

Policy Position: Health and Welfare of Brachycephalic Dogs

Introduction

Brachycephaly results from multiple skeletal genetic mutations, whereby altered growth of the bones that make up the canine skull manifests as a short and wide head, with a shortened muzzle length. As such, brachycephalic dogs are often referred to as ‘flat-faced’ dogs. The brachycephalic conformation has been intensely selected for by dog breeders for many centuries to develop many popular companion breeds, including the Pug, French Bulldog and Bulldog. Brachycephaly is a spectrum, from dogs with almost entirely flat faces (sometimes termed ‘extreme brachycephaly’) in breeds such as the Pug and Japanese Chin, through to a less exaggerated brachycephalic phenotype in breeds such as the Boxer and Staffordshire Bull Terrier. Brachycephaly is not restricted to purebred dogs, and crosses that include these breeds can also exhibit this conformation.

The popularity of brachycephalic breeds has substantially increased over the past decade, with increases in both Kennel Club (KC) registrations and reports of brachycephalic dogs being illegally imported into the UK. In 2017, the French Bulldog is set to become the most KC-registered breed in 2017¹, overtaking the Labrador Retrievers’ 27-year reign as the UK’s favourite breed. Similar increases in popularity of small brachycephalic breeds are reflected internationally. It is thought that the popularity of brachycephalic dogs stems from the anthropomorphic appeal of their juvenile, human-like features including large, round, wide-set eyes and flat, rounded faces. Despite the popularity of dogs with this face shape, the brachycephalic conformation is not benign from a health perspective and is associated with a variety of inherited disorders that may have severe impacts upon quality of life. The negative effects of this dramatic deviation in body shape from the dog’s progenitor

species, the grey wolf, have been considered 'inevitable', with major and multifaceted consequences of markedly reducing the bony framework of the skull.

Issues

Brachycephaly has been linked with a variety of inherited diseases that are inherently linked with this conformation and they may have major lifelong welfare consequences for affected dogs:

Breathing problems: Chronic breathing difficulty and impaired thermoregulation are common in brachycephalic dogs as a consequence of anatomical defects of the upper airway. Airway abnormalities include narrowing of the nostrils, elongation of the soft palate, laryngeal collapse and tracheal stenosis. Termed Brachycephalic Obstructive Airway Syndrome (BOAS), BOAS is the overall effect from several of these disorders and can be a progressive, lifelong disorder that impairs a dog's ability to exercise, play, eat and sleep. Studies have demonstrated that dogs with more extreme brachycephaly (flatter faces) are at higher risk of the effects of BOAS. Dogs with moderate-severe BOAS often require surgical intervention to reduce the obstruction in their airways to breathe more freely to enable them to express normal behaviour.

Eye problems: Recurrent damage to the surface of the eye leading to corneal ulceration is common in brachycephalic dogs, mainly because of the shallow orbit that is a feature of brachycephaly, but also because of conformational defects of eyelids and prominence of the nasal folds. The shallow orbit means that these dogs have prominent, 'bulging' eyes (exophthalmos) and an inadequate blink which results in areas of corneal drying (exposure keratopathy) especially in the central cornea. Corneal ulceration is a common sequel to exposure keratopathy and is further complicated because brachycephalic dogs also have reduced corneal sensitivity. In addition, many brachycephalic dogs have imperfect eyelid anatomy, not only is the eyelid opening (palpebral aperture) excessively wide, but the eyelids sometimes turn in (entropion) or out (ectropion). Irrespective of the underlying cause, corneal ulceration in brachycephalic dogs is always serious as healing is invariably poor. Because of the poor corneal sensitivity brachycephalic dogs may not exhibit

the usual clinical signs of corneal ulceration (pain and excessive blinking), so that complications such as deepening ulceration and actual corneal perforation, sometimes resulting in loss of the eye, are common. Corneal pigmentation is also a common finding in brachycephalic dogs, usually as a chronic change over time. Studies have demonstrated that dogs with wider eyelid openings, flat faces and nasal folds that are in contact with the eye are at elevated risk of corneal ulcers. Tear replacement therapy to mitigate corneal drying and surgery to the eyelids and nasal folds (if in contact with the cornea) may be needed to reduce damage to the cornea.

Skin problems: Chronic skin irritation and infection are common in brachycephalic dogs, as a consequence of result of skin folds found on the muzzle (the nasal fold), but also around the tail and vulva in association with screw-tails. Deep skin folds cause abnormal rubbing and retention of moisture and may lead to overgrowth of bacteria and yeast if not cleaned regularly, resulting in dermatitis and infections. Skin fold disease may cause chronic discomfort or pain, in some cases requiring surgical removal.

