

Dogs Victoria Fact Sheet

Health & Wellbeing

Respiratory Function Grading Scheme



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Dogs Australia has recently signed on to join the UK Kennel Club's '**Respiratory Function Grading Scheme**'.

The grading scheme assesses three of Australia's most popular breeds - Bulldogs, French Bulldogs and Pugs - for breathing problems known as BOAS (brachycephalic obstructive airway syndrome).

What is BOAS?

The UK Kennel Club provides the following explanation:

Dogs with a flat, wide-shaped head are said to be brachycephalic ('brachy' meaning short, and 'cephalic', meaning head). The soft tissue in the nose and throat of some brachycephalic dogs may be excessive for the airways, partially obstructing the airway and making it difficult for them to breathe normally (causing heavy panting or noisy breathing). This condition is known as BOAS and is a progressive disorder that can impair a dog's ability to exercise, play, eat and sleep.

Note: 'Progressive' means that the disorder gets worse with time.

Affected animals may not be able to cool themselves effectively, and are at high risk of hyperthermia (a sometimes fatal rise in body temperature that can occur even when the weather is not hot). They are also at risk of collapse if they cannot get enough oxygen to their brain when exerting themselves.

BOAS is one of the most contentious animal welfare and breeding issues worldwide, and has been the focus of veterinary organisations and animal welfare groups for many years. This attention has seen calls in various parts of the world to ban the breeding of brachycephalic breeds on welfare grounds.

Locally, the Australian Veterinary Association and RSPCA joined forces in 2016 to address the increasing number of family pets with severe breathing issues with the 'Love is Blind' campaign, calling for vets, owners, and breeders to work together to address the issues that contribute to BOAS.

What contributes to BOAS symptoms?

Obstructive airway syndrome has a complex group of contributing factors.

BOAS was originally thought to be due simply to the anatomical changes seen across breeds when the length of nose (or foreface) became shorter – things such as elongated soft palates, narrowed windpipes or narrowed nostrils.

However; it has now been shown that anatomical features (such as length of fore face, nostril size etc.) often correlate poorly with the clinical symptoms of BOAS, and are poor predictors of the individual's ability to breath effectively.

The UK Kennel club has some excellent information and a great video explaining BOAS on their website if you would like to learn more.

Can BOAS be treated?

There is no one treatment that 'cures' BOAS.

Depending on the seriousness of the symptoms and the impact on the individual's welfare, treatment options include:

For **mild symptoms** - managing the animal to minimise breathing stress and over-heating (avoiding hot weather, keeping the animal in air-conditioning, restricting exertion or exercise when it is warm etc.)

For more **serious symptoms** – there are a variety of surgical techniques aimed at increasing the air flow and removing obstructions, however none of these come without risk.

Brachycephalic animals have increased anaesthetic risk, and those with BOAS present the highest risks of aspiration pneumonia occurring both under anaesthetic and when under stress.

Unfortunately, the number of animals presenting with severe symptoms and requiring surgery has increased over recent years – largely due to the spike in popularity

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of these breeds as pets. For the veterinary profession, the constant flow of pet owners with animals that struggle to breath, or who cannot live, eat, play or sleep normally is distressing.

About the Grading Scheme

Developed by Jane Ladlow and her team at Cambridge University, this program offers breeders a non-invasive, scientifically based, grading assessment of their animal's airway function.

Animals are assessed by an accredited vet who uses a stethoscope to listen to the dog's breathing while they are calm and relaxed, and again following 3 minutes of trotting exercise.

A list of criteria is then used to give a grading between 0 and 3

Grade 0 – Clinically Unaffected and free of Respiratory signs of BOAS

Grade 1 – Clinically Unaffected with **mild** respiratory signs linked to BOAS

Grade 2 – Clinically Affected with **moderate** respiratory signs of BOAS

Grade 3 – Clinically Affected with **severe** respiratory signs of BOAS

The grading result can then be used to guide balanced breeding selections, and help reduce the risks of producing puppies affected by BOAS.

Are there rules about which Grades can be bred from?

There are currently no rules or limitations relating to breeding with animals of certain grades.

It is up to the breeder to carefully consider the grading results of their breeding stock, and to weigh these up as part of their breeding stock selection process.

