HEALTH REPORT 2018





This is the Dachshund Breed Council's 10th Annual Health Report

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Prepared by: DBC Health Committee

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10 years of Breed Health Reports

As 2018 draws to a close, we also come to the start of our second decade as a Breed Council. Our inaugural meeting was in 2008 so it's perhaps a good time to reflect on some of our achievements over the past 10 years.



If you want to track our history of work on breed health, visit our InteractiveTimeline.

What have we achieved in our first 10 years?

Under the leadership of the Wirehaired Dachshund Club, the risks of Lafora Disease in Mini Wires has been dramatically reduced thanks to the development of a DNA screening programme. In 2012, around 55% of litters were at risk of including Lafora-affected puppies. By 2018, that figure was down to 6%.

Under the leadership of the Miniature Dachshund Club, the risk of miniatures going blind as a result of PRA has been reduced, with prevalence down to just 0.3% in our 2018 DachsLife Survey.

Twice, we came Number One in the <u>KarltonIndex</u> review of UK breed clubs as a result of our focus on using data and effective planning to address breed health matters.

We were the first breed to appoint Pet Advisors, a group of non-show owners who devote their time to helping other less experienced owners via social media.

In 2018, our charity Dachshund Health UK was formally registered with the aim of supporting our research and health improvement activities, including education of owners and buyers. Over the decade, before the charity was set up, over £60,000 was raised to support breed improvement activities.

We now have more data and evidence than ever before of the priority issues facing our breed. Our surveys have collected health, temperament and lifestyle reports on around 7000 Dachshunds.

We have provided data for and contributed to the publication of 4 peer-reviewed papers on Lafora Disease and IVDD.

We ended 2018 with the agreement on our Breed Health and Conservation Plan which was developed with the Kennel Club and will published in 2019.



Roger Sainsbury BVM&S, MRCVS Chairman, Health Committee

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Our latest health survey, DachsLife 2018, was launched on 1st Sept and ran until the end of November. The main focus was on cancers and tumours in Dachshunds but the survey covered other disease conditions and we wanted to know about all Dachshunds – not just sick ones!

The Breed Council had a stall at the Dachshund Town UK event at Milton Keynes. Owners were met and advice on buying and owning dachshunds was offered. A hamper was also raffled in aid of funds for Dachshund Health UK.

Breed Health and Conservation Plan

Members of the Health and Welfare committee met with the Kennel Club to discuss the Breed Health and Conservation Plan for Dachshunds. This will be published in 2019.

The addition of two conditions, distichiasis and pes varus, to Breed Watch, was discussed at the meeting and subsequently by email. The Health Committee felt that this should be discussed by the Breed Council before we ask the Kennel Club to amend Breed Watch.

Also discussed were the dangers of exaggeration of the Dachshund, particularly the short legs and long back. Dogs should be fit for function and a hunting dog needs adequate ground clearance and dogs that are too long tend to have poor ground clearance. Unfortunately, dogs like this are still getting top honours ten years on from the change to the breed standard. This needs to change as there are still journalists who campaign on over-exaggeration in dogs and there has even been a call for Dachshunds to be banned. We published an illustrated article on the breed standard which is now on the website and is well worth reading.

Roger Sainsbury BVM&S, MRCVS Chairman, Health Committee

Money has been raised at a large number of fundraising events to assist with IVDD, Lafora disease and other projects. Amongst others, there were fun days in Musselburgh, Shropshire and Chipping Norton, monthly walks against IVDD and The Great British Sausage Walk – a series of walks around the UK in October.

Devoted to Dachshunds produced cards, Candy Jones created a 'Sausage Dog Days' children's book and the 'Sausage Army 'Dachshund Calendar for 2019. All were sold with contributions going to our Dachshund health funds.

We really must say thank you to everybody involved.

Intervertebral Disc Disease (IVDD)

There has been much discussion on the FGF4-2 (chromosome 12) mutation, which included UC Davis and the Animal Health Trust, about using this second mutation in an IVDD test. It appears that, although we thought most Dachshunds were homozygotes for the mutation, there are exceptions, notably Wires, where there may be enough variation for a viable test and this needs to be explored further. Cathryn Mellersh said that there is no doubt the FGF4-2 mutation is a risk factor for IVDD but there is insufficient variability in the other Dachshund breeds to breed away from the mutation without seriously damaging the Effective Population size of the breeds. But not all Dachshunds get IVDD, so there are probably other factors involved. It may be worth doing a Genotype wide test comparing IVDD cases with older clear dogs to see whether other genetic factors can be identified.

A grant from the Kennel Club Charitable Trust for IVDD testing was made two years ago but unfortunately this money was supposed to be directed to CVS who have no mechanism for using it. The Kennel Club asked that we re-submit the grant application. Unfortunately, we heard in early January 2019 that our application had been turned down and, therefore, we will have less money available than we had hoped to support the IVDD screening programme.

An open access paper on the association between neutering and IVDD was published in November 2018. Results from this retrospective study suggest that gonadectomy, especially if performed before 12 months old, increases risk of IVDD in our breed. Decisions regarding neutering should be made on an individual basis, taking a range of pros and cons into account. Considering the high prevalence, morbidity and mortality of IVDD in dachshunds, increased IVDD risk associated with neutering is a key factor to consider in deciding whether and when to neuter.

Roger Sainsbury BVM&S, MRCVS Chairman, Health Committee

In November, the Breed Council once again discussed the practice of weighing Miniature Dachshunds at dog shows. Concerns have been expressed about potential welfare risks for the dogs and judges are advised to penalise any dogs presented in thin body condition.

The Council voted to continue to support the practice of weighing and will continue to monitor reports from judges on dogs' body condition.

Lafora Disease

On the 9th August the Kennel Club contacted us to say that after discussion with the Animal Health Trust, the new blood test for Lafora disease introduced by Laboklin had been added to the approved list for the scheme. The Animal Health Trust has suggested that we should submit some known Lafora carrier samples to Laboklin to ensure that they are correctly identifying them, but they also said that increasing numbers of hereditary clears mean the risk of a false clear result is low. The blood test being carried out by Genomia, a Czech Company, is also now accepted by the KC.

The Wirehaired Dachshund Club intends to continue to use the Toronto lab as they have a proven track record. Monitoring of the Lafora blood testing continues to show that most registered matings are 'safe' for Lafora.

Sue Holt, who was particularly involved with the Lafora disease programme, has now moved to Brittany. I wrote to thank her for her contribution during the time that she had been helping us on the Health and Welfare subcommittee.

Breeding Regulations

We published an article to summarise the 2018 Animal Welfare Regulations as they apply to ordinary dog owners who may also breed and show their dogs. This is on the Breed Council website. It appears the Regulations are being interpreted differently by each Local Authority, so you need to look at the Regulations – or at least the article! If you are unsure, then you should discuss this with your Local Authority.



