

Inherited disease tests for the Labrador Retriever

	Orthopaedic		Clinical Eye tests		DNA
--	-------------	--	--------------------	--	-----

<u>Disease</u>	<u>Type of test</u>	<u>Disease information</u>	<u>How to test</u>	<u>When to test</u>	<u>Recommendations</u>
Hip Dysplasia (HD)	X-ray	<p>HD is an abnormal development of the hip joint. Osteoarthritis then develops which can be painful and disabling for the dog.</p> <p>Inheritance is influenced by a number of genes</p>	<p>X-ray by your own vet, or a vet experienced in taking x-rays for the BVA hip scheme (see bottom of page).</p> <p>http://www.bva.co.uk/canine_health_schemes/Hip_Scheme.aspx</p>	<p>X-rays can be submitted to the BVA at 12 months or older.</p>	<p style="color: red;">All breeding animals should be x-rayed and scored.</p> <p>The Breed Mean Score (BMS) is currently 14. Scores range from 0-53 for each hip. The lower the score the better. It is recommended that you should breed from dogs below the BMS.</p> <p style="color: red;">Not uncommon.</p>
Elbow Dysplasia (ED)	X-ray	<p>ED is an abnormal development of the elbow joint. Osteoarthritis then develops which can be painful and disabling for the dog.</p> <p>Inheritance is influenced by a number of genes.</p>	<p>X-ray by your own vet, or a vet experienced in taking x-rays for the BVA hip scheme (see bottom of page).</p> <p>http://www.bva.co.uk/canine_health_schemes/Elbow_Scheme.aspx</p>	<p>X-rays can be submitted to the BVA at 12 months or older.</p>	<p style="color: red;">All breeding animals should be x-rayed and scored.</p> <p>Scores range 0-3 for each elbow. The lower the score the better. The BVA/KC recommended score for breeding animals is 0.</p> <p style="color: red;">Not uncommon.</p>

<u>Disease</u>	<u>Type of test</u>	<u>Disease information</u>	<u>How to test</u>	<u>When to test</u>	<u>Recommendations</u>
Hereditary Cataract (HC)	Clinical eye test	Can cause problems with vision but is less likely to cause total blindness than other eye diseases. Not all cataracts are HC. Inheritance unknown.	Examination by a BVA Eye Panel vet. http://www.bva.co.uk/canine_health_schemes/Eye_Scheme.aspx and http://www.bva.co.uk/public/documents/EP_list_Jan_2012.pdf	Clinical eye test normally carried out at 12 months or older. Eye tests should be carried out annually.	Any Labrador who is to be bred from should be eye tested annually. Not uncommon. Due to the effect on the animal testing is essential.
Multifocal Retinal Dysplasia (MRD)	Clinical eye test	There is defective retinal development e.g. rosettes, ridges, folds, geographic abnormalities and localised detachments that may affect the dogs sight. A simple autosomal recessive gene is possibly responsible for MRD.	Examination must by a BVA Eye Panel vet. http://www.bva.co.uk/canine_health_schemes/Eye_Scheme.aspx and http://www.bva.co.uk/public/documents/EP_list_Jan_2012.pdf	Clinical eye test normally carried out at 12 months or older. Eye tests should be carried out annually.	Any Labrador who is to be bred from should be eye tested annually. Not uncommon. Due to the effect on the animal testing is essential.

<u>Disease</u>	<u>Type of test</u>	<u>Disease information</u>	<u>How to test</u>	<u>When to test</u>	<u>Recommendations</u>
Total Retinal Dysplasia (TRD)	Clinical eye test	<p>This is most commonly associated with non-attachment or complete detachment of the retina and affects the dogs sight.</p> <p>A simple autosomal recessive gene is possibly responsible for MRD.</p>	<p>Examination by a BVA Eye Panel vet.</p> <p>http://www.bva.co.uk/canine_health_schemes/Eye_Scheme.aspx</p> <p>and</p> <p>http://www.bva.co.uk/public/documents/EP_list_Jan_2012.pdf</p>	<p>Clinical eye test normally carried out at 12 months or older.</p> <p>Eye tests should be carried out annually.</p>	<p>Any Labrador who is to be bred from should be eye tested annually.</p> <p>Very Rare.</p> <p>Due to the effect on the animal testing is essential.</p>
Central Progressive Retinal Atrophy (CPRA)	Clinical eye test	<p>CPRA can cause total loss of vision does but not always because some peripheral vision may be maintained.</p> <p>The inheritance of the disease appears complex, and environmental factors (eg. a poor quality diet) and levels of vitamin E may influence how this problem is expressed in the individual.</p>	<p>Examination by a BVA Eye Panel vet.</p> <p>http://www.bva.co.uk/canine_health_schemes/Eye_Scheme.aspx</p> <p>and</p> <p>http://www.bva.co.uk/public/documents/EP_list_Jan_2012.pdf</p>	<p>Clinical eye test normally carried out at 12 months or older.</p> <p>Eye tests should be carried out annually.</p>	<p>Any Labrador who is to be bred from should be eye tested annually.</p> <p>Rare.</p> <p>Due to the effect on the animal testing is essential.</p>