However, the recommendation to breeders is to avoid breeding animals that have been graded as a Grade 3, and with breeding stock that has been graded as a Grade 2 to aim to breed them to animals that are Grade 0 or Grade 1.

The table below, taken from the [UK Kennel Club Website](http://www.ukkennelclub.co.uk) provides information about the risk of producing puppies with BOAS based on the grading of the two parents.

The combinations in green represent the lowest risk of breeding puppies with BOAS, the combination of Grade 2 to Grade 2 (shown in amber) represents a higher risk.

The combinations highlighted in red (where at least one parent is a Grade 3) represent the highest risk, and these breedings are not recommended.

		DOG ONE (sire or dam)			
DOG TWO (sire or dam)	RFG GRADE FOR EACH DOG	GRADE 0	GRADE 1	GRADE 2	GRADE 3
	GRADE 0				
	GRADE 1				
	GRADE 2				
	GRADE 3				

The grading scheme has been used in the UK since 2017, and there have been significant improvements in the incidence of BOAS in puppies produced by breeders using the scheme.

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What can we expect to see in Australia?

Like most countries, it is anticipated that the initial rounds of grading will see a large number of animals fall into the Grade 2 and Grade 3 categories.

Although breeders will be disappointed and no doubt concerned with these gradings, by considering their future breeding plans, it is hoped that within a generation or two, the number of Grade 3 animals will significantly reduce as it has done in the UK.

It is also anticipated that the pet-owning public will become aware of the need to source their future pets from breeders who are actively scoring, and whose breeding animals have lower grades.

In the UK, it is now common for pet purchasers to actively seek out breeders who utilise the scheme to inform their breeding program, and for breeders to widely promote that their breeding animals have low grades.

Knowledgeable and conscientious breeders in these breeds are also looking for grading results prior to selecting stud dogs, importing or purchasing breeding animals, or utilising frozen semen.

Where can I learn more?

The UK Kennel Club website has some fabulous resources relating to BOAS and the Respiratory Function Grading Scheme.

For information about the Respiratory Function Grading Scheme visit:

<https://www.thekennelclub.org.uk/health-and-dog-care/health/getting-started-with-health-testing-and-screening/respiratory-function-grading-scheme/>

To watch a short YouTube video that explains the test and shows some examples visit:

https://youtu.be/bd3_s_hC7G4

To learn more about Boas and breathing problems in Brachycephalic breeds visit:

<https://www.thekennelclub.org.uk/health-and-dog-care/health/health-and-care/a-z-of-health-and-care-issues/breathing-problems-brachycephalic-dogs/>



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Information for Breeders who are thinking about having their dogs tested under Dogs Australia's Respiratory Function Grading Scheme

Below we try to answer some of the common questions that breeders may have about the introduction of this scheme -

How are the results of each assessment recorded?

All animals that undergo a grading assessment will have their results recorded on the **Dogs Australia ORCHID database**. Breeders can choose whether they would like those results to be made public or not.

As part of the licensing agreement, Dogs Australia is required to share all results data with the UK Kennel Club for the purposes of evaluating the assessment process and to monitor trends over time.

Do I get a copy of the Grading?

Regardless of whether a Breeder chooses to make the result public or not, they will receive a Certificate showing the result for their animals to keep with their records.

Will the grading assessment test be available for other brachycephalic breeds?

At this stage, the test is only scientifically validated for Bulldogs, French Bulldogs and Pugs; however work is progressing to expand the test to other breeds in the near future.

Other brachycephalic breeds can be assessed; however they will not be able to receive an official grading. Individuals of other breeds will only be assessed as 'Affected – showing signs of BOAS' or 'Unaffected – no signs of BOAS'.

I own an animal that is not registered with Dogs Australia, can it be tested?

Animals of the three breeds that are able to be graded, that are not registered with Dogs Australia, or who are registered with another registry, can be assessed, however, the cost of the grading test will be higher.

Although many Dogs Australia members will find this surprising, the UK Kennel Club agreement allows for all dogs of the breed to be assessed, so that there is potential for improvement in both registered pedigree dogs, and those bred by other breeders.

How old must the individual be before it can undergo a grading assessment?

Regardless of the breed, all individuals need to be at least 12 months of age before being assessed.