Leadership

In this section:

- Health Committee
- Contacts
- Pet Advisers' Report
- Health Fund

Health Committee

The Breed Council represents the interests of sixteen UK Dachshund Breed Clubs and has appointed a Health Committee to develop policies and coordinate plans for breed health improvement.



Interactive breed health timeline

Members of the Subcommittee are:

Roger Sainsbury BVM&S MRCVS (Chairman), Helen Geeson, Dawn Norton, Nora Price, Ian Seath and Judy Squires.

In addition, Gill Key, Charlotte Baldwin and Aimée Thomas are Pet Advisers to the Committee. Other Clubs and individuals take the lead on specific projects within our Health Plan; for example the Wirehaired Dachshund Club leads on Lafora Disease and the Miniature Dachshund Club leads on eye disease including cord1 PRA and Distichiasis.

Sue Holt retired from the Committee in 2018 and we would like to thank her for all her hard work on the Lafora Screening project.

Gill Key, Charlotte Baldwin and Aimée Thomas are Pet Advisers to the Health Committee.

ARE YOU ON THE ROAD TO BEING THE PERFECT DACHSHUND BUYER?





Do...

BUY ONE BECAUSE:

- · you've researched the breed
- you understand what they're like to live with
- you've got one already and you're sure another one will be a good fit with your lifestyle

UNDERSTAND THE POTENTIAL RISKS OF BACK DISEASE (IVDD):

- . invest in pet insurance (diagnosis & surgery could cost £10,000)
- visit www.dachshund-ivdd.uk for all the facts

GET A RECOMMENDATION OF A GOOD BREEDER:

- ask a Breed Club Secretary
- ask for advice on one of the Dachshund Facebook Groups

VISIT THE RECOMMENDED BREEDER(S) TO:

- · see the Mum of your potential puppy
- · see what their dog(s) is/are like in a home environment

talk about your lifestyle and why you want a Dachshund BUILD A RELATIONSHIP WITH YOUR

CHOSEN BREEDER TO:

- ensure you both understand the commitment you are making
- have an honest conversation about whether you want to show, or breed from, your puppy

VISIT YOUR BREEDER AT LEAST TWICE:

- firstly, to see the puppies together as a litter (good breeders will be happy for you to visit several times)
- finally, to collect your puppy

FIND OUT WHAT HEALTH TESTS ARE RECOMMENDED:

IVDD for all. Lafora for Mini Wires. Cord1 PRA for all Miniature.

- IVDD for all, Lafora for Mini Wires, Cord1 PRA for all Miniatures
- ask which ones your breeder has done
- check out www.dachshundhealth.org.uk and www.laforadogs.col
 if your puppy is KC registered, you can check this on the KC

Enjoy a long and happy life with your wellbred and well-reared Dachshund who is a typical example of the breed

Don't.

BUY ONE BECAUSE:

- you think they are cute from all the adverts you've seen
- · you've seen a celebrity with one
- you really like the idea of owning a "rare coloured" Dachshund

BELIEVE IVDD HAPPENS TO EVERYONE ELSE'S DACHSHUND:

 1 in 4 will experience some degree of IVDD, with Mini Smooths and Smooths more likely to be affected

FIND SOMEONE "DOWN THE ROAD" WHO:

- thought it would be nice for their bitch to have puppies
- always has puppies available

MEET SOMEONE IN A CAR PARK TO:

- pick up your puppy from the back of a car/van
- save time travelling to see the pup and its Mum at home

VIEW YOUR PURCHASE AS A PURELY COMMERCIAL ARRANGEMENT:

- be wary of paying a large, non-refundable, deposit without seeing
- Mum or your puppy

 don't tell your breeder you "only want a pet" when you really fancy the idea of having puppies and recovering your purchase costs

FIND A PUPPY FROM AN INTERNET

- buy it today because you MUST have it now
- collect it from the "breeder's house" without seeing Mum

ASSUME YOUR PUPPY WILL BE HEALTHY BECAUSE:

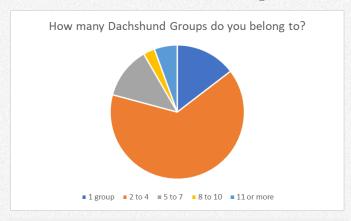


WWW.DACHSHUNDHEALTH.ORG.UK

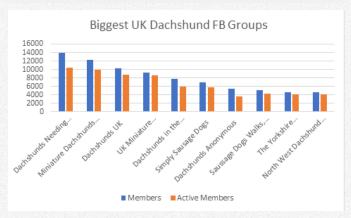
The 3 pet advisers:

- monitor and act as a conduit for complaints about adverts on online puppy selling sites and report/advise to Health Committee for further action (e.g. refer issues to the KC)
- write articles for the DBC website
- answer queries from buyers, owners and would-be first time breeders
- support pet events (e.g. walks and pet shows)
- identify opportunities in the media to raise awareness of health and welfare issues (e.g. forthcoming article in Edition Dog magazine)

But, the main thrust in 2018 has been Facebook activity.







UK Facebook Dachshund Group Report:

The Admins of 18 national and regional Dachshund Facebook groups kindly shared activity statistics for their membership with us, revealing just how popular this platform is amongst the Dachshund owning community. Most Dachshund owners on Facebook belong to at least 2 groups (see chart - left).

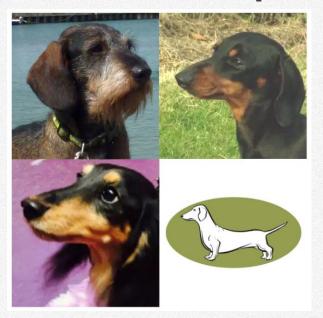
Some of these groups are enormous and very active (active membership = members who have interacted on the group in the last 28 days, either posting, commenting, 'liking' or sharing posts).

The biggest 'regional' groups were:

- a. Sausage Dog Walks, South Wales, UK (SDW) (5.1k members, 4.2k active)
- b. The Yorkshire Dachshund Group (TYDG) (4.5k, 4k active)
- c. North West Dachshund Owners (NWDO) (4.5k, 4.1k active)
- d. Dachshunds North East UK (DNEUK) (3.3k, 3.0k active)
- e. Scotland (DIS) (2.9k, 2.6k active)

Size isn't everything: across all groups, an impressive 84% of members were active in the last 28 days (posted, commented or reacted), but UKMD, Warwickshire Dachshunds, DNEUK and NWDO had the highest % of active membership, all with 90%+ members getting involved.

Dachshunds in Scotland had the highest average comments per active member (more than 20 comments per member in last 28 days), and DUK, TYDG, UKMD, NWDO active members all commented more than 17 times on average.



