

# Brachycephalic Syndrome

*A PowerPage Presented By*



Brachycephalic syndrome is typically a result of our need to breed **short, little, flat-faced** dogs. This has in turn, caused some severe “abnormalities” which can affect the quality of life of the dog. Dogs with brachycephalic syndrome may have one or more of the following congenital components: **Elongated soft palate, stenotic nares, and hypoplastic trachea**. Cats can get elongated soft palates and stenotic nares too—typically, Himalayans and Persians.

## Pathophysiology

### Congenital components:

- Elongated soft palate
  - **Normal soft palate extends to caudal aspect of tonsil and tip of palate barely touches the epiglottis**
  - **Elongated soft palate typically extends into laryngeal opening, blocking air flow**
- Stenotic nares
  - Severe narrowing of nasal lumen
- Hypoplastic trachea
  - Narrowing of trachea
  - Esp. prevalent in English Bulldogs

### Acquired components-as a result of increased airway resistance:

- **Everted laryngeal sacculles**
  - This is the mucosal lining of the laryngeal ventricles. These can evert into the lumen of the larynx, compounding the problem
- Laryngeal edema
- Laryngeal collapse
- Redundant (edematous) pharyngeal folds

## Clinical Presentation

### Breed:

- **Small breeds**
  - Bulldog, Boston Terrier, Pug, Pekingese
- Boxer, Shar-Pei, Lhasa Apso

### Signs:

- Exercise intolerance
- Respiratory distress
- Gagging and dysphagia
- Open mouth and loud, **stertorous breathing**
- Collapse/cyanosis
- Aspiration pneumonia

## Diagnosis

- Physical Exam
- Thoracic Radiographs
  - Evaluate for hypoplastic trachea
- Oral exam under anesthesia

## Treatment

### Elongated Soft Palate:

- **Resect to normal size.** Be very careful as over-resection can predispose to aspiration pneumonia
- Monitor very carefully for excessive post-op swelling resulting in life-threatening airway obstruction

### Stenotic Nares:

- **Wedge resection of nasal fold**

### Hypoplastic Trachea:

- There is no effective treatment
- As long as you fix the other problems, animals can typically live with this
- If you have other underlying diseases such as heart failure, it may become a problem

### Laryngeal Collapse:

- Make sure this diagnosis is accurate and that it is not laryngeal paralysis
- **Occurs with very advanced brachycephalic syndrome**
- Permanent tracheostomy is probably the best treatment option

### Everted Laryngeal Saccules:

- Can grab saccule at the base with long pair of hemostats or Allis tissue forceps and remove with traction

