

# Health Summary

## Rusholme Molly

Retriever (Labrador)

### This document contains the following information

- Recommended screening schemes and advice for this breed
- Health test results for this dog
- Health test comparison for siblings
- Health test comparison for progeny
- EBV information
- 3 generation Health Test Pedigree
- Glossary of Health Tests

## Screening Schemes & Advice

**Kennel Club Assured Breeders must use the following screening schemes for sires and dams**

BVA/KC Hip Dysplasia Scheme

Eye testing

**Kennel Club Assured Breeders are strongly recommended to use the following screening schemes and/or advice for sires and dams**

BVA/KC Elbow Dysplasia Scheme

DNA test - prcd-PRA

**The following other health tests are also available**

DNA test - CNM

DNA test - EIC

DNA test - SD2

DNA test - HNPK

The list above is not necessarily comprehensive. Breed clubs and experienced breeders are useful sources of information on health issues in the breed. All breeds have a Breed Health Coordinator.

## Health Test Results

Please refer to the glossary at the back of this document for more information on listed screening schemes.

### DNA

There are DNA tests available for specific conditions in some breeds. A result or status will show only if the dog has been DNA tested or is hereditarily clear of the condition for which there is a DNA test.

DNA tests can show whether an individual dog is genetically clear (no copies of the disease gene), a carrier (one copy of the disease gene) or affected (two copies of the disease gene) for a particular condition or disease. This is very useful information for breeders, and breeding advice will vary according to the disease/condition in question.

Test	Result/Status	Date	Age
EIC	Clear	14th May 2019	3 years, 3 months
SD2	Clear	14th May 2019	3 years, 3 months
HNPk	Clear	14th May 2019	3 years, 3 months
prcd-PRA	Clear	15th May 2019	3 years, 3 months
CNM	Clear	15th May 2019	3 years, 3 months

#### Key

EIC	Exercise Induced collapse
SD2	Skeletal Dysplasia 2
HNPk	Hereditary Nasal Parakeratosis
prcd-PRA	Progressive rod cone degeneration - Progressive retinal atrophy
CNM	Centronuclear Myopathy

### Elbow Grade

An elbow grade is a measure of any evidence of elbow dysplasia (abnormal development). Both elbows are graded (between 0-3), but only the highest grade is used as an overall elbow grade for the dog. The lower the grade the better, with the advice given to breeders to ideally breed from dogs which have an elbow grade of 0 or 1.

Test	Result	Date	Age
Elbow Dysplasia	0	19th October 2017	1 year, 8 months

### Hip Score

A hip score is a measure of evidence of hip dysplasia (abnormal development). Scores for each hip are added together to get an overall hip score for a dog. Scores range from 0 to 106, with the lower the score the better. The advice to breeders is to ideally breed only from dogs which score below the breed average.

Test	Result	Date	Age
Hip Dysplasia	6/4 = 10	19th October 2017	1 year, 8 months

## Eye Screening

There is a set list of breeds and eye conditions, known to be inherited in those breeds and that are certified under the Eye Scheme.

### Key to eye conditions

CEA	Collie eye anomaly
CHC	Congenital hereditary cataract
G	Glaucoma
HC	Hereditary cataract
PHPV	Persistent hyperplastic primary vitreous
PLL	Primary lens luxation
PPM	Persistent pupillary membrane
CPRA	Centralised progressive retinal atrophy
GPRA	Generalised progressive retinal atrophy
MRD	Multifocal retinal dysplasia
TRD	Total retinal dysplasia

In general, it is recommended that eyes are examined annually (except for glaucoma predisposition which is only done once), with the advice given to breeders to only breed from dogs that are found to be unaffected (or clear) of all known conditions in the breed.

Test	Result	Date	Age
Eye Disease	Unaffected	11th September 2017	1 year, 7 months
Eye Disease	Unaffected	30th June 2019	3 years, 4 months

For more information on Screening schemes and to get an idea of screening currently relevant to this breed, please see the Assured Breeder Scheme - Breed Specific Requirements and Recommendations at [www.thekennelclub.org.uk](http://www.thekennelclub.org.uk)

## Health Test Comparison - Siblings

Please refer to the glossary at the back of this document for more information on listed screening schemes.

