



# NATIONAL BRITISH BULLDOG COUNCIL OF AUSTRALIA

(Affiliated with the Australian National Kennel Council)

## NATIONAL BRITISH BULLDOG HEALTH SCHEME PROPOSAL

- 1. OBJECTIVES:**
- To promote, recognise and encourage good breeding practices
  - To reduce the incidence of hereditary diseases & traits
  - To assist breeders to select and breed with health tested dogs
  - To assist the public in their search for healthy puppies from responsible breeders
- 2. TARGET:**
- To collect results to establish accurate breed averages and Medians on each test/assessment, indicating how widespread the disease is within the gene pool in order to understand what effect on the size of the gene pool may occur if there were limitations on breeding combinations.
  - To improve health and welfare to support and promote informed breeding decisions.
  - To remove tests from the scheme once it has been established that the relevant condition does not regularly effect the breed.
- 3. PARTICIPATION:**
- Participation in this scheme is optional. *National Council does not have the power to enforce testing. Suggestion to review in the future with the option of introducing Litter Registration Limitations (LRL).*
  - Participation is open to all ANKC registered British Bulldogs over 12 months of age.
- 4. COLLATION AND HOLDING OF RECORDS:**
- Records to be submitted to Orchid (to be updated by ANKC to allow for receiving/holding of additional records)
  - Dogs Registration number, Registered Name & Microchip number will be mandatory to submit.
  - Microchip number identified by veterinarian must be identified on each test and must match the microchip submitted.
  - Owners will have the option to make results public or remain private when submitting.
  - Statistical numbers may be made public by the National Council, this may include sex, age, test result etc. but will not include the dogs name or registration details as public information.
- 5. INCENTIVE:**
- At the discretion of the owner/breeder, dogs that have obtained a certificate (of any level) can be listed on the National Council Website under a 'Health Scheme Participation' listing, along with the certificate level and the name of the tests submitted.
  - Breeders who have obtained certificates for 3 or more dogs can be listed under a 'Breeder' listing.
  - This is to give owners the incentive to submit to the National Council Data Base, also a reference for Puppy Buyers.
  - 'National British Bulldog Health Scheme' to be advertised on DogzOnline Puppy Advertisement Page along with 'British Bulldog Puppy Buyer Info'
  - This is to help puppy buyers know what questions they should be asking the breeder, and to give them insight into the tests available.
  - Breeders can then advertise their Dogs Health Certificate in their advertisement.

- 6. CERTIFICATE ISSUE:** Certificates will only be issued to those that submit their results to Orchid Data Base.
- Orchid submission forms (with or without results at the owners discretion) must be submitted to the NBBBC for participation certificate to be issued.
- 7. COST:** Cost of Submission to be \$20.00 per dog submitted, upgrading of certificate levels at \$10.00.
- Income from Health Scheme Submissions to be used for the ongoing running of the health scheme including but not limited to, online database, health testing research, health scheme promotion.
- 8. LEVELS:** Each level will be obtained by the number of test results submitted.
- |        |   |
|--------|---|
| Bronze | Cardiac Assessment or Echocardiogram, HUU and any 3 <sup>rd</sup> test. |
| Silver | Any 6 tests.  |
| Gold   | Any 9 tests.  |
- 9. REQUIRED RESULTS:** Cardiac Examination & Assessment or Echocardiogram will require a grade 0 or 1 to pass health scheme.
- There will not be pass or fail results for any other tests until breed averages and mediums are established. Certificates will be issued on participation.
- NBBBC Health Committee to ongoingly review breed statistics on each test and review the introduction of pass/fails on individual tests.*
- 10. VETERINARY INFORMATION SHEET:**
- Each test/assessment will have an accompanying Veterinary Information Sheet which will detail the benefits of the test/assessment and the procedures on how to complete the test/assessment. This will minimise variables between vets.
- 11. RECOMMENDED VETS:** Recommended vets will be vets that have been issued with the full procedures of the national health scheme and have acknowledged their understanding of the scheme and its requirements, objective & targets.
- It is NOT mandatory to use Recommended Vets; owners may use any vet of their choice.
- 12. SUMMARY OF TESTS:**
- |  |    |  |
|--|----|--|
| Respiratory Function Grading Scheme        | or | Exercise Tolerance Test & Nares Assessment |
| Cardiac Examination & Assessment           | or | Echocardiogram                             |
| DNA Testing – Canine Hyperuricosuria (HUU) |    |  |
| DNA Testing – (Cystinuria Type III)        |    |  |
| Tracheal Hypoplasia Xray & Scoring         |    |  |
| Spine X-Ray & Scoring                      |    |  |
| Hip X-Ray & Scoring                        |    |  |
| Elbow X-Ray & Scoring                      |    |  |
| Patella Luxation Examination & Assessment  |    |  |
| Eye Examination & Assessment               |    |  |
| ACES                                       |    |  |
| Thyroid Testing                            |    |  |