Other dachshund interest groups use Facebook to assist in their rehoming goals, including Dachshund Rescue, the Red Foundation (in 2 years, 168 rehomes including 8 dogs paralysed or compromised by IVDD), and the Keith Rumney Foundation and fundraising (see Dedicated to Dachshunds with IVDD report).

Using Social Media – the positives:

Though Instagram's popularity has grown enormously in 2018, the Pet Advisers continue to focus on Facebook:

- 1. For gathering data: .e.g..
- Heavy promotion of DachsLife 2018, helping towards more than 2500 respondents
- Dilute poll 43% respondents reported their dogs were showing signs of colour dilution alopecia
- IVDD awareness poll 81% owners knew about IVDD in Dachshunds before buying
- Contracts 74% owners reported they had bought a dog with no contract
- 2. Raising awareness, e.g.: IVDD, Lafora, Puppy farming/illegal importing, Dilute breeding, Pes Varus
- 3. Answering health, buying and ownership questions with factual information from the DBC site. The most frequently asked (and often contentious) questions include:

When to neuter	Insurance advice				
Housetraining	Vaccination				
Separation anxiety	Coats				
Barking	Feeding advice				
Buying two pups together	Are they good with children?				
Owning dog whilst working full time	What weight should my dog be?				
KC or not	Harness or collar?				
Where to buy	Best Insurance				

Pet Advisers' priorities for 2019:

- Continue activities as 2018
- Organise another national event as per Caldicot Castle, to raise awareness of IVDD
- Build presence on Instagram
- Continue to seek out opportunities to raise awareness of best practice in dog-related and national media
- Review articles on the top most frequently asked questions and suggest how to simplify messages/infographics for instant impact



Using Social Media – the negatives:

Getting attention: Though the DBC has excellent documentation and weblinks on health, buying, owning and breeding dachshunds, posts can get lost amongst the responses offering advice based on personal experience, or the original questioner favours the information that confirms what they want to hear.

Human nature: Unfortunately, social media can be a breeding ground for jealousy, bitterness, rumour and misunderstanding and the effect of Chinese Whispers when an incomplete story is shared and embroidered can rapidly escalate and cause division. Pet Advisers are sometimes asked to provide confidential advice and help to individuals. Our concern first and foremost is the dogs, and not personal opinion or 'taking sides'.

Normalising poor practice: The Dog's Trust reports that 63% puppies intercepted as illegal imports between Dec 2015 - July 2018 were French or English Bulldogs, Pugs and **Dachshunds**. Many Facebook members have bought dogs cheaply on the internet which turn out to have been imported from Latvian, Romanian, Lithuanian or other Eastern European countries, despite being advertised initially with no indication of that. Because they are the norm, the very long legs, Queen Anne fronts and oversize dogs are becoming widely accepted as the norm.





Charlotte Baldwin runs the 'Dedicated to Dachshunds with IVDD' charity. She reports:

Since launch in June 2016, Dedicated to Dachshunds with IVDD has raised an incredible £76,779.48.

Loaning to date, 29
wheels4dogs and 227 new
Innopet strollers. We have also
re-loaned 90 of these preloved
strollers. We have also
supplied Pet pens,
Gingerleads, Belly bands and
pants.

We have supported at least 317 dachshunds with equipment to date.

Total cost of equipment purchased and loaned by Dedicated to dachshunds with ivdd £32,343.03!!!

Health Fund



At the end of 2018, the Health Fund balance was £27,000. This includes money ring-fenced for IVDD.

Funding for Lafora screening is managed by the Wirehaired Dachshund Club who continued to subsidise tests during 2018. Tests now cost just £95 (full price is £225).





During the year, the Health Fund supported several projects, including:

- Subsidies (£4500) for IVDD screening
- Printing of educational leaflets for seminars, awareness-raising events and Discover Dogs

Dachshund Health UK was formally registered as a UK charity in 2018 to support the Breed Council's health activities.

6 Trustees have been appointed: Roger Sainsbury, Gill Key, Pauline Kerslake, Katherine Herrington, Ian Seath, Anne Moore.



We are grateful to everyone who has raised funds for us during 2018. Just some of those who have run campaigns for us include:

- The Dachshund Club Loose Change Challenge
- The Sausage Army (calendar)
- Devoted to Dachshunds (Xmas cards)
- Dachshunds 2018 Nadine Miles (calendar)
- Sausage Dog Days (children's story book)



Planning

In this section:

- 2017 priorities
- Registration trends
- Health surveillance
- Partners
- Communications

2018 Priorities

Back Disease (IVDD):

- Publicise the UK screening programme and recruit participants partially achieved
- Continue to provide education to owners on lifestyle factors that can help reduce the risks of IVDD achieved

Lafora Disease:

- Continue to promote, subsidise and roll-out the Lafora Screening Programme with a view to increasing the proportion of "safe" litters to at least 95% (2018 average = 94%) not quite achieved
- Continue to support the work of Dr. Minassian's to develop potential treatments for Lafora achieved

Eye Disease:

• Promote the use of clinical eye examinations in addition to the use of DNA screening so that conditions such as Distichiasis can be diagnosed – partially achieved

Health Surveillance:

 Continue to promote the on-line illness, epilepsy and cause of death surveys – achieved and completed DachsLife 2018 survey

Education and Communication:

- Continue to make the most up-to-date breed health information available to potential puppy buyers (e.g. via on-line media, magazines and Discover Dogs) achieved
- Provide regular updates on the work of the Breed Council, using a variety of on-line and off-line channels/media achieved

Dachshund Breed Council Health Plan 2018

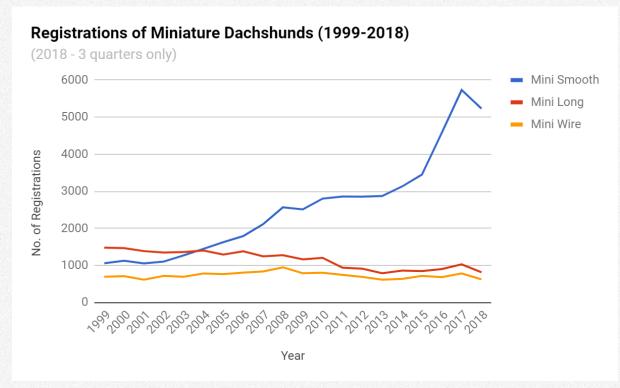
Demonstrate leadership for Improve breed health **OBJECTIVES Develop evidence-based Engage with breeders and** health improvement plans owners **ACTIVITIES** Reduce IVDD Collect breed health data via online survey Achieve charitable status for Dachshund Support owners via Facebook Groups Health UK Promote IVDD Screening Collaborate with the AHT on the genetics of Provide resources for Discover Dogs Support campaigns to raise funds Subsidise IVDD Screening Develop further content for the Health Promote education of lifestyle factors Share IVDD data with the veterinary Collaborate with non-UK Breed Clubs on IVDD website research community (e.g. diagnosis, neutering) Reduce Lafora Publish a newsletter, monthly Publish a paper with Dr Minnassian's team on Support the AHT development of a Lafora Lafora research swab test Run 2 Screening sessions Influence/divert demand for Mini Smooths and "rare colours" Collaborate with the KC to develop a Breed Publish Safe/Unsafe litter data Health & Conservation Plan Reduce Eye Disease Collect evidence of dogs with epilepsy Promote BVA/KC Eye Testing Promote genetic diversity

Publish KC COI data & advice

Registration trends (Miniatures)

The inexorable rise in popularity of Mini Smooths saw a 66% increase in registrations between 2015 and 2017. In 2017 they were the 9th most popular KC registered breed (up from 16th in 2015).

