

DBC News

October 2011

Dachshund Breed Council



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It's a Dachs Life! – Breed Survey 2012

Please help us find out how healthy and long-lived your Dachshunds are.

Dachs-Life 2012 will be a three-month survey of UK Dachshunds, whether pet, show or working, starting in January 2012 and run by the Dachshund Breed Council.

Why we need a Breed Health Survey

We like to say to people that Dachshunds generally suffer from few health problems and are long-lived, providing they are kept well-exercised, fit and fed a healthy, balanced diet. The last major survey of the breed was carried out by the Kennel Club in 2004 and reported the average lifespan of a Dachshund to be over 12 years. This year there was a TV report of a Miniature Dachshund that lived to be 22, which is truly amazing.

Our Breed Council Health website has a health reporting page and we have been collecting information from owners for nearly two years now. However, that really only tells us about dogs with health problems. It's already confirming back disease to be the number one issue reported in the breed (no surprises!). But, we don't know what proportion of our Dachshunds suffer from back problems.

Dachs-Life 2012, for the first time, will provide us with a better picture of the health across the breed by asking owners to submit reports on their healthy dogs as well. For example, it's much more useful to know that perhaps 20 out of 500 Dachshunds had a particular problem, than simply having 20 owners reporting that problem. This survey will help us put any problems in context and help us identify how healthy our Dachshunds are, here in the UK.

What we need Dachshund owners to do

It's very simple! For each of your Dachshunds, we need you to record on a Survey Form any health problems they currently have and any they develop over a three month period (January to March 2012). These should be conditions that have been diagnosed by your Veterinary Surgeon. If your Dachshund is unfortunate enough to die in that period, we'd like to know what the cause was (even if it was just "old age"). We also need you to submit Forms for all your healthy dogs.

What will happen to the survey data?

At the end of the three month survey period, post or e-mail your survey form (one for each Dachshund you own) to us and we will begin the analysis of the data. We are asking you to include the KC Registered name of each Dachshund, but all data will be treated in the strictest confidence and no names of owners, or dogs' details will ever be published. By including your Dachshund's name, we will be able to carry out analysis of pedigrees and, if necessary, come back to you for further information.

Once we have analysed the data, we will publish a full report of our findings and conclusions. The Breed Council will be able to use this data to help focus its Health Plans over the next few years.

Roger Sainsbury BVM&S, MRCVS is Chairman of the Breed Council's Health and Welfare Subcommittee. He said: *"The 2004 Kennel Club Breed Health Survey and our current online survey tool are very*

useful sources of health data, but with knowledge of the population that the dogs in these surveys come from, the data goes into a different league. This is why we are asking for information on all healthy Dachshunds too – this will allow us to see just how common these conditions really are.”

Download the Survey [here](#).

Lafora Disease – update from Centogene

Centogene would like to provide an update on the Lafora disease screening and research programme to the Wirehaired Dachshund Club. Centogene is a human genetic disease testing laboratory in Rostock, Germany, focussing on genetic testing of rare inborn human diseases. Centogene has been selected by the club to apply a test for the screening of MWHD samples which is able to differentiate between “clear” animals, carriers of Lafora’s disease and animals which will develop Lafora’s disease later in their life or to confirm a diagnosis based on disease symptoms. In addition, it has been agreed to further investigate the genetic background of Lafora’s disease in MWHD.

Lafora’s disease is, in humans and dogs, a form of epilepsy. The difference is that there are mutations which cause Lafora’s disease in humans which have not been found in dogs. The genetic background of Lafora’s disease in MWHD has been investigated by a group of researchers at the Hospital for Sick Children in Toronto, Canada. This ground-breaking work is still based on the investigation of a low number of dogs and it remains to be seen if the investigation of a larger number of MWHD might result in the finding that additional genetic alterations contribute to Lafora’s disease. From a genetic point of view Lafora’s disease in dogs resembles Corea Huntington disease in humans.

In dogs, Lafora’s disease is caused by the expansion of a part of the EPM2 gene. Expansion of the gene prevents at the end the biosynthesis of a protein. Lack of the protein causes Lafora’s disease.

Centogene initially performed tests with samples of Dachshunds with known disease status. These tests indicated that the test was suitable for a screening to differentiate between clear, carriers and affected dogs. The subsequent testing of 96 samples revealed that the differentiation between clear and carriers is impaired by individual genetic differences of the investigated dog samples.