# NATIONAL BRITISH BULLDOG COUNCIL OF AUSTRALIA

(Affiliated with the Australian National Kennel Council T/A Dogs Australia)

## NATIONAL BRITISH BULLDOG HEALTH SCHEME ORCHID SUBMISSION FROM

Dog Details		
Dogs Australia Registered Name		
Dogs Australia Registered Number		
Microchip Number		
Weight		
Colour		
Owner Details		
Owner/s Name		
Dogs Australia Member Number		
Owners Address		
Owners Email		
I/We hereby declare that: (a) The particulars as shown above are correct and relate to the dog submitted for examination. (b) I give permission for the results of the examination to be used at a future date for the purpose of statistical research which may be published and for use by Dogs Australia.		
In addition to using the results for statistical purposes the results will be placed on an open register with Dogs Australia.		
<input type="checkbox"/> Place an "X" in the box if not approved		
Owner/s Signature:		Date:
Veterinarian Details		
Veterinarian Name	Practice Name	
Address		
Contact Number		
Contact Email		
<input type="checkbox"/> Positive Identification (microchip) Sighted	<input type="checkbox"/> Dogs Australia Certificate of Registration and Pedigree Sighted	
Veterinarian Signature:		Date:
Test Results		
Respiratory Function Grading Scheme *	<input type="checkbox"/> Grade 0 <input type="checkbox"/> Grade 1	<input type="checkbox"/> Grade 2 <input type="checkbox"/> Grade 3
Exercise Tolerance Test & Nares Assessment *	<input type="checkbox"/> Grade 0 <input type="checkbox"/> Grade 1	<input type="checkbox"/> Grade 2 <input type="checkbox"/> Grade 3
Echocardiogram **	<input type="checkbox"/> Grade 1 <input type="checkbox"/> Grade 2	<input type="checkbox"/> Grade 3
Cardiac Examination & Assessment **	<input type="checkbox"/> Grade 0 <input type="checkbox"/> Grade 1 <input type="checkbox"/> Grade 2 <input type="checkbox"/> Grade 3	<input type="checkbox"/> Grade 4 <input type="checkbox"/> Grade 5 <input type="checkbox"/> Grade 6
DNA - Canine Hyperuricosuria HUU	<input type="checkbox"/> Clear	<input type="checkbox"/> Carrier <input type="checkbox"/> Affected
DNA Testing - (Cystinuria Type III)	<input type="checkbox"/> Clear	<input type="checkbox"/> Carrier <input type="checkbox"/> Affected
Patella Luxation Examination & Assessment	Left: <input type="checkbox"/> Grade 1 <input type="checkbox"/> Grade 2 <input type="checkbox"/> Grade 3 <input type="checkbox"/> Grade 4	Right: <input type="checkbox"/> Grade 1 <input type="checkbox"/> Grade 2 <input type="checkbox"/> Grade 3 <input type="checkbox"/> Grade 4
Eye Examination & Assessment	Left Eye: <input type="checkbox"/> Clear <input type="checkbox"/> Cherry Eye <input type="checkbox"/> Ectropion <input type="checkbox"/> Entropion <input type="checkbox"/> Dry Eye <input type="checkbox"/> Distichiasis <input type="checkbox"/> Signs of Surgery _____	Right Eye: <input type="checkbox"/> Clear <input type="checkbox"/> Cherry Eye <input type="checkbox"/> Ectropion <input type="checkbox"/> Entropion <input type="checkbox"/> Dry Eye <input type="checkbox"/> Distichiasis <input type="checkbox"/> Signs of Surgery _____
Thyroid Testing	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal

Hip, Spine, Elbow & Tracea scoring must be submitted by an ORCHID radiologist.  
ACES must be submitted by an ORCHID Ophthalmologist.