### BVA/KC Elbow Dysplasia Scheme

Tested	Sex	Result	Date	Age
Rusholme Molly	Bitch	0	19/10/2017	1 year, 8 months
Tarka's Teddy	Dog	0	16/11/2018	2 years, 9 months

### BVA/KC Hip Dysplasia Scheme

Tested	Sex	Result	Date	Age
Rusholme Molly	Bitch	6/4 = 10	19/10/2017	1 year, 8 months
Tarka's Teddy	Dog	4/5 = 9	16/11/2018	2 years, 9 months

### BVA/KC/ISDS Eye Scheme

Tested	Sex	Result	Date	Age
Rusholme Molly	Bitch	Unaffected	11/09/2017	1 year, 7 months
Rusholme Molly	Bitch	Unaffected	30/06/2019	3 years, 4 months
Tarka's Teddy	Dog	Unaffected	05/07/2018	2 years, 4 months

### DNA test - CNM

Tested	Sex	Result	Date	Age
Rusholme Molly	Bitch	Clear	15/05/2019	3 years, 3 months

### DNA test - EIC

Tested	Sex	Result	Date	Age
Rusholme Molly	Bitch	Clear	14/05/2019	3 years, 3 months

### DNA test - HNPk

Tested	Sex	Result	Date	Age
Rusholme Molly	Bitch	Clear	14/05/2019	3 years, 3 months

## DNA test - prcd-PRA

Tested	Sex	Result	Date	Age
Rusholme Molly	Bitch	Clear	15/05/2019	3 years, 3 months

## DNA test - SD2

Tested	Sex	Result	Date	Age
Rusholme Molly	Bitch	Clear	14/05/2019	3 years, 3 months

## **Health Test Comparison - Progeny**

**There are no screening records for progeny.**

## EBV Information

An Estimated Breeding Value (EBV) evaluates the genetic value of an individual dog, in relation to the whole of the dog's breed. These EBVs are intended to help breeders reduce the prevalence of hip and/or elbow dysplasia by more accurately evaluating genetic risk.

Type	Latest Test Score	EBV	Confidence
Elbow	0	4	52%
Hip	$6/4 = 1.5$	5	64%

EBVs are computed using available hip and/or elbow scores for the dog and all its relatives. Pedigree information is used to determine the relationships among dogs. This allows the genetic risk of individuals to be evaluated, stripping away any environmental effects. Using EBVs to make mating decisions will be more accurate than using the observed hip or elbow score and will lead to faster progress in reducing the prevalence of disease.

A dog's EBV allows it to be placed on a scale of liability, identifying those individuals at highest risk of passing on the condition and those at lowest risk.

### What does the EBV value mean?

- The breed average is always set to 0. Higher risk EBVs are shown as a positive number (red area on the left of the centre bar) and lower risk EBVs as a negative number (green area on the right of the centre bar).
- The further a dog's EBV is from the average, the higher or lower its genetic risk. One standard deviation is represented by 20 units. So a dog with an EBV of +40 is two standard deviations worse than average, while a dog with an EBV of -20 is one standard deviation better than average.
- At birth a puppy's EBV will be the average of its parents' EBVs. A dog's EBV can change during its lifetime, as more information becomes available, either about the dog itself or its relatives.
- The accuracy is a measure of how much information has been used to calculate the EBV. If the dog has been hip or elbow scored itself and has several relatives with scores then the accuracy will be higher than if it has not been scored and has few relatives with scores. Individuals with several scored offspring tend to have high accuracies. Accuracy is the correlation between the estimate of the breeding value and the true value. The more information available the closer the estimate will be to the true value.



# Health Test Pedigree



**THE KENNEL CLUB**  
*Making a difference for dogs*

## Rusholme Molly - Retriever (Labrador)

If no results are shown it could be because:

None of the available Kennel Club testing schemes are relevant to this breed.

The dog has not been tested.

The dog has been tested, but the Kennel Club does not have the test results on its database.

Test	Result/Status	Date
EIC	Clear	14/05/2019
SD2	Clear	14/05/2019
HNPk	Clear	14/05/2019
prcd-PRA	Clear	15/05/2019
CNM	Clear	15/05/2019
Elbow Dysplasia	0	19/10/2017
Hip Dysplasia	6/4 = 10	19/10/2017
Eye Disease	Unaffected	11/09/2017
Eye Disease	Unaffected	30/06/2019

### Agra Allahbad

Test	Result/Status	Date
Elbow Dysplasia	0	03/02/2016
Hip Dysplasia	3/5 = 8	03/02/2016
Eye Disease	Unaffected	15/01/2016

### Hintsford Sunbeam

Test	Result/Status	Date
Hip Dysplasia	4/5 = 9	09/12/2014
Eye Disease	Unaffected	22/09/2014

### Agra Ahlee

Test	Result/Status	Date
Hip Dysplasia	3/3 = 6	15/11/2006
Eye Disease	Unaffected	29/09/2006

### Jasmine Activa

Test	Result/Status	Date
Hip Dysplasia	3/2 = 5	05/03/2010

### Hornerama How Do You Do

Test	Result/Status	Date
Hip Dysplasia	2/4 = 6	29/03/2012

### Hornerama Herself

No health test results

# Glossary

## DNA test - EIC

### Details about the disease

This condition leads to a defect in nerve communication during intense exercise. In affected dogs, certain factors can trigger the collapse including type of exercise, temperature and excitement.