<u>Disease</u>	<u>Type of test</u>	<u>Disease information</u>	<u>How to test</u>	<u>When to test</u>	<u>Recommendations</u>
<p>General Progressive Retinal Atrophy (GPRA)</p>	<p>Clinical eye test</p>	<p>The disease causes blindness in Labradors. Generally it is first seen in middle age but it can develop at various ages.</p> <p>prcd/GPRA is an inherited disease with a recessive mode of inheritance (both parents have to have the faulty gene for the progeny to be affected by the disease).</p>	<p>Examination must be done by a BVA Eye Panel vet</p> <p>http://www.bva.co.uk/canine_health_schemes/Eye_Scheme.aspx</p> <p>and</p> <p>http://www.bva.co.uk/public/documents/EP_list_Jan_2012.pdf</p>	<p>Clinical eye test normally carried out at 12 months or older.</p> <p>Eye tests should be carried out annually.</p>	<p>Any Labrador who is to be bred from should be eye tested annually.</p> <p>Fairly uncommon.</p> <p>Due to the effect on the animal testing is essential.</p> <p>This disease affects both show and working lines.</p>

<u>Disease</u>	<u>Type of test</u>	<u>Disease information</u>	<u>How to test</u>	<u>When to test</u>	<u>Recommendations</u>
<p>General Progressive Retinal Atrophy (prcd/GPRA)</p>	<p>DNA test</p>	<p>The disease causes blindness in Labradors. Generally it is first seen in middle age but it can develop at various ages.</p> <p><i>prcd</i>/GPRA is an inherited disease with a recessive mode of inheritance (both parents have to have the faulty gene for the progeny to be affected by the disease).</p>	<p>A DNA test can be taken by either blood or mouth swab. The blood sample taken by a vet.</p> <p>The sample is then sent to either</p> <p>http://www.optigen.com</p>	<p>Test can be done at any age.</p>	<p>If one parent is genetically clear NO affected progeny will be produced.</p> <p>Fairly uncommon.</p> <p>Due to the effect on the animal testing is encouraged to keep levels of Carriers and Affecteds to a minimum.</p> <p>This disease affects both show and working lines.</p>

<u>Disease</u>	<u>Type of test</u>	<u>Disease information</u>	<u>How to test</u>	<u>When to test</u>	<u>Recommendations</u>
<p>Centronuclear Myopathy (CNM)</p>	<p>DNA test</p>	<p>By a few months old the dog suffers generalised muscle weakness and becomes increasingly disabled. The dog may also suffer from megaesophagus which causes difficulty with swallowing.</p> <p>CNM has an inherited recessive mode of inheritance (both parents have to have the faulty gene for the progeny to be affected).</p>	<p>A DNA test can be taken by either blood or mouth swab. The blood sample taken by a vet.</p> <p>The sample is then sent to either http://www.aht.org.uk/cms-display/genetics_tests.html or http://www.labradorcnm.com/</p>	<p>Test can be done at any age.</p>	<p>If one parent is genetically clear NO affected progeny will be produced.</p> <p>Fairly uncommon.</p> <p>Due to the effect on the animal testing is encouraged to keep levels of Carriers and Affecteds to a minimum.</p> <p>Thought to be more common in working lines at present in the UK</p>