DNA Testing must be collected by an approved collector or veterinarian.

\*Respiratory Function Grading Scheme or Exercise Tolerance Test & Nares Assessment only 1 will count towards certificate.

\*\*Cardiac Examination & Assessment or Echocardiogram only 1 will count towards certificate.



# NATIONAL BRITISH BULLDOG COUNCIL OF AUSTRALIA

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## VETERINARY INFORMATION SHEET: TRACHEAL HYPOPLASIA EXAMINATION & ASSESSMENT

### Details about the Condition:

Tracheal hypoplasia is a narrowing of the trachea that is present from birth. The trachea is made up of multiple cartilage rings, and in affected dogs the growth of these rings is inadequate. The trachea does not always grow at the same rate as a puppy and in some cases, it will require careful management until the puppy outgrows the condition.

Tracheal hypoplasia is one component of brachycephalic airway obstruction complex.

Affected animals may present with stridor (wheeze), dyspnoea (laboured breathing), reduced exercise tolerance and coughing. Excitement can make the condition worse.

### Testing Procedure:

Tracheal hypoplasia is diagnosed by Xray over the age of 12 months.

Dog may be awake or sedated. If sedated endotracheal tube must not influence tracheal diameter.

Evaluation of the radiographs should include the following:

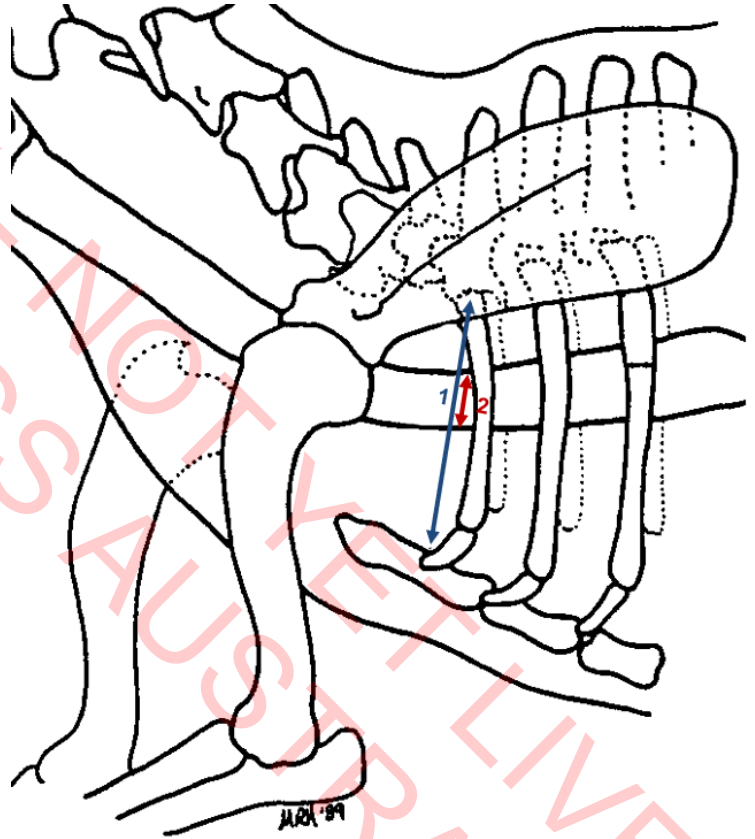
1. Assessment of the pulmonary parenchyma for pneumonia, pulmonary oedema or other pathology.
2. Assessment of the mainstem bronchi and trachea for collapse
3. Measurement of the thoracic inlet and tracheal diameter.

