

Brachycephalic Airway Syndrome

Brachycephalic syndrome or brachycephalic airway syndrome (BAS) refers to the combination of anatomical abnormalities in certain dog and cat breeds that have short muzzles. Dog breeds that are commonly affected by this syndrome include the English Bull Dog, French Bull Dog, Boston Terrier, Boxer, Pug, and Pekingese. These pets often have a combination of mouth and nostril malformations. The clinical severity of BAS varies widely among individual patients.

Because their breathing passages and throat are narrowed or collapsed, these pets can have noisy breathing at rest which may worsen with excitement or exertion. In many cases, panting worsens the syndrome. Exertion, excitement, anxiety, or hyperthermia (increased body temperature) can all trigger increased panting, which in turn exacerbates the severity of a pre-existing narrowed or collapsed airway.

Continued rapid airflow across the upper airway can also cause inflammation of the upper airway. All of these factors contribute to a worsening upper airway obstruction. Importantly, body temperature can increase dramatically as these pets breathe against a progressive obstruction.

An upper airway obstruction can progress quickly and may be fatal. Therefore, it is critically important that pets with brachycephalic syndrome are kept calm, cool, and avoid over-exertion until their airway can be more completely assessed by a surgeon. It's worth noting that obesity can also worsen clinical signs and the risk of an upper airway crisis.

Pets with brachycephalic syndrome may also have chronic gastrointestinal disease, including gastroesophageal reflux, gastritis (inflammation of the stomach), and frequent retching, vomiting, and regurgitation.

Many patients with brachycephalic airway syndrome can benefit from surgery to correct several of the anatomical abnormalities that obstruct their breathing. Ideally, a surgical consultation is pursued prior to an upper airway crisis. In a crisis, emergent medical management and oxygen therapy is often necessary prior to surgical intervention.