<u>Disease</u>	<u>Type of test</u>	<u>Disease information</u>	<u>How to test</u>	<u>When to test</u>	<u>Recommendations</u>
Exercise Induced Collapse (EIC)	DNA test	<p>This disease causes exercise intolerance and collapse. Whilst not life threatening in most dogs it can prove to be fatal in some individuals. It can show itself at any age.</p> <p>EIC has an inherited autosomal recessive mode of inheritance (both parents have to have the faulty gene for the progeny to be affected).</p>	<p>A DNA test can be taken by either blood or mouth swab. The blood sample taken by a vet.</p> <p>Submission forms can be obtained from: http://www.vdl.umn.edu/ourservices/canineneuromuscular/eic/home.html or http://www.laboklin.co.uk/laboklin/index.jsp</p>	Test can be done at any age.	<p>If one parent is genetically clear NO affected progeny will be produced.</p> <p>Fairly uncommon.</p> <p>Due to the effect on the animal testing is encouraged to keep levels of Carriers and Affecteds to a minimum.</p> <p>Thought to be more common in show lines at present in the UK</p>
Nasal Parakeratosis (HNPK)	DNA test	<p>Dogs affected by this disease show scales and crusts on the nose, and can on occasions develop painful fissures too. Dogs with this cannot be cured, only managed.</p> <p>HNPK has an inherited recessive mode of inheritance (both parents have to have the faulty gene for the progeny to be affected).</p>	<p>A DNA test can be taken by either blood or mouth swab. The blood sample taken by a vet.</p> <p>The kit for taking samples for testing can be ordered from: http://www.genoscooper.com/en/</p>	Test can be done at any age.	<p>If one parent is genetically clear NO affected progeny will be produced.</p> <p>Fairly uncommon.</p> <p>Due to the effect on the animal testing is encouraged to keep levels of Carriers and Affecteds to a minimum.</p> <p>Thought to be more common in show lines at present in the UK</p>

<u>Disease</u>	<u>Type of test</u>	<u>Disease information</u>	<u>How to test</u>	<u>When to test</u>	<u>Recommendations</u>
Skeletal Dysplasia 2 (SD2 'Mild disproportionate dwarfism')	DNA test	This disease is an abnormality of skeletal development that causes abnormal growth of the long bones, especially in the forelegs. This is not the same as a simple short legged Labrador. The dog will have normal body length and depth. Adult dogs with disproportionate dwarfism are overbuilt and stand on legs that are too short.	A DNA test can be taken by either blood or mouth swab. The blood sample taken by a vet. The kit for taking samples for testing can be ordered from: http://www.genoscooper.com/en/tests-dog/ or http://www.generatio.de/index.php/de/	Test can be done at any age.	If one parent is genetically clear NO affected progeny will be produced. Fairly uncommon. Due to the effect on the animal testing is encouraged to keep levels of Carriers and Affecteds to a minimum. Thought to be more common in working lines at present.

DNA tests are also available for the following. At the present time these diseases are either not known in British Labradors, or are not apparently a significant problem. However a watch should be kept that they do not become a problem in this country . It is up to the individual breeder to decide upon which tests they feel they should use.

RD/OSD (Retinal Dysplasia/Oculo Skeletal Dysplasia) – at the present time thought to be confined to dogs of American descent - http://www.optigen.com/opt9_test.html

Narcolepsy - http://www.optigen.com/opt9_test.html

Recommendations are made in the light of current knowledge and may change as more information becomes available.

Note that for BVA tests the dog must be permanently identified by either microchip or tattoo at the time of the test.

It is important that Labradors have a clinical eye test annually.

A DNA test is a one off test and will tell you the genetic status of your dog.

DNA testing has an advantage over a clinical eye examination because the clinical examination only tells us if the dog has the condition or not at that time, not whether it will develop it in the future.

Health test results are recorded by the laboratories who run the tests but not all send the results automatically to the Kennel Club. Results from other laboratories may be included on the KC database upon owner submission and request – please email hbs@thekennelclub.org.uk for further information.

Laboratories who automatically send results are:

prcdGPRA - OptiGen -

** Please note that as the prcd-PRA DNA test for all breeds is subject to a patent, the Kennel Club can currently only record and publish results issued by OptiGen.

CNM – Animal Health Trust, Laboklin

EIC – Laboklin, University of Minnesota*

* Results from University of Minnesota will only be automatically sent to the Kennel Club if the owner of the dog has indicated this requirement on their submission form.

Kennel Club recorded results for individual dogs can be found at <http://www.the-kennel-club.org.uk/services/public/mateselect/test/Default.aspx>

They also publish an overall results list for these three conditions on their website (this may not contain every dog who has been tested if the dogs were tested by laboratories other than those listed above):

CNM - <http://www.thekennelclub.org.uk/item/2717>

EIC – <http://www.thekennelclub.org.uk/item/3783>

Prdc GPRA - <http://www.thekennelclub.org.uk/item/1490>

No Labrador should be bred from without being tested before being mated. Anyone thinking of breeding from their Labrador should think long and hard. Breeding is not something to undertake unless you are fully committed to spending both the time and money required to do it properly.

For further information contact the British

Veterinary Association (BVA) at:

http://www.bva.co.uk/canine_health_schemes/Canine_Health_Schemes.aspx

Address :

British Veterinary Association
7 Mansfield Street
London
W1G 9NQ

General enquiries

Tel: 020 7636 6541

Fax: 020 7908 6349

Email: bvahq@bva.co.uk