### Thoracic Inlet

Measured from the ventral aspect of the vertebral column at the midpoint of the most cranial rib to the dorsal surface of the manubrium (1st sternbra) at its point of minimal thickness

### The tracheal diameter

Measured between the internal surfaces of the tracheal wall oriented perpendicularly to the tracheal long axis. This measurement performed where the long axis of the trachea crosses the midpoint of the tracheal lumen



### Interpreting Results:

Measurements taken at the Thoracic Inlet, TI (number 1 in the diagram) and the diameter of the Trachea TD (Number 2) are then written as a ratio. Ratio is calculated by  $TD \div TI$ .

**Trachea Diameter (cm):** \_\_\_\_\_  $\div$  **Thoracic Inlet (cm):** \_\_\_\_\_ = \_\_\_\_\_

**Notes:** \_\_\_\_\_



# NATIONAL BRITISH BULLDOG COUNCIL OF AUSTRALIA

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## VETERINARY INFORMATION SHEET: EXERCISE TOLERANCE TEST

### Test Procedure:

Functional grading system of BOAS based on respiratory signs before and after an exercise tolerance test.

A 3-minute trot with speed of approximately 6-8 km/hr. **(300m in 3 minutes)**. Ideally performed at ambient temperature <22 Celsius.

Presentation of at least one sign in the highest grade determines the final grading result.

### Clinical Signs:

- Respiratory noise is diagnosed by pharyngolaryngeal auscultation. Performed gently from the side of the larynx not below.**
  - Mild: only audible under auscultation
  - Moderate: intermittent audible noise that can be heard without stethoscope
  - Severe: constant audible noise that can be heard without stethoscope
- Inspiratory effort - An abnormal respiratory cycle characterised by evidence of increased effort to inhale the air with the use of the diaphragm and/or accessory muscles of respiration and/or nasal flaring with an increase in breathing rate.**
  - Mild: regular breathing patterns with minimal use of diaphragm
  - Moderate: evidence of use of diaphragm and accessory muscles of respiratory
  - Severe: marked movement of diaphragm and accessory muscles of respiratory
- Dyspnoea/Cyanosis/Syncope - Dogs that have had episodes of syncope and/or cyanosis documented by the owners report are classified into Grade III without performing the ETT.**
  - Mild dyspnea: presents sign of discomfort
  - Moderate dyspnoea: irregular breathing, signs of discomfort
  - Severe dyspnoea: irregular breathing with signs of breathing discomfort and difficulty in breathing

### Interpreting Results:


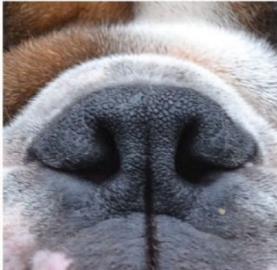


		Respiratory Noise	Inspiratory Effort	Dyspnoea/Cyanosis/Syncope
Grade 0	Pre ETT	Not audible	Not present	Not present
	Post ETT	Not audible	Not present	Not present
Grade 1	Pre ETT	Not audible or mild	Not present	Not present
	Post ETT	Mild	Not present to mild	Not present
Grade II	Pre ETT	Mild to moderate	Mild to moderate	Not present
	Post ETT	Moderate to severe	Moderate to severe	Mild dyspnoea, cyanosis or syncope not present
Grade III	Pre ETT	Moderate to severe	Moderate to severe	Moderate to severe dyspnoea, may or may not present cyanosis. Inability to exercise
	Post ETT	Severe	Severe	Severe dyspnoea, may or may not present cyanosis or syncope.



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## VETERINARY INFORMATION SHEET: NASAL STENOSIS EXAMINATION & ASSESSMENT





Examination & Assessment Procedure:	
Open:    nostrils are wide open	
Mild:    Slightly narrowed nostrils where the lateral nostril wall does not touch the medial nostril wall. Immediately after the exercise tolerance test (ETT), the nostril wings should move dorsolaterally to open on inspiration	
Moderate: The lateral nostril wall touches the medial nostril wall at the dorsal part of the nostrils and the nostrils are only open at the bottom. Immediately after the ETT, the nostril wings are not able to move dorsolaterally and there may be nasal flaring (ie, muscle contraction around the nose trying to enlarge the nostrils)	
Severe:    Nostrils are almost closed. The dog may switch to oral breathing from nasal breathing with stress or very gentle exercise such as playing.	