### Clinical signs

Dogs clinically affected by EIC will show signs of leg weakness followed by complete collapse after 5-20 minutes of strenuous activity. The severity can vary. Severely affected dogs may collapse with mild exercise - other dogs only exhibit collapse episodes sporadically (occurring at irregular intervals). First clinical signs are usually noticed between 5 months and 3 years of age, but can appear later in life.

### 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.

### Which laboratories test for this condition?

A list of laboratories and DNA tests can be found at the following link [www.thekennelclub.org.uk/health/for-breeders/dna-testing-simple-inherited-disorders/worldwide-dna-tests/](http://www.thekennelclub.org.uk/health/for-breeders/dna-testing-simple-inherited-disorders/worldwide-dna-tests/)

### How to responsibly breed from your DNA tested dog

If, once your dog is DNA tested, you would like to find out what their DNA test results mean, or how to select the right mate to avoid producing affected puppies, then please read our breeding advice and information on the following link <http://bit.ly/2oSbttn>.

### How to find out if a potential mate has been DNA tested

The Kennel Club's "Health Test Results Finder" allows you to find the results of DNA tests carried out as part of official Kennel Club DNA testing schemes for any dog on the Kennel Club's breed register. To access this free health tool, please follow this link <http://bit.ly/1jyCFnc>.

## **DNA test - SD2**

### **Clinical signs**

Apart from the shortened stature, SD2 affected dogs do not show any further clinical signs. This contrasts with pituitary dwarfism, which can cause malformed genitals or neuronal diseases.

### **Details about the disease**

SD2, also known as dwarfism, is a genetic condition that causes long bones to stop growing before being fully developed. This particular type of dwarfism results in shortened front limbs and a raising dorsal line, but does not alter the torso length and depth as with other forms of dwarfism (pituitary dwarfism).

### **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.

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## **DNA test - HNPk**

## **Details about the disease**

Hereditary Nasal Parakeratosis causes the nose to dry out which leads to inflammation and continuous irritation of the skin on the nose.

## **Clinical signs**

Clinical signs include the nose surface to be dry, rough and eventually show a change in skin colour from a dark to lighter colour. Brown crusts may also develop on the surface and edge of the nose. Affected dogs start showing these signs from 6-12 months of age.

## **How it is inherited**

The disease is unique to the Labrador Retriever and 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.

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## **DNA test - prcd-PRA**

### **Details about the disease**

The cells of the retina receive light from the external environment and transmit the information to the brain where it is interpreted to become vision. PRA causes cells in the retina at the back of the eye to degenerate and die, even though the cells may have developed normally early in life.

## **Clinical signs**

Owners of affected dogs first notice that their dog becomes night blind, but this eventually progresses to total blindness. The age of onset of first signs varies from breed to breed, however, in all cases puppies are born with perfect vision and their sight begins to degenerate later in life, from around 3 years of age or later.

## **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.

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## **DNA test - CNM**

### **Details about the disease**

CNM causes muscle weakness because of a deficiency of muscle fibres.

### **Clinical signs**

Clinical features of CNM include hypotonia (reduced muscle tone), generalized muscle weakness, abnormal postures, stiff hopping gait, exercise intolerance and increased collapse when exposed to cold. In Labrador retrievers, the first sign is an abnormal, stiff gait, which progresses to a generalized weakness by about 5 months of age.

## **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.

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## **BVA/KC Elbow Dysplasia Scheme**

The current BVA/KC scoring scheme for elbow dysplasia (ED) was launched in 1998. Dysplasia means abnormal development. An elbow grade is a measure of any evidence of elbow dysplasia (abnormal development). Both elbows are graded (between 0-3), but only the higher grade is used as an overall elbow grade for the dog. The lower the grade the better, with the advice given to breeders is to ideally breed from dogs which have an elbow grade of 0.

## **Which breeds are screened under the Scheme?**

Any breed may be screened under the scheme, but there are a number of breeds which have been shown to have a higher incidence of elbow dysplasia. These breeds include: Basset Hounds, Bernese Mountain Dogs, English Mastiffs, German Shepherd Dogs, Golden Retrievers, Great Danes, Irish Wolfhounds, Labrador Retrievers, Newfoundlands and Rottweilers.

## **How do I get my dog graded under the Scheme?**

Owners should make an appointment with their vet who can take the required X-rays of the dog's elbows. The vet then sends the X-rays to the British Veterinary Association where they are examined and "graded" by a panel of experts.