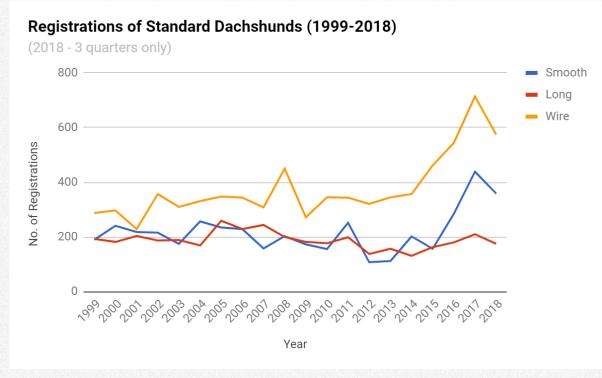
In the Miniatures, the Mini Smooths have increased by over 500% since 1999. Mini Longs have declined by about 40% while the Mini Wires have remained roughly static over that same period (based on the linear trend line).



The chart (left) shows Kennel Club registration trends since 1999. 2018 is for 3 Quarters only.

Registration trends (Standards)

In the Standards, the Smooths and Longs have each declined in popularity by about 20% while the Wires have increased by about 50% since 1999 (based on the linear trend line).



The chart (left) shows Kennel Club registration trends since 1999. 2018 is for 3 Quarters only.

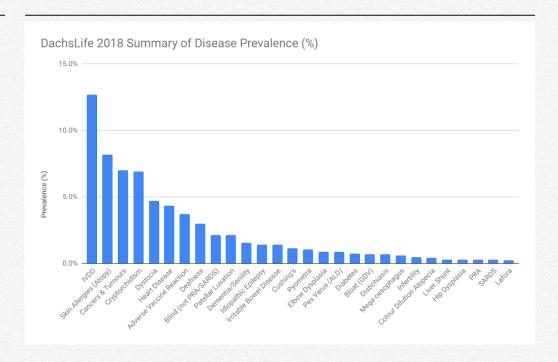
Health surveillance

Our on-line Health Survey continues to provide a source of useful data on Dachshund health issues and we received 7 reports during 2018; an average of 6 reports each month.



DachsLife 2018 was our most recent major Health Survey and received reports on more than 2500 Dachshunds. Full report at www.dachshund-health.org.uk

The main focus of DachsLife 2018 was cancers and tumours. 1 in 20 S, MS, W, MW had a report of cancer/tumour. 1 in 10 L, ML had a cancer/tumour report.



The chart above is a summary of DachsLife 2018 reports.

- IVDD continues to be the No. 1 reported health condition (13% prevalence)
- Skin allergies were the 2nd most commonly reported condition (8%)
- Cancers and tumours were the 3rd highest category (7%) equal with Cryptorchidism (missing testicles)

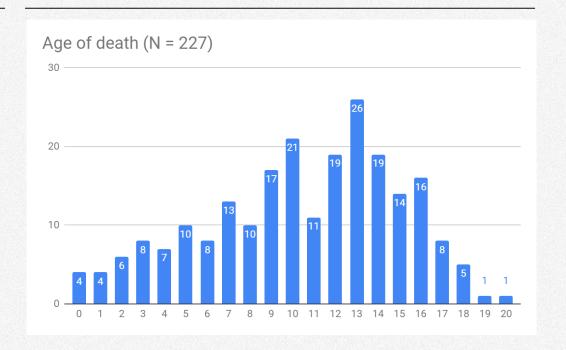
Longevity (Age of death)



The chart shows the age of death for dogs in DachsLife 2018

The median age of death was 11. In our 2012 survey it was 11.8 years.

40% of deaths were due to cancers.



The median age of death, by variety, in DachsLife 2018 was:

- Smooth = 13
- Long = 12
- Wire = 12
- Mini Smooth =10
- Mini Long =12
- Mini Wire =12

Partners in health improvement



We are working with Professor John Innes and Dr Mark Lowrie of CVS Group as our key partners for the IVDD Screening programme.

Dr Cathryn Mellersh is supporting our investigation into the genetics of IVDD.

Dr Marianne Dorn is supporting members of our IVDD Facebook Group with advice on rehabilitation. www.therehabvet.com Many of our partners willingly give their time freely and we gratefully acknowledge all their support. Without them, we would not be able to progress our health improvement plans with such scientific and academic rigour.



Lafora Disease



Dr Berge Minassian and his team at the Hospital for Sick Kids in Montreal continues to carry out analysis of our Lafora tests. We will be publishing a paper on Lafora Disease, with Dr Minassian, in 2018.

Dr Cathryn Mellersh is currently working on a cheek swab test for Lafora Disease using control samples provided by us.

Dr Clare Rusbridge continues to support our work on Lafora Disease via our Progression Study, led by Gill Key. IPFD have shared examples of our work on their website:

www.dogwellnet.com

Communications

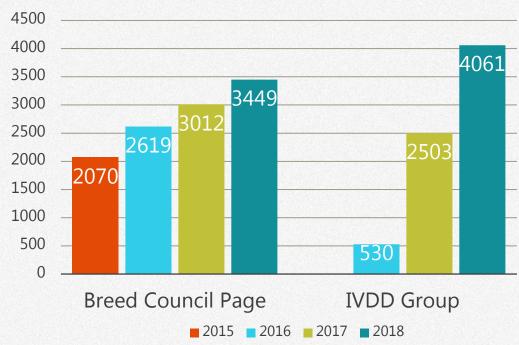
We have three key groups of people with whom we have to communicate effectively:

- Breed Club members (who have agreed to abide by our Code of Ethics)
- Breeders who are not members of Breed Clubs (and who probably represent about 80% of the Dachshund breeders with litters listed in the KC's Breed Records Supplement)
- Owners and potential owners of Dachshunds, whether they are KC Registered or not

We have 2 Facebook Groups, a main Breed Council page and an IVDD Support Group.