Centogene’s testing results have demonstrated that differences in the length of the expansion have a strong impact on the ability to detect carriers of Lafora’s disease in dogs. A short expansion can be detected by Centogene’s test while larger expansions cannot be detected. The expansion results in a structure which prevents the biosynthesis of a protein, but also impairs the application of standard testing methods.

The test can be used to detect dogs which will develop Lafora’s disease but is currently not suitable to detect the majority of carriers. Within 96 tested samples 10 affected dogs have been identified. Some of these dogs either suffer already from Lafora’s disease and/or had been identified as affected by the Canadian test. Specific detection methods applied by Centogene have proven that expanded versions of the EPM2 are being detected.

In 2010 the Canadians identified 12 affected dogs from 95 samples. Centogene has now tested a large cohort of MWHDs and identified a similar proportion of affected dogs. We would like to emphasise that this is still a very low proportion of the total population of MWHDs, but it indicates that Lafora’s disease is more frequent, as reported by the Canadian group in 2005. This implies that the number of carriers is also higher, as previously expected. I will come back to this issue at the end of my report.

Affected dogs will always transmit expanded EPM2 genes to their offspring. Dependant on the genetic status of the other mating dog the offspring will be at least disease carriers or affected dogs.

Identifying affected dogs has potentially the largest impact on reducing the frequency of Lafora’s disease. Nevertheless, additional methods will be applied by Centogene to detect carriers of Lafora’s disease with larger expansions of the EPM2 gene. Within the last month more sensitive detection methods have been tested to prove if longer versions of the expanded EPM2 gene can be detected in samples of carriers. The results indicate that earlier steps in the testing procedure still need to be

modified.

We suggest continuing the programme in the following way. Owners of dogs which have been tested as affected will be informed of the result. We suggest not breeding from those dogs. In cases where the differentiation between clear and carrier needs the application of additional testing methods, no intermediate result will be sent out and Centogene will apply these methods. In the vast majority of samples received by Centogene the amount and quality of the DNA is sufficient for further testing. In case additional samples are required Centogene would inform Mrs. Nora Price (Lafora Coordinator for the WHDC).

We apologize for the inconvenience. The worldwide experience in genetic testing of Lafora's disease is still extremely limited and the results of the Canadian group in 2005 demonstrated that the particular genetic mechanism which causes Lafora's disease in dogs poses a major challenge to the identification of Lafora's disease carriers in MWHDCs. Since that discovery of the genetic background of Lafora's disease in dogs, genetic testing methods have made significant progress. Centogene is using a different approach compared to the Canadian group. The first results indicated that this would work for the identification of carriers. The positive control makes us confident that further refinement of the test established by Centogene will be the basis for robust carrier identification.

Within the next 4 weeks Centogene is introducing different modifications of the test. Samples from dogs with known disease status will be used for the validation. At latest, at the end of November Centogene and the Wirehaired Dachshund Club will review the results and decide on how to move on with the programme. As indicated above, the current results point in the direction of up to 10% affected dogs. From a statistical point of view this means about 20% carriers would be expected in the sample population. These numbers need to be confirmed in larger cohorts and it is likely that carriers need not be excluded from breeding, providing they are only mated to clear dogs. Reducing the so-called gene pool (number of dogs participating in breeding programs) will have potentially detrimental effects on other inborn diseases. It would have a benefit on Lafora's disease maybe at the expense of increasing the number of dogs suffering from other genetic diseases.

We ask you for your understanding that we are dealing with a difficult disease and that recommendations on breeding strategies need to take the disease frequency in account.

Costs for the refinement of Centogene's test as indicated above are carried by Centogene and are not at the expense of the Wirehaired Dachshund Club.

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Lafora Disease - update

The above report from Centogene is clearly disappointing for all of us who had been expecting to be able to identify Clear, Carrier and Affected dogs. On the positive side, their analysis has confirmed that the proportion of Affected dogs found by the Canadian test in 2010 is the same; i.e. around 10%. It also means that, knowing the pedigrees of these dogs, we can identify their parents as being at least Carriers, if not Affected. All results will be published on the WHDC website.