Once the X-rays have been graded, the result is returned to the vet, who relates it to the owner, and a copy is sent to the Kennel Club for recording on the registration database and publication in the KC Breed Records Supplement. There is a time limit of 45 days and a set procedure for appealing against results under the Scheme.

### **More Information**

More information can be found at [www.thekennelclub.org.uk/item/309](http://www.thekennelclub.org.uk/item/309)

The BVA website can be found at [www.bva.co.uk](http://www.bva.co.uk)

## **BVA/KC Hip Dysplasia Scheme**

The current BVA/KC scoring scheme for hip dysplasia (HD) has been in operation since 1984 and since then over 250,000 X-rays have been assessed. Dysplasia means abnormal development, and the degree of hip dysplasia present is indicated by a score assigned to each hip. The hip score is the sum of the points awarded for each of nine aspects of the X-rays of both hip joints. The minimum hip score is 0 and the maximum is 106 (53 for each hip). The lower the score the less the degree of hip dysplasia present. An average (or mean) score is calculated for all breeds scored under the scheme, as is the median (or middle) score. Advice for breeders is to use only breeding stock with scores well below the breed mean score and ideally below the median.

The minimum age for hip scoring is one year, and each dog is only ever scored once under the scheme.

### **Which breeds are screened under the Scheme?**

It is generally accepted that hip dysplasia is more common in larger breeds, but any dog of any breed can be scored under the scheme.

### **How do I get my dog scored under the Scheme?**

Owners should make an appointment with their vet who can take the required X-ray of the dog's hips. The vet then sends the X-ray to the British Veterinary Association where it is examined and "scored" by a panel of experts. (Details of the scoring criteria are available in the form of a leaflet from either the Kennel Club or the BVA.) Once the X-ray has been scored, the result is returned to the vet, who relays it to the owner, and a copy is sent to the Kennel Club for recording on the registration database and publication in the Breed Records Supplement.

There is a time limit of 45 days and a set procedure for appealing against results under the Scheme.

### **More Information**

More information can be found at <http://www.thekennelclub.org.uk/item/313>

The BVA website can be found at [www.bva.co.uk](http://www.bva.co.uk)

## **BVA/KC/ISDS Eye Scheme**

The BVA/KC/International Sheep Dog Society (ISDS) Eye Scheme offers breeders the possibility of eye testing to screen for inherited eye disease in certain breeds. By screening breeding stock for these diseases, breeders can use the information to eliminate or reduce the frequency of eye disease being passed on to puppies. At the centre of the scheme are two schedules: Schedule A and Schedule B.

Schedule A contains a list of breeds and eye conditions that are known to be inherited in those breeds. Under the Eye Scheme one of a specialist group of canine ophthalmologists (the Eye Panel) examines a dog to look for clinical signs of inherited disease known to affect the breed in question. If no clinical signs are noted for these diseases, then the dog is declared 'unaffected'; if signs consistent with one or more Schedule A conditions, then the dog will be declared 'affected' for the relevant disease. These results are passed to the KC for inclusion in the tested dog's registration database.

Only the results of Schedule A examinations are available to the Health Test Result Finder. List of breeds and conditions on Schedule A:

[www.thekennelclub.org.uk/media/303395/canine\\_health\\_schemes\\_eye\\_schedule\\_a\\_january\\_2013.pdf](http://www.thekennelclub.org.uk/media/303395/canine_health_schemes_eye_schedule_a_january_2013.pdf)

Schedule B is a list of breeds and conditions which are suspected of being inherited in those breeds. The panellists' observations on Schedule B conditions are noted and returned to the BVA, but these results are not passed to the KC and so the results of Schedule B examinations are not available to the Health Test Result Finder.

List of breeds and conditions on Schedule B:

[www.thekennelclub.org.uk/media/303421/canine\\_health\\_schemes\\_eye\\_schedule\\_b\\_january\\_2013.pdf](http://www.thekennelclub.org.uk/media/303421/canine_health_schemes_eye_schedule_b_january_2013.pdf)

In general, it is recommended that eyes are examined annually (except for glaucoma predisposition which is tested for by a technique called gonioscopy. Current advice is that gonioscopy is performed at approximately 1, 4 and 7-8 years of age), with the advice given to breeders to only breed from dogs that are found to be unaffected (or clear) of all known conditions in the breed. Breeding advice for gonioscopy is more complex and can be found at [www.thekennelclub.org.uk/media/1159316/gonioscopy-breeding-advice.pdf](http://www.thekennelclub.org.uk/media/1159316/gonioscopy-breeding-advice.pdf)

For more information about the scheme, please visit [www.bva.co.uk](http://www.bva.co.uk)