

Brachycephalic Dogs Undergoing Anaesthesia or Sedation

Normal steps of anaesthesia

Dogs frequently needed to be sedated or fully anaesthetised to allow investigations or treatment to be carried out. Sedation involves using drugs to calm the patient, allowing minor procedures to be carried out (for example, permitting X-rays to be taken). Anaesthesia uses additional drugs and involves a breathing tube being placed in the windpipe. This is necessary for surgery but is often also the safer option in patients undergoing MRI or CT scans.

Complexities in Managing Brachycephalic Breeds

Breathing problems

Brachycephalic (short nosed) dogs often have a relatively narrow windpipe, congested nasal passages, an overlong soft palate that blocks the throat and various degrees of collapse of their larynx, a syndrome referred to as Brachycephalic Obstructive Airway Syndrome (BOAS). This can lead to breathing difficulties during exercise and periods of stress, but also increases the risk of complications during sedation and anaesthesia. In some cases, dogs require surgical intervention to facilitate recovery from anaesthesia, even if they are coming to see us for a primarily non-BOAS problem.

Gastrointestinal problems

Brachycephalic dog breeds also have an elevated risk of vomiting and regurgitation. This is not always obvious, since many dogs simply swallow what they've regurgitated, and it can occur in dogs without obvious breathing difficulties. The risks of regurgitation are increased in patients undergoing sedation and anaesthesia. This is problematic as regurgitated stomach contents are acidic and can cause oesophageal damage; they can even be inhaled, potentially causing pneumonia. In severe cases, this can be life-threatening.

The risk of this happening and causing any significant problems can be reduced, if some simple precautions are taken. We preferentially anaesthetise (rather than sedate) brachycephalic patients, since this allows us to insert a tube into the windpipe, protecting the lungs from any regurgitated material. You can also help by following the advice below:

- **Withhold food from your dog for 6-12 hours prior to sedation and/or anaesthesia**
this reduces the likelihood of regurgitation
- **Administer prescribed antacid medication**
(typically *omeprazole*, usually given for at least 24 hours prior to sedation/anaesthesia)
this reduces the stomach acidity and limits damage from any regurgitated material
- **Minimise stress on the journey to and from the hospital**
this reduces the likelihood of regurgitation in the period prior to sedation and/or anaesthesia