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## VETERINARY INFORMATION SHEET: EYE EXAMINATION & ASSESSMENT

Examination & Assessment Procedure:	
<p><b>Cherry Eye:</b></p> <p>This is created by an enlarged and prolapsed tear gland on the inner surface of the third eyelid, generally caused by infection. It shows itself as a red, cherry-like growth protruding from the inner corner of the eye.</p>	
<p><b>Ectropion:</b></p> <p>In the normal structure of the eye, the lid should be shaped like a globe. It should not be rolled in or out. Ectropion is a condition where it is rolled out, resulting in the third eyelid (or haw) being visible. This causes the lower eyelids to appear droopy.</p>	
<p><b>Entropion:</b></p> <p>In the normal structure of the eye, the lid should be shaped like a globe. It should not be rolled in or out. Entropion is the condition where the eyelid rolls inward, causing irritation to the eye.</p>	
<p><b>Dry Eye:</b></p> <p>This is a disease, usually of the older dog, which results from inadequate tear production. The eyes appear dull and listless and the eye has a thick discharge. This can lead to infection or corneal ulcers if left untreated.</p>	
<p><b>Distichiasis:</b></p> <p>Distichiasis is a condition in which extra hairs grow out of the eyelash area. It happens when there are two or more hairs growing out of a Meibomian gland opening. (Meibomian glands are located along the margin of the eyelid.)</p>	



# NATIONAL BRITISH BULLDOG COUNCIL OF AUSTRALIA

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## VETERINARY INFORMATION SHEET: CANINE HYPERURICOSURIA (HUU)

### Details about the disease:

In affected dogs, uric acid does not dissolve easily in urine and accumulates. The excessive amount of uric acid forms crystals which lead to urinary calculi (stones), which may require surgery.

### Clinical signs:

The changes in the urine are generally present from birth. However, it usually takes some time for crystals to form and combine into stones that cause problems, most often between 3 and 6 years of age. The signs you will see in your dog depend on where in the urinary tract the stones end up. They collect most commonly in the bladder, in which case you may see blood in the urine, difficulty and pain in urinating, and small frequent amounts of urine.

Urinary tract obstruction is a serious condition that occurs when a stone completely blocks the urethra and blocks the outflow of urine (more common in male dogs that have a smaller urethra). Signs include straining to urinate, vomiting and loss of appetite, weakness, and lethargy (lack of energy), due to toxins building up in the body.

### How it is inherited:

The disease is described as an autosomal recessive condition. This means that a dog must inherit two copies of an abnormal gene (one from its mother and one from its father) before its health is affected. A dog that inherits only one copy of the abnormal gene (from its mother or its father) will have no signs of the disease but will be a carrier and may pass the gene on to any offspring.

### Testing laboratories:

Orivet Genetics AU	<a href="https://www.orivet.com/store/breedlist?breed=British%20Bulldog&amp;species=canine">https://www.orivet.com/store/breedlist?breed=British%20Bulldog&amp;species=canine</a>
Animal Genetics US	<a href="https://www.animalgenetics.us/canine/canine-test-now-canine.asp">https://www.animalgenetics.us/canine/canine-test-now-canine.asp</a>
Animaldna Diagnostics UK	<a href="https://www.animaldnadiagnostics.co.uk/breed/dog/39">https://www.animaldnadiagnostics.co.uk/breed/dog/39</a>
UC Davis US	<a href="https://vgl.ucdavis.edu/services/Hyperuricosuria.php">https://vgl.ucdavis.edu/services/Hyperuricosuria.php</a>
Massey University NZ	<a href="https://epagsc.myshopify.com/collections/frontpage/products/canine-testing">https://epagsc.myshopify.com/collections/frontpage/products/canine-testing</a>

### Testing Procedures:

Testing must be completed by a Veterinarian or a Laboratory Authorized Collection Agent.

Laboratory Submission form must be completed by a Veterinarian or a Laboratory Authorized Collection Agent.

To avoid any possible contamination, ensure that gloves are worn during the collection.

Refer to laboratory website for specific sample requirements include swab, packaging, and postage.