Facebook Followers

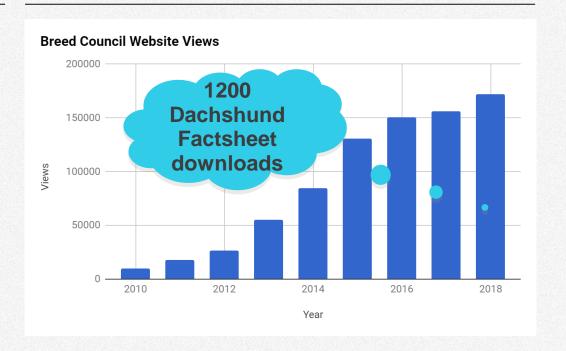


Communications

We have 3 websites:

- Dachshund Breed Council (general information about the breed for buyers and owners)
- Health website (advice on health and welfare of the breed)
- IVDD (specific information on IVDD and our screening programme)







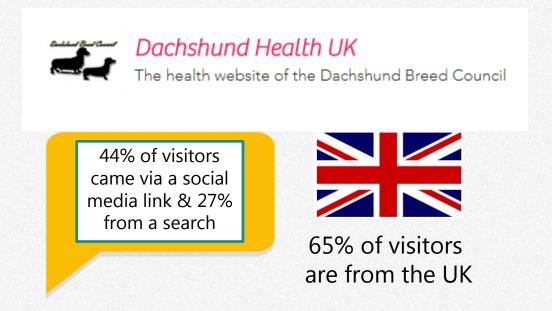
Communications

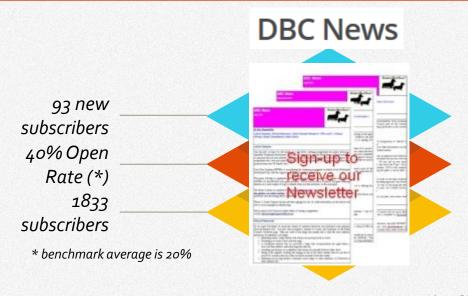
We launched a new Health website in September 2017. It had 12,000 visitors in 2018 and includes a blog as well as information pages.

The most visited pages from the Home page are:

- Health priorities
- Breeding from your Dachshund
- Caring for your Dachshund
- About Dachshunds
- Health testing

www.dachshundhealth.org.uk







Breed Health Improvement

In this section:

- IVDD
- Lafora Disease
- Eye Disease
- Watch list
- Genetic diversity
- Recessive coats
- Colours and health
- Conformation
- Temperament

Intervertebral Disc Disease (IVDD)

The aim of X-ray screening is to reduce the occurrence of herniations by encouraging breeding with dogs that have low numbers of calcifications.





No. of Dogs vs No. of Calcifications (N=66)

Back disease is reported to affect up to 1 in 4 Dachshunds but the prevalence varies in the 6 varieties, with S and MS at highest risk. This may range from relatively mild symptoms that can be cured with cage rest and antiinflammatory drugs, through to paralysis which may require surgery, or in the worst cases, euthanasia.

www.dachshund-ivdd.uk

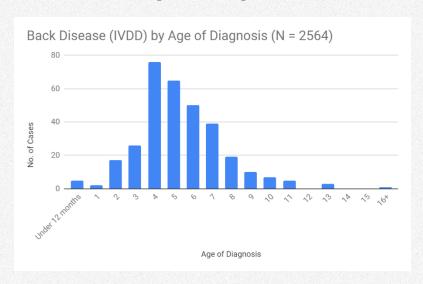
We launched our IVDD X-ray Screening Programme in November 2016, together with a dedicated IVDD website and Facebook Support Group.

66 dogs have now been screened. 31 of those were Mini Smooths which is good news considering this variety has the highest prevalence of IVDD.

We will continue to promote and subsidise this programme in 2019. 64% of dogs screened had 0, 1, 2, 3 or 4 calcifications.

It is clearly going to take time to screen UK dogs and it may, therefore, be impossible to adhere rigidly to the advice given in the Nordic countries, at least in the short-term. It would not be sensible from a genetic diversity perspective to remove all highscoring dogs from the gene pool by not breeding from them.

Intervertebral Disc Disease (IVDD)

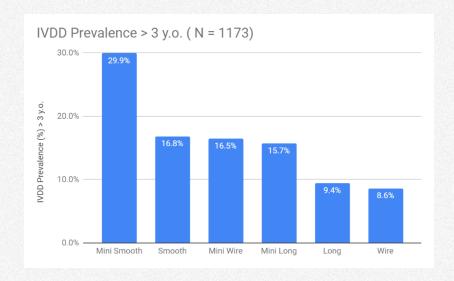


Overall prevalence = 12.7%.

This must be viewed in the context of nearly half the dogs in the survey being under the age of 4 (i.e. generally below IVDD risk age).

Unsurprisingly, most cases (70%) of IVDD were reported between the ages of 4 and 7. The median age of diagnosis was 5.

The data here is from our DachsLife 2018 survey.



Overall revalence for Dachshunds over the age of 3 = 21.1%.

This calculation excludes the young dogs that, in general, are less likely to have IVDD. The exclusion of dogs under 3 is consistent with analyses in our previous survey reports.

The genetics of IVDD



A validation study has been carried out by researchers in Denmark. Their initial findings suggest that FGF4 on Chromosome 12 is not the causative mutation for IVDD. Smooth and Longhaired Dachshunds appear to be homozygous for the mutation, irrespective of their IVDD status.

The conclusions from our AHT samples and Danish samples mean that the UCD "test" cannot be used to screen against IVDD and our advice remains that X-ray screening is the only viable test available currently.

We are grateful to Dr. Cathryn Mellersh at the AHT and to Dr. Danika Bannasch at UCD for their support.

In October 2017, University of California, Davis, researchers revealed the discovery of a genetic mutation across breeds that is responsible for chondrodystrophy (the skeletal disorder leading to shorter legs and abnormal intervertebral discs) in a study published in the <u>Proceedings of the National Academy of Sciences</u>. We <u>reported this</u> and their claim to have developed a DNA test for IVDD. At the time, we were rather concerned that, although a potentially exciting development, the conclusions were based on analysis of a very small number of Dachshund DNA samples.

We have been working with the Animal Health Trust on the genetics of IVDD and UCD generously agreed to screen a set of samples which we had collected for Dr. Cathryn Mellersh in the UK. These comprised UK dogs aged 4-7 who had suffered IVDD herniations and dogs over the age of 10 with no clinical history of IVDD symptoms. 144 samples were sent, covering Smooth, Long and Wire coats in both Standard and Miniature sizes.

These samples were all genotyped for both FGF4 retrogenes (CFA12 and CFA18) and unfortunately all samples were homozygous for both loci. We thought Wirehaired dogs might be variable (based on other genetic studies), but that isn't the case in our set of samples, although a Danish study does show some genotype variability.

