

## Inherited disease tests for the Labrador Retriever

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	Orthopaedic	Clinical Eye tests	DNA
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<u>Disease</u>	<u>Type of test</u>	<u>The disease</u>	<u>How to test</u>	<u>When to test</u>	<u>Recommendations</u>
Hip Dysplasia (HD)	X-ray	HD is an abnormal development of the hip joint. Osteoarthritis then develops which can be painful and disabling for the dog.  Inheritance is influenced by a number of genes	X-ray by your own vet, or a vet experienced in taking x-rays for the BVA hip scheme (see bottom of page).	X-rays can be submitted to the BVA at 12 months or older.	<b>All breeding animals should be x-rayed and scored.</b>  Breed average score currently circa. 15. Scores range from 0-53 for each hip. The lower the score the better.  <b>Not uncommon.</b>
Elbow Dysplasia (ED)	X-ray	ED is an abnormal development of the elbow joint. Osteoarthritis then develops which can be painful and disabling for the dog.  Inheritance is influenced by a number of genes	X-ray by your own vet, or a vet experienced in taking x-rays for the BVA hip scheme (see bottom of page).	X-rays can be submitted to the BVA at 12 months or older.	<b>All breeding animals should be x-rayed and scored.</b>  Scores range 0-3 for each elbow. The lower the score the better. 0 and 1 are the recommended scores for breeding animals. If higher scores are used the mate should score 0.  <b>Not uncommon.</b>

<u>Disease</u>	<u>Type of test</u>	<u>The disease</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. ( <a href="http://www.bva.co.uk/public/documents/EP_List_Jan_2010-3.pdf">http://www.bva.co.uk/public/documents/EP_List_Jan_2010-3.pdf</a> )	Annual Clinical eye test normally carried out at 12 months or older.	<b>Any Labrador who is to be bred from should be eye tested annually.</b>  <b>Not uncommon.</b>
Multifocal Retinal Dysplasia (MRD)	Clinical eye test	There is defective retinal development eg. 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. ( <a href="http://www.bva.co.uk/public/documents/EP_List_Jan_2010-3.pdf">http://www.bva.co.uk/public/documents/EP_List_Jan_2010-3.pdf</a> )	Annual Clinical eye test normally carried out at 12 months or older.  Puppies in the litter can be examined at 7 weeks as the condition can disappear at an older age and reappear later.	<b>Any Labrador who is to be bred from should be eye tested annually.</b>  <b>Not uncommon.</b>
Total Retinal Dysplasia (TRD)	Clinical eye test	This is most commonly associated with non-attachment or complete detachment of the retina and affects the dogs sight.  A simple autosomal recessive gene is possibly responsible for MRD.	Examination by a BVA Eye Panel vet. ( <a href="http://www.bva.co.uk/public/documents/EP_List_Jan_2010-3.pdf">http://www.bva.co.uk/public/documents/EP_List_Jan_2010-3.pdf</a> )	Annual Clinical eye test normally carried out at 12 months or older.	<b>Any Labrador who is to be bred from should be eye tested annually.</b>  <b>Very Rare.</b>  <b>Due to the effect on the animal testing essential.</b>

<p><b>Central Progressive Retinal Atrophy (CPRA)</b></p>	<p><b>Clinical eye test</b></p>	<p>CPRA can cause total loss of vision does but not always as some peripheral vision may be maintained. 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.  <a href="http://www.bva.co.uk/public/documents/EP_List_Jan_2010-3.pdf">http://www.bva.co.uk/public/documents/EP_List_Jan_2010-3.pdf</a></p>	<p>Annual Clinical eye test normally carried out at 12 months or older.          Eye tests should be carried out annually.</p>	<p><b>Any Labrador who is to be bred from should be eye tested annually.</b></p> <p><b>Rare.</b></p> <p><b>Due to the effect on the animal testing essential.</b></p>
<p><b>General Progressive Retinal Atrophy (GPRA)</b></p>	<p><b>Clinical eye test</b></p>	<p><i>prcd</i>/<i>GPRA</i> 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).          The disease causes blindness in Labradors.          Generally it is first seen in middle age but it can develop at various ages.</p>	<p>Examination must be done by a BVA Eye Panel vet  <a href="http://www.bva.co.uk/public/documents/EP_List_Jan_2010-3.pdf">http://www.bva.co.uk/public/documents/EP_List_Jan_2010-3.pdf</a></p>	<p>Annual Clinical eye test normally carried out at 12 months or older.          Eye tests should be carried out annually.</p>	<p><b>Any Labrador who is to be bred from should be eye tested annually.</b></p> <p><b>Fairly uncommon.</b></p> <p><b>Due to the effect on the animal testing essential.</b></p> <p><b>(Also see below)</b></p>

<u>Disease</u>	<u>Type of test</u>	<u>The disease</u>	<u>How to test</u>	<u>When to test</u>	<u>Recommendations</u>
General Progressive Retinal Atrophy (GPRA)	DNA test	<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).  The disease causes blindness in Labradors.  Generally it is first seen in middle age but it can develop at various ages.	A DNA test can be taken by either blood or mouth swab, usually by your vet. <a href="http://www.optigen.com">http://www.optigen.com</a>	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 strongly encouraged to keep levels of carriers and affecteds to a minimum.
Centronuclear Myopathy (CNM)	DNA test	By a few months old the dog suffers generalised muscle weakness and becomes increasingly disabled. The dog may also suffer from megaoesophagus which causes difficulty with swallowing. CNM is an inherited recessive mode of inheritance (both parents have to have the faulty gene for the progeny to be affected by the disease).	A DNA test can be taken by either blood or mouth swab, usually by your vet.  The sample is then sent to either <a href="http://www.aht.org.uk/genetics_tests.html">http://www.aht.org.uk/genetics_tests.html</a> or <a href="http://www.labradorcnm.com/">http://www.labradorcnm.com/</a>	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 strongly encouraged to keep levels of carriers and affecteds to a minimum.  <b>THOUGHT TO BE MORE COMMON IN WORKING LINES AT PRESENT IN THE UK</b>

Exercise Induced Collapse (EIC)	DNA test	At the moment it is thought to have an autosomal recessive mode of inheritance, though this is unproven as yet.  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.	A DNA test can be taken by either blood or mouth swab, usually by your vet.  The sample is then sent to either <a href="http://www.vdl.umn.edu/ourservices/canine_neuro_muscular/taylor2008/holdings/laboklin/index.jsp">http://www.vdl.umn.edu/ourservices/canine_neuro_muscular/taylor2008/holdings/laboklin/index.jsp</a>	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 strongly encouraged to keep levels of carriers and affecteds to a minimum.  <b>THOUGHT TO BE MORE COMMON IN SHOW LINES AT PRESENT IN THE UK</b>
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**There are conditions called OSD and narcolepsy which are tested for in the USA as rarely they affect Labradors in that country.**

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

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 test, or x-ray, because this only tells us if the dog has the condition or not at that time.

Labradors should be tested prior to 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 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](http://www.bva.co.uk/canine_health_schemes/Canine_Health_Schemes.aspx)

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