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## VETERINARY INFORMATION SHEET: CARDIAC EXAMINATION & ASSESSMENT

### Testing Procedure:

The arterial and venous pulses, mucous membranes, and precordium should be evaluated. Heart rate should be obtained. Cardiac auscultation should be performed in a quiet, distraction-free environment. The animal should be standing and restrained, but sedative drugs should not be used. Panting must be controlled, and if necessary, the dog should be given time to rest and acclimate to the environment. The clinician should be able to identify the cardiac valve areas for auscultation.

The examiner should gradually move the stethoscope across all valve areas and should auscultate over the subaortic area, ascending aorta, pulmonary artery, and the left craniodorsal cardiac base. Following examination of the left precordium, the right precordium should be examined.

- The **mitral valve** area is located over and immediately dorsal to the palpable left apical impulse and is identified by palpation with the tips of the fingers. The stethoscope is then placed over the mitral area and the heart sounds identified.
- The **aortic valve** area is dorsal and 1 or 2 intercostal spaces cranial to the left apical impulse. The second heart sound will become most intense when the stethoscope is centered over the aortic valve area. Murmurs originating from or radiating to the subaortic area of auscultation are evident immediately caudoventral to the aortic valve area. Murmurs originating from or radiating into the ascending aorta will be evident craniodorsal to the aortic valve and may also project to the right cranial thorax and to the carotid arteries in the neck.
- The **pulmonic valve** area is ventral and the one intercostal space cranial to the aortic valve area. Murmurs originating from or radiating into the main pulmonary artery will be evident dorsal to the pulmonic valve over the left hemithorax.
- The **tricuspid valve** area is a relatively large area located on the right hemithorax, opposite and slightly cranial to the mitral valve area.
- The clinician should also auscultate along the ventral right precordium (right sternal border) and over the right craniodorsal cardiac border.

### Interpreting Results:

Murmurs that are only detected intermittently or are variable should be so indicated. The radiation of the murmur should be indicated.

Grading of heart murmurs is as follows:

**Grade 0** - no murmur present

**Grade 1** - a very soft murmur only detected after very careful auscultation

**Grade 2** - a soft murmur that is readily evident

**Grade 3** - a moderately intense murmur not associated with a palpable precordial thrill (vibration)

**Grade 4** - a loud murmur; a palpable precordial thrill is not present or is intermittent

**Grade 5** - a loud cardiac murmur associated with a palpable precordial thrill and audible even when the stethoscope is lifted from the thoracic wall

**Grade 6** - a loud cardiac murmur associated with a palpable precordial thrill and audible even when the stethoscope is lifted from the thoracic wall.



# NATIONAL BRITISH BULLDOG COUNCIL OF AUSTRALIA

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## VETERINARY INFORMATION SHEET: ELBOW DYSPLASIA

### Diagnostic Imaging Panellists:

Dr Roger Lavelle VIC [lavellesdiagnosticimaging@gmail.com](mailto:lavellesdiagnosticimaging@gmail.com)  
Dr Mariano Makara NSW [www.vetscoring.com](http://www.vetscoring.com)  
Dr Jenny Richardson WA [Jen.Richardson@inet.net.au](mailto:Jen.Richardson@inet.net.au)  
Dr Ana Hayes VIC [anahayes18@icloud.com](mailto:anahayes18@icloud.com)

### Testing Procedures:

Digital x-rays must be in DICOM format  
Radiographs are obtained under sedation or anesthesia.

### Hyperflexed medial to lateral view (mandatory)

- Place the patient in lateral recumbency with the affected limb next to the tabletop.
- Forcefully pull the limb downward and cranially.
- Position the limb so that the elbow joint is a hyperflexed position. Make sure the carpus stays in a true lateral position, move the carpus toward the neck to hyperflex the elbow joint. This will help keep the elbow joint in a true lateral position.
- Use sandbags to hold the limb in position.
- Arch the head and neck dorsally using sandbags to hold the position.
- Pull the unaffected leg caudally and hold it with sandbags or tie to the tabletop.
- Sandbags can be used to hold the pelvic limbs.
- X-ray beam direction: The vertically directed x-ray beam is centered on the elbow joint.