The advice given at the WHDC AGM on Sunday 23rd October was that it would be inadvisable for anyone

with an Affected MWHD to breed from it because of the high risk of producing Affected puppies, even if mated to a "Not Affected" dog (which might be a Carrier).

Anyone whose dog is given an interim report of "Not Affected" from the Centogene test MUST NOT describe that dog as being "Clear" of Lafora.

Back Disease Research

We have reported before on the progress we are making with setting up a research programme to try to identify a gene test that will help predict back disease. We already have our "control" samples from 50 Dachshunds over the age of twelve who have never experienced back disease.

Recently a research paper was published which gives us hope that the search for a gene test will perhaps be quicker than we thought. Here is the abstract:

Genome-Wide Association Study in Dachshund: Identification of a Major Locus Affecting Intervertebral Disc Calcification [Journal of Heredity 2011;102(S1):S81–S86]

Intervertebral disc calcification and herniation commonly affects Dachshund where the predisposition is caused by an early onset degenerative process resulting in disc calcification. A continuous spectrum of disc degeneration is seen within and among dog breeds, suggesting a multifactorial etiology. The number of calcified discs at 2 years of age determined by a radiographic evaluation is a good indicator of the severity of disc degeneration and thus serves as a measure for the risk of developing intervertebral disc herniation. The aim of the study was to identify genetic variants associated with intervertebral disc calcification in Dachshund through a genome-wide association (GWA) study. Based on thorough radiographic examinations, 48 cases with #6 disc calcifications or surgically treated for disc herniation and 46 controls with 0–1 disc calcifications were identified. GWA using the Illumina CanineHD BeadChip identified a locus on chromosome 12 from 36.8 to 38.6 Mb with 36 markers reaching genome-wide significance ($P_{\text{genome}} 5.0.00001–0.026$). This study suggests that a major locus on chromosome 12 harbors genetic variations affecting the development of intervertebral disc calcification in Dachshunds.

In plain English: They have found an area of Chromosome 12 which correlates with the development of calcified discs in Dachshunds. Previous Danish research has claimed a correlation between the number of calcified discs present at 18-24 months and the risk of back disease. Other research has challenged that, so we will have to see how this work develops. However, it does give the AHT a much narrower area to look at, instead of having to carry out whole genome scans initially.

There is also a similar piece of research about to begin at a university in Texas. So, the race is on to find a gene test for Dachshund back disease!

Distichiasis in Miniature Long-haired Dachshunds

A research paper published by the AHT earlier this year reported on clinical, ERG and DNA testing of PRA in Miniature Long-haired Dachshunds primarily. However, the clinical eye examinations also identified 42% of MLHDs suffering from Distichiasis. This is an inherited condition seen in many breeds in which there is a growth of extra eyelashes from the upper or lower eyelids. In many cases, these eyelashes, called distichia, rub on the cornea causing irritation and tearing, and occasionally corneal abrasions. In severe cases, surgery is required to remove the extra lashes, but this is not always successful as they can grow back.

The Breed Council agreed that the high proportion of dogs presenting with this condition in the research called for further investigation. The Miniature Dachshund Club has therefore agreed to take on the lead role in this and will be contacting the AHT for further advice.

We would like to remind all Dachshund owners, not just MLHDs, that clinical eye testing is recommended as a reliable way to detect eye disease such as Distichiasis, Entropion, Ectropion and Persistent Pupillary Membranes, all of which have been reported in one or more variety of Dachshund.

It seems to be a side-effect of the availability of cord1 PRA testing that clinical eye examinations are being carried out less frequently on Dachshunds. An ophthalmologist at the AHT said recently: “clinical eye testing and genetic testing work so well together; you need both”.

Dachshunds in pole position

Here is a Press Release from The Karlton Index:

The first full listing against the framework of The Karlton Index has now been completed and published (October 9th 2011) at www.thekarltonindex.com

The top scoring breed is Dachshunds. Congratulations to the team behind the Dachshund Breed Council for their impressive work and commitment to breed health.

The top twenty includes Leonbergers, Bernese Mountain Dogs and Hungarian Vizslas. Full list of top twenty available here: http://www.thekarltonindex.com/wordpress/?page_id=116

At the other end of the scale several breeds are visibly doing so little in terms of breed health that more than twenty score Zero out of 100 and sixty breeds scored less than double figures. Included in this group of breeds is Shih Tzu, Pomeranian and Yorkshire Terrier.