How often do animals need to undergo assessment?

The grading certification lasts for **2 years**, after which the animal will require re-assessment. This is due to the progressive nature of BOAS.

Who will be conducting the testing?

Only trained and accredited veterinarians will be able to conduct grading assessments. Training of assessors is already underway, and it is hoped that there will soon be assessors located all over the country, making it easy for breeders to access the Respiratory Function Assessment Scheme.

Dr. Arthur House, a specialist small animal surgeon based at the Peninsula Vet and Emergency Referral Hospital, will be Australia's Chief Assessor, and will be responsible for training interested veterinarians who wish to become accredited under the scheme.

Dr. House will also be the Veterinarian responsible for any re-assessments when there is a dispute about the grading given to an individual animal.

What does the test actually involve?

All dogs that are presented for grading are first allowed time to settle after arrival – in most cases, this will take place in an air-conditioned room or area.

Each animal is first examined at rest – with the assessor looking at and listening to the animal's breathing. This includes observing the shape and 'openness' of the nostrils, the normal rate and rhythm of the breathing, the amount of respiratory effort when at rest, and noting any respiratory noise.

To do this they will use a stethoscope to listen to the animal's heart and lung sounds, as well as the sounds of air moving through the animal's larynx (by listening at the side of the dog's upper neck).

Based on the observations, the assessor will already have a pre-exercise grading based on set criteria.

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Then the animal is trotted at about 6-8km/hour for 3 minutes. During this exercise period, the assessor is watching and listening to the animal's breathing and behaviour.

At the end of the 3 minutes, the assessor then re-assesses the animal's breathing – looking for changes such as increase respiratory effort or noise. They also watch how quickly the animal recovers from the exercise.

At the end of the test, the animal is given a grading, and the results are recorded directly into the ORCHID database.

Only one dog is assessed at a time, assessors do not run multiple tests concurrently due to the high level of observation required.

Is there a maximum temperature set for above which a grading assessment cannot occur?

Although the UK Kennel Club does not have a set limit, in Australia a maximum of 25 degrees Celsius has been set, above which a grading test will not be undertaken.

Note:

*The symptoms of BOAS are **not** temperature dependant - in affected animals, airway obstruction is present at all times, and in all weather. However, exercising animals with severe BOAS on a warmer day may have welfare implications for the animal.*

Can the breeder/owner or the assessor stop the test?

Where an individual animal has significant signs of respiratory distress, the test may be aborted in the interests of the animal's welfare.

Animal's that have severe respiratory signs of BOAS (Grade 3) generally show signs of respiratory compromise at around the 2 minute mark of the trotting exercise part of the test.

These dogs may refuse to continue moving, may vomit fluid, or may show signs related to lack of oxygenation. If this is the case the test may be aborted as it will already be clear that the animal qualifies for Grade 3.

Where are grading assessments going to be conducted?

In many cases, testing will take place at the Assessor Veterinarian's clinic or hospital. However, it is anticipated that breed clubs may host testing 'days' at facilities such as KCC Park or the Bulla Dog Exhibition Centre.

Will the grading result be better if my animal is fitter?

Physical fitness is not directly related to the clinical signs of BOAS so 'training' your dog up prior to assessment is unlikely to change their grading. Dogs who have severe respiratory signs of BOAS are also likely to be exercise intolerant, making any form of fitness training very difficult. The exception to this is in Pugs, where obesity has been shown to worsen the symptoms of BOAS, so pugs with a lower body condition score at the time of testing may record better results.

How much will it cost?

The assessment of each individual dog takes approximately 20-30 minutes, including time for the assessor to complete all of the paperwork. This is similar to the time allocated within a veterinary practice for a standard consultation.

It is anticipated that the fee to conduct a grading test will be about \$150 to reflect the time required. As part of the initial training of assessors, this amount has been discussed across a variety of clinic and assessors, and it is hoped that it will become a standardised fee.

There is also a \$10 fee that the assessor must pay to Dogs Australia (\$20 for animals not registered with Dogs Australia) Taking the anticipated cost for an assessment to \$160 per animal.

Breed Club grading days may offer members a reduced fee.

Note: Testing prices quoted are correct as at January 2023 but are subject to change over time.



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