### Lateral view (highly recommended)

- Position the patient in a lateral recumbent position with the elbow to be imaged down.
- Position the target limb cranially and ventrally and pull the opposite leg caudally
- Flex the elbow to a 90 degree angle
- Place the patient in lateral recumbency with the affected limb next to the tabletop.
- Forcefully pull the limb downward and cranially
- Flex the elbow to a 90 degree angle.
- Use sandbags to hold the limb in position.
- Arch the head and neck dorsally using sandbags to hold the position.
- Pull the unaffected leg caudally and hold it with sandbags or tie to the tabletop.
- Sandbags can be used to hold the pelvic limbs.
- X-ray beam direction: The vertically directed x-ray beam is centered on the elbow joint.



Reference - Dr Mariano Makara. <https://vetscoring.com/radiographic-technique/>



# NATIONAL BRITISH BULLDOG COUNCIL OF AUSTRALIA

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## VETERINARY INFORMATION SHEET: HIP DYSPLASIA

### Diagnostic Imaging Panellists:

Dr Roger Lavelle VIC [lavellesdiagnosticimaging@gmail.com](mailto:lavellesdiagnosticimaging@gmail.com)  
Dr Mariano Makara NSW [www.vetscoring.com](http://www.vetscoring.com)  
Dr Jenny Richardson WA [Jen.Richardson@iinet.net.au](mailto:Jen.Richardson@iinet.net.au)  
Dr Ana Hayes VIC [anahayes18@icloud.com](mailto:anahayes18@icloud.com)

### Testing Procedures:

Digital x-rays must be in DICOM format

Radiographs are obtained under sedation or anesthesia for several reasons:

To minimize stress to the patient;

To permit precise positioning of the pelvis and hips;

To remove the need for the animal to be held, as x-rays are potentially hazardous for anyone doing so.

### Positioning:

The radiographic view required is the extended ventrodorsal (VD) view.

The dog is positioned on its back with its hindlegs extended caudally, resulting in a position similar to that of a standing human.

The femora must be positioned parallel to each other and for this, the stifles are rotated slightly medially and held in position with a tie or tape so that they lie in the sagittal plane with the patella superimposed over the centre of the distal femur.

This position allows the femoral neck to be seen clearly, without superimposition by the greater trochanter and facilitates the detection of new bone on the femoral neck.

Centring of the x-ray beam must be at the level of the hip joints, which can be achieved by palpation of bony landmarks such as the pubic symphysis and greater trochanters. Centring further cranially or further caudally will distort the appearance of the hip joints. Collimation must be sufficient to include the pelvis but it is not necessary to include the stifles; to do so requires either incorrect centring or an unacceptably large area to be irradiated.

It is important to avoid tilting the dog to the side (lateral rotation) as this will alter the appearance of the hips and may worsen the score, since the hip that is closer to the table may appear artefactually subluxated. It is also important that the technical quality of the image is of a high standard with optimum contrast and definition and all the necessary labelling.



### Reference

DENNIS R. Interpretation and use of BVA/KC hip scores in dogs. *In Practice*. BMJ Publishing Group Limited; 2012 Apr 16;34:178-194.

Dr Mariano Makara. <https://vetscoring.com/radiographic-technique/>



# NATIONAL BRITISH BULLDOG COUNCIL OF AUSTRALIA

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## VETERINARY INFORMATION SHEET: PATELLAR LUXATION

### Examination & Assessment Procedure:

A method of classifying the degree of luxation and bony deformity is useful for diagnosis and can be applied to either medial or lateral luxation's by reversing the medial-lateral directional references.

The position of the patella can most easily be palpated by starting at the tibial tubercle and working proximally along the patellar ligament to the patella.

### Interpreting Results:

#### Grade 1

The patella easily luxates manually at full extension of the stifle joint but returns to the trochlea when released. No crepitation is apparent. The medial, or very occasionally, lateral deviation of the tibial crest (with lateral luxation of the patella) is only minimal, and there is very slight rotation of the tibia. Flexion and extension of the stifle joint is in a straight line with no abduction of the hock.