So this means, sadly, that neither of these loci can be selected against to reduce the prevalence of IVDD, in UK Dachshunds at least.

Lifestyle factors and IVDD

IVDD has a strong heritability, meaning it runs in families. Dogs whose parents and other ancestors suffered from IVDD are much more likely also to suffer from IVDD. Unfortunately, just because your dog is fit and in good body condition does not guarantee that it will avoid back problems.

Nevertheless, prevention is better than cure, so lifestyle choices you can take to help reduce the risk of your dog having a back problem are very important.

Research Open Access

Neuter status as a risk factor for canine intervertebral disc herniation (IVDH) in dachshunds: a retrospective cohort study

Marianne Dorn and Ian J. Seath 🔤 💿

Canine Genetics and Epidemiology 2018 5:11

https://doi.org/10.1186/s40575-018-0067-7 © The Author(s). 2018

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Our DachsLife 2015 Health Survey investigated lifestyle factors that were associated with IVDD. The results were also analysed and published in a peer-reviewed paper in 2016 and a further paper on neutering in 2018.

Exercise

Dogs over the age of 3 that were highly or moderately active were half as likely to have suffered an IVDD incident as dogs described as mildly or not at all active.

This could either be a genuine effect of fitter dogs being less prone to IVDD, or affected dogs are now leading less active lives.

Neutering

Females neutered at any age had a significantly increased risk of IVDD than did unneutered females.

Bitches neutered before 12 months old were the group at highest risk.

These early-neutered bitches were around twice as likely to develop IVDD as were unneutered bitches.

Males neutered before 12 months old had a significantly higher incidence of IVDD than unneutered males. However, there was no significant difference in IVDD risk between unneutered and lateneutered males.

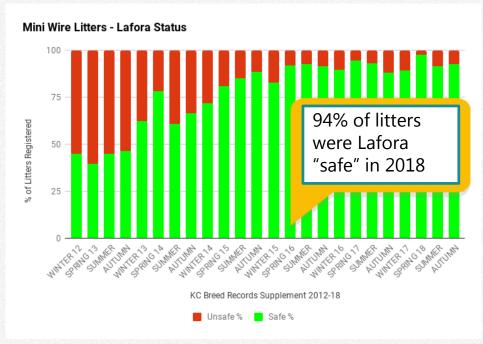
Lafora Disease

In 2018, there were 2 Lafora screening sessions.

The Wirehaired
Dachshund Club
continues to subsidise
Lafora testing (£90 per
test).

We are grateful to all those who continue to fundraise for Lafora screening and research. Blood samples have been collected from around 700 MWHDs worldwide, mostly of UK origin, for canine LD genetic testing. Among the total tested MWHD population, 7.2% were homozygous for the dodecamer repeat and at risk for LD. In addition, 222 dogs were heterozygous for the mutation, indicating a carrier frequency of 31.8% in the tested MWHD population. Among the tested MWHDs, the mutant allele frequency was 0.2.

Data from the tested dogs over 6 years indicated that the frequency of the homozygous dogs has decreased from 9.9% in 2012 to 5% now and carrier dogs has reduced from 42.3 % in 2012 to 21.6% now. As a consequence, the frequency of dogs free of the mutation has increased from 47.9% to 73.0%.



Eye disease

408 Mini Smooths were tested for cord1 PRA by the AHT in 2018. 69 Mini Longs were tested and 26 Mini Wires.

Since Cord1 testing began for Mini Longs, the percentage of Affected dogs each year had dropped from 18% to 2% (2005-2017) but increased to 6% (4 dogs) in 2018. This is on a smaller number of dogs tested compared with previous years.

In Mini Smooths, the percentage of Affected dogs has dropped from 27% to 4% (2007-2018).

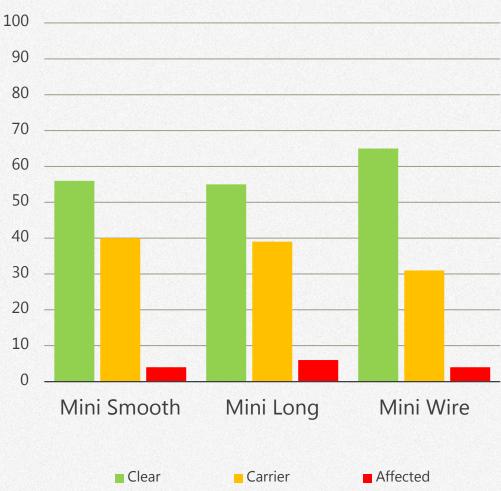
In Mini Wires, there was only 1 dog tested as Affected in 2018.

The overall prevalence of PRA in our DachsLife 2018 survey was 0.3% and all 7 cases were in Miniatures.

The overall prevalence of Distichiasis in our DachsLife 2018 survey was 0.7% and 15 of 18 cases were Miniatures. The prevalence in Mini Longs was 2.5%.

We recommend clinical eye screening for all varieties of Dachshund.

Cord1 PRA Results 2018 (% of each genotype)



Cancers and Tumours

CANCER IN DACHSHUNDS

The good news from our 2018 Health Survey of 2500 dogs

FIND OUT MORE

DachsLife 2018 Results

The results of our 2018 Health Survey are reported at www.dachshundhealth.org.uk (go to the "Surveys" menu).

Thank you to all the owners who took the time to provide data on their Dachshund(s) for our survey.

WWW.DACHSHUNDHEALTH.ORG.UK.



The main focus of our DachsLife 2018 survey was cancers and tumours.

93% of Dachshunds in our DachsLife 2018 survey reported no cancers or tumours.

About 1 in 20 Mini Smooths, Smooths, Mini Wires and Wires reported a cancer/tumour. About 1 in 10 Mini Longs and Longs reported a cancer/tumour. Interestingly, Red and Cream Dachshunds were statistically more likely to report a cancer/tumour than Black/Tans or other colours/patterns.

Just over a third of the deaths reported in our survey were attributed to cancers.

Mammary tumours and Gastrointestinal cancers/tumours were the most common type reported. They accounted for 44% of all cancers/tumours (22% each). Next most common were skin cancers (12%), blood system (6%), lymph nodes (5%), hormone system ((5%) and bones/joints (5%).

The median (average) age of cancer diagnosis was 9. In general, cancers and tumours are more common in older Dachshunds. On average, Smooths were diagnosed at the odlest age, 12 and Longs at the youngest age, 7.

Where it was known, 60% of the cases were reported as benign. 40% were malignant. 1 in 6 owners didn't know if their dog's cancer/tumour was malignant or benign.