Full list of poor performing breeds can be found at: http://www.thekarltonindex.com/wordpress/?page_id=118

On completing the first full index, Philippa Robinson founder of the Karlton Index says:

“The full review of all breeds has been very enlightening. On the whole findings are disappointing but there are glimpses of brilliant work being done in some quarters like the Dachshund Breed Council and the teams addressing the health agenda in Leonbergers and Vizslas for instance. The teams behind the top performing breeds are characterised by a determined urgency and they tackle health without a hint of complacency.

But over twenty breeds scored zero, in other words nothing of substance could be found on health. Clearly the claims that media attention and external criticism of dog breeding is unwarranted and unnecessary because breeders are “doing all they can” to improve the health of dogs, are flimsy at best in this group. Many in the bottom twenty breeds came from the Toy group. Some of the more controversial breeds like Bulldog, Pug and Neapolitan Mastiff also score poorly despite coming under additional scrutiny from being on the Kennel Club’s list of high profile breeds. I was surprised that many popular breeds like Boxers, Dalmatians and Poodles also came out with low scores.

The framework is based on recognised business improvement tools and to that end the entire aim of the project is to support the work being done by breed clubs. My conclusions are that the Kennel Club and other interested stakeholders should target resources more effectively for breed clubs. They need much more support to develop balanced health strategies and embark upon meaningful health surveillance.”

The next assessment against the Karlton Index is scheduled for Spring 2013.

End of press release

The full listing can be accessed at www.thekarltonindex.com

Philippa Robinson is a campaigner for better health and welfare in dogs and is a business consultant by profession. Her contact details are

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The Karlton Index [report on Dachshunds](#) says:

As identified in the spring The Dachshund Breed Council (DBC) continues to set the benchmark in its approach to breed health. It impresses with the following:

- ⤴ Establishing a balanced strategy for prioritising health issues
- ⤴ Setting objectives and measures to help gauge progress
- ⤴ Communicating this far and wide using a dedicated website, regular press releases and social media
- ⤴ Organising regular health related events and campaigns
- ⤴ Involving a wide range of people in the health agenda, including pet owners
- ⤴ Regularly surveying the breed on health matters and publishing the results
- ⤴ Developing very strong partnerships across the relevant breed clubs and with the KC and veterinary/scientific profession
- ⤴ Being very generous in sharing information and practice.

Their approach is by far the most advanced in the UK, and rightly, the Kennel Club now links its Dachshund information pages to the DBC, thus giving prospective dachshund owners direct access to this invaluable source of information. They can do this in confidence that the information is credible, current and comprehensive. The work done by the DBC team is nothing short of outstanding.

We're obviously delighted to have come out so well in this first survey, but we're not complacent. We may have been the top-scoring breed, but with a score of 40% there is clearly still lots more to be done. Some of the challenges we face include:

- ⤴ Encouraging even higher rates of adoption of available screening programmes (DNA and clinical), particularly among breeders who are not members of Breed Clubs and those who advertise on commercial puppy sales internet sites
- ⤴ Getting our health messages out to potential Dachshund owners so that they can ask the right questions when looking for a puppy
- ⤴ Encouraging more people to report any health issues on our [Health Reporting page](#)
- ⤴ Making real progress with reducing back disease

Health Fund

At its recent meeting, the Breed Council agreed to set up a dedicated Health Fund to support future breed health improvement activities. We have seen, over the past couple of years, the high costs associated with genetic research and screening programmes and it seems likely that there will be a need for funding for the foreseeable future.

The Council agreed to transfer £500 from its reserves to the Health Fund and will discuss future donations at its Annual General Meetings when any surplus funds are known and reported by the Treasurer.

It is hoped that Clubs and individuals will be generous in supporting this fund, in the same way they support Dachshund Rescue and Daxaid.

We hope to be able to set up an on-line donation facility once the health Fund bank account is in place. In the meantime, any donations (Payable to Dachshund Breed Council – Health Fund) can be sent to the Treasurer: Katherine Herrington, 5 Linden Close, Huntington, York YO3 9RQ.

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E-mail: secretary@dachshundbreedcouncil.org.uk

Website: <http://www.dachshundbreedcouncil.org.uk>

Health Website: <http://www.uk-dachshund-health-report.org.uk>

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