lhasa Apso, Brasileiro, and Pekingese.

Greatest Welfare Impediment: Inability to Breathe Normally

- Although brachycephalic breeds are at increased risk for numerous morbidities, their inability to breathe normally is considered the greatest impediment to their welfare.

Brachycephalic Obstructive Airway Syndrome: Definition

- Brachycephalic obstructive airway syndrome (BOAS) is a consequence of the shortened noses and skulls of these dogs and includes: 1) elongated and thickened soft palate; 2) stenotic nares and 3) everted laryngeal sacculles/laryngeal collapse.
- Computed tomography (CT) studies have confirmed that aberrant caudal nasal turbinates may be a contributing factor to BOAS.

Recognizing Clinical Signs and Prevalence of BOAS

- Clinical signs of BOAS can include dyspnea (difficulty breathing), stertor (noisy breathing), exercise intolerance, regurgitation/vomiting and overheating.
- Brachycephalic dogs have decreased capacity for thermoregulation compared with non-brachycephalic dogs.
- Brachycephalic dogs have lower oxygen saturation levels in the blood than non-brachycephalic dogs.
- Clinical signs due to upper respiratory disorders were noted in 22% of dogs with extreme brachycephalic conformation.
- Objective measurements using novel methods including functional grading systems and plethysmography have determined that 50% of Pugs and French Bulldogs and 45% of Bulldogs have clinically significant signs of BOAS.

Risk Factors Associated with BOAS

- Obese dogs are twice as likely to show signs of BOAS compared to dogs with normal body condition.
- Upper respiratory disorders were the cause of death for 17% of dogs with extreme brachycephalic conformation (Pugs, Bulldogs and French Bulldogs) compared to 0% for all other breeds of dogs.
- The lifespan of dogs with extreme brachycephalic conformation is younger (8.6 years) compared to all other breeds of dogs (12.7 years).

Diagnosing BOAS:

- Oro-pharyngeal examination has been the conventional diagnostic test for BOAS for decades.
- Use of exercise tolerance tests increases diagnostic sensitivity for detecting BOAS.
- CT of the head, posterior rhinoscopy, and oro-pharyngeal examination are now considered evidence-based diagnostic tools for BOAS.

Preventing BOAS:

Welfare concerns associated with brachycephalic obstructive airway syndrome include the detrimental and lifelong impacts of their conformation and the emotional and financial burdens placed on the human families of brachycephalic dogs. The HSVMA encourages veterinarians to improve the health and welfare of brachycephalic dogs by:

- **Providing pre-purchase/pre-adoption consultations** with clients considering acquiring a brachycephalic dog.
- **Advising against breeding any dog suffering from symptoms of BOAS.** Studies are underway to develop genetic testing which could exclude dogs likely to be severely affected or to pass on BOAS, from breeding programs.
- **Learning about exercise tolerance tests** as part of annual examinations to improve diagnostic sensitivity. The accurate prediction of exercise tolerance and functional grading from plethysmography data has allowed breed clubs for Pugs, French Bulldogs and Bulldogs to include clinically supervised exercise testing in their health schemes.
- **Raising awareness among clients of the role of obesity** in worsening BOAS symptoms.
- **Educating clients that respiratory sounds such as snorting and snoring are not normal,** but rather are clinical signs of airway obstruction and compromised breathing.
- **Collaborating with breed clubs** to develop and implement plans to improve the health of dogs with brachycephalic conformation.
- **Reporting conformation-altering surgeries and C-sections** in American Kennel Club (AKC) registered dogs to the AKC.
- **Developing a practice strategy to clearly and consistently disclose the health problems** experienced by dogs with brachycephalic conformation through all practice communication channels.
- **Working to counter the dramatic increase in demand for brachycephalic breeds.** For example, the profession can educate major retailers and organizations that use brachycephalic breeds in their advertising about the health problems endemic in these breeds and encourage them to feature healthier breeds or mixed breed dogs instead.

References and more information available at www.hsvma.org/brachycephalic.