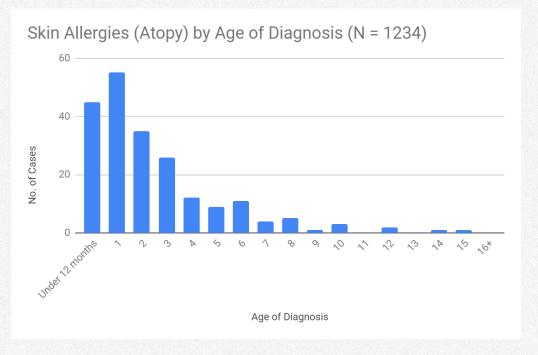
Skin allergies (Atopy)



1 in 12 Dachshunds in our DachsLife 2018 survey was reported as having some form of skin allergy.

This was the 2^{nd} highest prevalence condition (after IVDD).

8.2% of Dachshunds in our DachsLife 2018 survey reported some degree of skin allergy. Mini Smooths had the highest prevalence among the 6 varieties and Mini Wires the lowest, although the differences between them were not significant.



Most were diagnosed under the age of 4.

Our current "Watch List"



In general, cancers and tumours appear to be conditions of old age in Dachshunds. However, we have seen a spate of reports of Lymphomas reported in young Mini Longs. We have had 11 cases reported in dogs aged 4 and under. These represent 40% of all Mini Long cancer cases in our online reports and we have had 4 times more cancers reported in Mini Longs than any of the other varieties.



Epilepsy

At its November 2015 meeting, the Breed Council agreed to set up an online registry of affected dogs to encourage reporting of epilepsy by owners. We now have reports for 14 dogs, of which 8 were Mini Longs. Although 57% of cases reported are Mini Longs, we still need significantly more cases reported to be able to carry out any meaningful analysis.



In DachsLife 2018, Heart disease was reported in 4.3% of dogs, with Wires reporting the highest prevalence (12%) and Longs second highest (8%).

Heart Murmurs were in the top 3 conditions reported (3%) for Wires in the 2014 KC survey and heart disease was the most common cause of death. The average age of death due to cardiac conditions was 9.

Our current "Watch List"

This is a condition that judges should be aware of when assessing Dachshunds in the show ring.

We have created a Pes Varus page on our new Health website.



Image courtesy of Georgia Wallin

Pes Varus

What is it?

Pes varus is a Latin term that combines pes (foot) and varus (inward). It is a bone deformity where the distal tibia is turned inward toward the body. It occurs when the shinbone growth plate closes prematurely, causing asymmetrical growth of the tibia. It results in a bow-legged appearance and lameness. It is also known as Angular Limb Deformity.

Prevalence:

The condition was reported with a prevalence of 0.9% in DachsLife 2018.

It is probably under-reported as it may simply be mistaken for "poor hind movement". It has been reported in all three coat varieties and both Standard and Miniature Dachshunds but UK cases have mostly been in Miniatures.

Severity & treatment:

The younger the age at which the growth plate closes, the more severe the deformity. Dogs that are mildly affected may experience few problems and are unlikely to need surgical treatment. In more severe cases, the dog may be lame, in pain and may develop osteoarthritis in older age. In these cases, surgery may be required to correct the deformity.

Genetics and diversity

The higher the CoI, the greater the probability that two copies of a particular gene will be inherited from a common ancestor.

Wires continue to have the lowest Coefficient of Inbreeding and Longs, the highest.

It is interesting to note how the COI for Mini Wires has reduced over the past 6 years. The Kennel Club updates data for breed average Coefficients of Inbreeding each year. We've been tracking this since it was first published in 2011. Here's the summary of results for each of our six varieties of Dachshund:

	Smooth Mini Smooth Lo		Long Mini Long		Wire	Mini Wire	
May 2011	8.2%	8.1%	8.6%	7.6%	6.7%	11.3%	
Dec. 2012	7.3%	8.0%	12.2%	7.1%	6.6%	10.8%	
Mar. 2014	5.3%	7.5%	11.8%	7.3%	4.7%	9.0%	
July 2014	8.5%	7.7%	14.6%	7.5%	6.1%	9.9%	
Oct. 2015	10%	7.5%	14%	7.5%	6.0%	8.0%	
Dec. 2016	8.7%	7.4%	15.2%	8.4%	5.0%	8.5%	
Nov. 2017	5.9%	7.4%	12.4%	8.5%	4.0%	7.2%	

It is likely that the KC calculations of COI are underestimates due to missing pedigree information on imported dogs. However, assuming this discrepancy is consistent over time, the figures should still be comparable and useful to highlight trends.

Recessive coats

Dachshunds in the UK normally have 2 copies of their own coat type gene (Wirehaired = WW, Smooth-haired = SS or Longhaired = LL) because the KC does not allow cross-coat matings.

However, these were allowed until 1977 and there are still Wires and Smooths that "carry" the genes for different coat types.

DNA tests are available from Laboklin UK for Smooth-Long and Wire.



Last year, the Kennel Club decided to amend Annex D to the B regulations, allowing the registration of Dachshunds born with a recessive coat type.

The Dachshund Breed Council expressed concern that this could lead to Lafora's disease, a debilitating neurological condition which currently affects only Miniature Wire Haired Dachshunds, entering the gene pool of other varieties.

After careful consideration, the Kennel Club Board have approved a recommendation from the Dog Health Group that the progeny of any Dachshund from two Miniature Wirehaired Dachshund parents, registered as a different coat type to their parents, must have a coat type DNA test as a condition of registration, and will be endorsed by the Kennel Club (R progeny not eligible for registration). The endorsement will be removed only should a clear Lafora's test result be produced or if both parents are either tested as clear, or shown to be hereditarily clear from the condition.

Allowing recessive coated Dachshunds to register in the appropriate breed for their coat will help improve the size of the gene pool for these breeds. The Kennel Club have now put testing in place which will prevent Lafora disease from being accidentally introduced into other breeds of Dachshund when this is done.

Colours and health



In the last year there has been a significant increase in the number of dilute coloured dogs being sold in the UK. The majority are being bred by French Bulldog and English Bulldog extreme-colour breeders, many using dogs imported from the U.S.A. or Eastern Europe, presumably as the market for both has passed the peak and they see an opportunity to make significant money from 'rare' or 'coloured' dachshunds.

The blue colour is a dilute of the black and tan; Isabella (also known as lilac in other breeds) is the dilute of the chocolate colour. The gene that causes the dilute colours can also cause an issue in some dogs called colour dilution alopecia (CDA), where the hair shaft is thin and weak, meaning it can drop out of the follicle and cause baldness. Because the coat is thinner than normal, the skin can also be more susceptible to infection and sunburn, which in turn may cause cancer.