#### Grade 2

There is frequent patellar luxation which, in some cases, becomes more or less permanent. The limb is sometimes carried, although weight bearing routinely occurs with the stifle remaining slightly flexed as much as 30 degrees of medial tibial torsion and a slight medial deviation of the tibial crest may exist. When the patella is resting medially the hock is slightly abducted. If the condition is bilateral, more weight is thrown onto the forelimbs. Many cases in this grade live with the condition reasonably well for many years, but the constant luxation of the patella over the medial lip of the trochlea causes erosion of the articulating surface of the patella and also the proximal area of the medial lip. This results in crepitation becoming apparent when the patella is luxated manually.

#### Grade 3

The patella is permanently luxated with torsion of the tibia and deviation of the tibial crest of between 30 degrees and 50 degrees from the cranial/caudal plane. Although the luxation is not intermittent, many animals use the limb with the stifle held in a semi-flexed position. Flexion and extension of the joint cause's abduction and adduction of the hock. The trochlea is very shallow or even flattened.

#### Grade 4

The tibia is medially twisted, and the tibial crest may show further deviation medially with the result that it lies 50 degrees to 90 degrees from the cranial/caudal plane. The patella is permanently luxated. The patella lies just above the medial condyle and a space can be palpated between the patellar ligament and the distal end of the femur.

The trochlea is absent or even convex. The limb is carried, or the animal moves in a crouched position, with the limb partly flexed



# NATIONAL BRITISH BULLDOG COUNCIL OF AUSTRALIA

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## VETERINARY INFORMATION SHEET: SPINE SCORING

### Diagnostic Imaging Panellists:

Dr Roger Lavelle VIC [lavellesdiagnosticimaging@gmail.com](mailto:lavellesdiagnosticimaging@gmail.com)  
Dr Mariano Makara NSW [www.vetscoring.com](http://www.vetscoring.com)  
Dr Jenny Richardson WA [Jen.Richardson@iinet.net.au](mailto:Jen.Richardson@iinet.net.au)  
Dr Ana Hayes VIC [anahayes18@icloud.com](mailto:anahayes18@icloud.com)

### Testing Procedures:

Digital x-rays must be in DICOM format  
Radiographs are obtained under sedation or anesthesia.

### Positioning:

#### Thoracic, thoracolumbar and lumbar spine, lateral view

- Place the dog in either lateral recumbency using sponges to make the spine parallel to the tabletop.
- Use a sponge beneath the sternum to achieve lateral positioning.
- Attempt to achieve this lateral positioning of the entire body
- Sandbags can be placed on the neck to help position the dog.
- The forelimbs are extended and can be held with sandbags or tied to the table.
- The pelvic limbs are in neutral position or extended being placed one over the other and tied to the tabletop or held with sandbags.
- **The vertically directed beam is perpendicular to the tabletop and centered on T6-7 for the thoracic spine, on T13-L1 for the thoracolumbar spine and on L3-4. (3 lateral views)**

#### Thoracic, thoracolumbar and lumbar spine, ventrodorsal view

- Place the sedated dog in dorsal recumbency.
- Sandbags may be positioned lateral to the thorax and abdomen.
- The body may be positioned so the abdomen or thorax is in a trough or held by a compression band.
- The forelimbs are pulled cranially and held by sandbags or ropes.
- The pelvic limbs can be in neutral position either held or tied to the table
- **The vertically directed beam is centered on T6-7 for the thoracic spine, on T13-L1 for the thoracolumbar spine and on L3-4. (3 ventrodorsal views)**

Reference - Dr Mariano Makara. <https://vetscoring.com/radiographic-technique/>



# NATIONAL BRITISH BULLDOG COUNCIL OF AUSTRALIA

(Affiliated with the Australian National Kennel Council)

## VETERINARY INFORMATION SHEET: THYROID TESTING

### Testing Procedure:

Female dogs should not be tested during an estrus cycle.

Test must be conducted as far away as possible from the last vaccination.

If the dog is on a thyroid supplement you must wait at least 90 days from the last dose to test.

### Free T4 (FT4)

This procedure is considered to be the “gold standard” for assessment of the thyroid’s production and cellular availability of thyroxine. FT4 concentration is expected to be decreased in dogs with thyroid dysfunction due to autoimmune thyroiditis.

### Interpreting Results:

Normal	Abnormal
FT4 Within normal range	FT4 Above or Below normal range