Birthing problems: Birthing difficulties (dystocia) due to foetopelvic disproportion are common in brachycephalic bitches, where selection for large heads and flat faces results in puppies too large to pass through the relatively narrow pelvises of the dam without medical or surgical intervention. Substantially increased risks of dystocia are seen in brachycephalic breeds compared with crossbreed bitches (French Bulldog: 15.9 times more likely; Boston Terrier: 12.9 times more likely; Pug: 11.3 times more likely). Without intervention, dystocia can lead to the death of the puppies and often of the mother. Consequently, caesarean section rates are high in these breeds, up to 86% in the English Bulldog.

Obesity: Overweight and obesity are common in brachycephalic breeds and may predispose dogs to BOAS as well as to further health disorders e.g. osteoarthritis and hypertension.

Shortened lifespan: In addition to an increased disease burden, longevity studies have demonstrated that brachycephalic dogs have a reduced lifespan compared to non-brachycephalic dogs.

Despite the potential welfare impact of many health problems seen in brachycephalic dogs, owners may not perceive their dog to be unhealthy, and instead may attribute clinical signs of disease (e.g. breathing difficulties) as a breed-related trait, and thus 'normal for the breed'. Such attitudes constrain positive change for these breeds, and may result in: breeders not actively selecting against conformational-related health disorders in their breeding decisions; puppy-buyers purchasing animals from parents with poor health; and owners delaying or not seeking veterinary advice and intervention for their dog.

DBRG Position

DBRG believes that the high prevalence of health problems in brachycephalic breeds that are a consequence of their conformation is unacceptable. Reforms in breeding practices and the selection of dogs for breeding are required to substantially improve breed health and welfare.

Due to the magnitude of this welfare problem, in terms of both chronicity and severity of disorders they are predisposed to, and the increasing number of animals at risk, DBRG believes that brachycephalic health and population numbers needs to be tackled as a matter of urgency.

The *Independent Inquiry into Dog Breeding*² recommended that extreme morphologies that can damage or threaten health and welfare should be avoided. DBRG agrees with this statement, and believes that extreme brachycephalic body shapes should be avoided in all breeds. DBRG advocates breeding towards more moderate brachycephaly, where disease risks are substantially lowered, alongside appropriate health testing to raise breed health standards.

Furthermore, the *Independent Inquiry into Dog Breeding* suggested that where welfare problems exist in a breed, breed standards should be amended specifically to encourage the selection of morphologies that will improve welfare. Advocated changes to breed standards include the addition of diagrams and quantitative ratios ('conformational limits'), to be both more precise, avoid misinterpretation of descriptions, and to encourage the necessary changes. DBRG believe that breed standards should be reviewed by

breeding organisations in consultation with independent veterinary professionals, to remove and amend references to potentially harmful traits, along with the inclusion of minimum muzzle lengths to discourage the most high-risk conformations.

The show ring has been identified as a potential lever for change. If healthy show dogs are rewarded, they will set a positive example for breeders of both show and pet dogs to emulate. Dogs that are awarded prizes in the show-ring should represent those with the best health in their breed, not merely the most desirable appearance. Show judges should receive further training on the interpretation of breed standards to avoid extreme conformation. Further policing of judging practices should be conducted, with those individuals repeatedly rewarding extreme conformation initially re-educated, and where appropriate suspended from this role. Show ring activity should be closely scrutinised for all brachycephalic breeds, as part of existing initiatives such as the Kennel Club's Breed Watch programme, with breeds only removed from such monitoring when substantial evidence of concrete improvements in breed health have been made.

To improve health within brachycephalic breeds, functional health testing, to measure exercise tolerance in brachycephalic breeds, should be developed, validated and included as a pre-breeding and pre-showing requirement for breeding organisations. Dogs which are incapable of exercising normally are denied their basic legal needs (as expressed in Section 9 (2) of the Animal Welfare Act 2006). A dog unable to breathe, walk and play freely should not be bred from.

DBRG recognises that the phenotypic variability, along with the percentage of dogs free from health problems is likely to be limited for some brachycephalic breeds. Insufficient variation may exist to select purely within the confines of registered dogs to achieve a more moderate conformation and reduced disease burden. In this scenario, to avoid increased levels of inbreeding, judicious outcrossing with other, non-brachycephalic breeds should be used to restore both genetic diversity and safer conformations within the breeding pool.

DBRG is concerned about the rapid rise in the popularity of brachycephalic dogs, reflected in the significant increase in Kennel Club registrations of Pugs and French Bulldogs, in particular, in recent years. DBRG wants to see this trend reversed; a decline in the number of registrations for brachycephalic breeds; and a reduction in the proportion of these breeds in the wider population. Elevated popularity of brachycephalic breeds not only leads to more dogs at risk of conformation-related disorders in the population, but may also lead to irresponsible breeding practices to meet demand. This includes indiscriminate selection of sires and dams; new breeders exploiting this demand and producing puppies without knowledge of breed-specific requirements; and encouraging the illegal importation of puppies into the UK. Consideration should therefore be given to incentivising breeders outside the influence of the Kennel Club to focus on breeding for healthier conformation.

Puppy-buyers, as consumers, fuel this demand, and stronger efforts should be made to educate the public regarding the consequences of this conformation. Initiatives to discourage the use and normalisation of brachycephalic dogs in the media may help to reduce the desire for these breeds, and perceptions that they are currently 'in fashion'. Companies using brachycephalic breeds for advertising products or services should be reminded of their corporate social responsibility and guided in the selection of healthier alternatives to use in publicity material.

Experts in canine behaviour and welfare should work with breeding organisations to identify and promote ownership of healthy non-brachycephalic breeds, with characteristics that meet the lifestyle requirements and preferences of owners who desire a brachycephalic breed. Where minds cannot be changed, educational materials should be produced to aid owners in selecting the healthiest brachycephalic dog possible, to raise the demand for healthy dogs. Owners should be well versed in the risks they are taking in acquiring such a breed, and aware of the emotional and financial implications of their decisions.

Veterinary professionals have a role in educating the public on brachycephalic health, both pre and post-purchase, and should take a proactive role in advising clients on breed choice. Further engagement of vets and vet nurses on brachycephalic health is required, as credible and trusted leaders in animal

health and welfare. Activities include: educating owners on what is 'normal' or not normal for brachycephalic dogs; reporting conformation-altering surgery and Caesareans to the Kennel Club when carried out on Kennel Club registered dogs; and undertaking breed health assessments. At a broader level, a united voice of the veterinary profession stimulating and contributing to public and political debate may help to further accelerate positive changes in breed health.

DBRG believes that contributions from many stakeholder groups are required to change the culture and attitudes surrounding the breeding and purchase of brachycephalic dogs, with efforts from the Kennel Club, dog breed clubs, dog breeders, veterinary professionals, academics, government and animal charities needed to bring about meaningful and lasting change.

Recommendations

- Educate potential buyers of brachycephalic dogs on the health and welfare consequences of this conformation, and encourage healthier alternatives that meet other breed characteristics (e.g. size, temperament) to reduce further increases in population.
- Continued and increased activity by the veterinary profession and welfare charities to warn and educate the general public about the health and welfare issues of brachycephalic breeds in order to reduce demand, and avoid normalisation of welfare issues within breeds.
- Urgent action by the relevant breed societies and the Kennel Club to maintain the revision of breed standards so that they more clearly represent the blueprint of a fundamentally healthy dog. This should not only avoid 'extremes' but provide specific measurements and diagrams to avoid misinterpretation.
- Only award prizes in the Show Ring to dogs which are in good health and without extreme conformations, and have passed functional health tests.
- Strict rules for show judges to follow Kennel Club guidance and specifications when judging brachycephalic breeds. This should include a KC and veterinary review of the judging process.

- Only dogs which have moderate body shapes should be selected for breeding.
- Functional health testing should be introduced for dogs before selection for breeding that are harmonised across breed clubs and across brachycephalic breeds to allow progress to be tracked.
- Judicious outcrossing should be considered as a strategy for all brachycephalic breeds to reduce affectedness in the general breed population and promote genetic and phenotypic diversity.
- Support of the CRUFFA campaign to persuade companies not to use brachycephalic breeds in their advertising, and where considered essential (e.g. for veterinary products) advocate the use of moderate individuals.
- Licensing regulations are amended to require that dogs selected for breeding are of sound health and temperament, and at low risk of causing adverse welfare in offspring arising from inherited conditions, including poor conformation.
- Statutory regulations under the Animal Welfare Act to prevent the breeding of dogs which are likely to cause the suffering of the female parent and offspring due to poor conformation.
- Adequate penalties issued for those breeders who contravene these regulations

Notes

¹ <http://www.thekennelclub.org.uk/press-releases/2017/february-2017/>

² Bateson, P. (2010) Independent inquiry into dog breeding. Halesworth, Suffolk. Micropress Ltd.
https://www.researchgate.net/publication/266277147_Independent_Inquiry_into_Dog_Breeding

³ Kennel Club and Brachycephalic Working Group to agree on which breeds may be removed from the Kennel Club's Breed Watch Programme.

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