Helen Geeson, resident geneticist and colour expert on the Dachshund Breed Council's Health and Welfare sub-committee explains: "The hypothesis is that the gene occurs in more than one version and some breeds have the problem gene whereas others do not. If this hypothesis is correct (and the research is incredibly slow and not progressing rapidly), what we do know for certain is that Dachshunds do have the version that causes CDA. At the moment, there is no DNA test for CDA (there is a DNA test for the dilution gene but it cannot differentiate between the version that causes CDA and the version that doesn't). Therefore, at the moment there is no 100% safe way to breed dilute colour Dachshunds and the people who are breeding them who say they don't have CDA in their lines cannot possibly know that for certain, as they haven't been breeding Dachshunds long enough to prove it. They are relying on mainly American breeders and some in Eastern Europe, and I am not convinced I would be trusting them all'.

Gill Key, one of our Pet Advisors, ran a Facebook survey during 2018. 53% of respondents were from USA, reflecting the higher number of dilute dogs bred there. 36% of respondents were from the UK, the rest being from Canada, Australia and South Africa. In total, 43% of dogs were reported as showing CDA.

Conformation



Source: Dogs Today 2009

The dangers of exaggeration

Our Health Committee's concerns are that dogs with excessive length and lack of ground clearance cannot be considered to be "fit for function" and that such exaggerations are likely to increase their health risks.

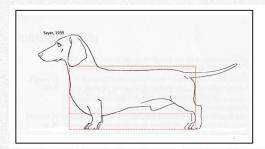
IVDD is one of those risks, as is Bloat which is reported in Dachshunds and other breeds with proportionately more depth of chest. Angular limb deformities such as Pes Varus are also a risk.

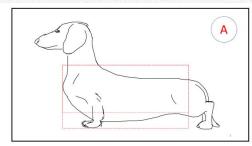


In 2018 we published an article on the dangers of exaggeration: "Dachshunds: Not long and low; please read the Breed Standard".

By definition, the Dachshund is an "exaggerated" breed; the genes for dwarfism cause the breed's characteristic short legs. The Breed Standard's use of the word "low" relates to this dwarfism; the breed is low to ground at the withers compared with a non-dwarf breed. Low to ground does not mean lack of ground clearance and the standard specifically requires "body sufficiently clear of the ground to allow free movement".

Our Health Committee is concerned that, despite the many messages about desired proportions and ground clearance that have been communicated at seminars for over a decade, some breeders and judges still seem inclined to favour undesirable exaggerations. Many pet owners also seem to think that very short legs are correct.





We created outlines of a selection of dogs from the show-ring and overlaid these with a 2:1 box and a 25% ground clearance line. All the illustrations have been drawn to the same scale, so are directly comparable. Sayer's illustration is also included as a baseline reference. They clearly show that UK dogs (e.g. A above) which are longer than the desired 2:1 proportions also tend to be excessively deep in chest, with very short legs.

Temperament



In November 2018, an Open Access paper "Prevailing Clusters of Canine Behavioural Traits in Historical US Demand for Dog Breeds (1926–2005)" was published. The analysis identified 6 clusters of breeds, each of which had behavioural traits in common.

Dachshunds were in the small-breed cluster of dogs that score high on aggression, fear, separation, excitability and are motivated by owner attention. In 2012, we conducted a <u>survey of Dachshund temperaments</u> and had around 1400 responses. The summary is shown below:

DachsLife 2012 Temperament Survey (1400 dogs)

Percentage of owners saying their Dachshund "Always" or "Often"...

	Outgoing/ Friendly	Excessive Barking	Easy to house-train	Submissive piddling	Separation anxiety	Noise/ Thunder fear	Aggressive with people	Aggressive with dogs	Nervous/ Fearful of people	Destructive
Smooth	74%	17%	94%	2%	15%	10%	2%	7%	14%	7%
Long	88%	14%	100%	0%	4%	5%	0%	1%	4%	5%
Wire	95%	14%	98%	2%	2%	11%	0%	5%	2%	1%
Mini Smooth	84%	20%	88%	7%	11%	9%	1%	5%	7%	3%
Mini Long	79%	17%	94%	1%	6%	3%	1%	4%	5%	1%
Mini Wire	84%	19%	96%	4%	7%	5%	0%	6%	7%	3%

The majority (85%) of Dachshunds were described by their owners as Always or Often Outgoing and Friendly, but 1 in 50 was described as Never behaving in this way. We tend to describe Dachshunds as being a noisy breed, after all they were originally developed to have a loud bark. 15% of owners said theirs Always or Often barks excessively or persistently.

Taking the scores for the positive traits and negative traits in our 2012 survey, it is possible to calculate an overall ranking for temperament and behaviour:

- 1. Long most positive traits
- 2. Wire, 3. Mini Wire, 4. Mini Long, 5. Mini Smooth, 6. Smooth

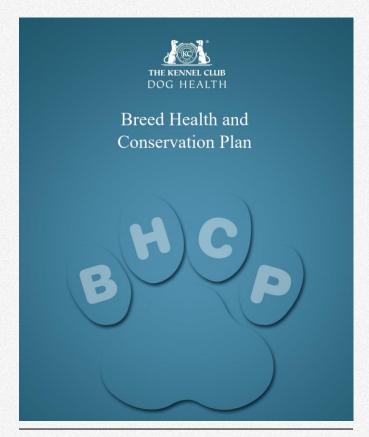


Plans for 2019

In this section:

- Breed Health and Conservation Plans
- 2019 priorities
- Objectives and key activities

Breed Health and Conservation Plan



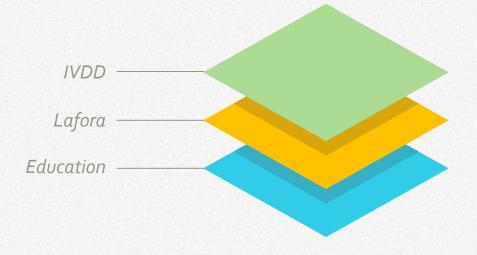
During 2018, members of our Health Committee met with the Kennel Club's Health Team to agree our Breed Health and Conservation Plan. This was approved by the Breed Council in November 2018. The Kennel Club's programme to develop Breed Health and Conservation Plans was launched in 2016 to ensure that, for every breed, all health concerns are identified through evidence-based criteria, and that breeders are provided with useful information and resources to support them in making balanced breeding decisions that make health a priority.

Dr Katy Evans, the KC's lead person on this project, reviewed the published evidence of the state of the breed. This provides a unique and comprehensive source of information covering health, genetic diversity, temperament and conformation.

This evidence is used to provide clear indications of the most significant health conditions in each breed, in terms of prevalence and impact. We were invited to meet the KC team in July and 6 of our 10 Health Committee members were able to attend. The breadth of experience among our delegates was invaluable for 2 reasons. Firstly, the discussions we had and the decisions we made were based on a wide range of knowledge across our 6 Dachshund varieties. No one person can know everything about the breed nor remember the history of how we got to where we are today. Secondly, the decisions made have to be a consensus because the Health Committee has to justify the BHCP to everyone else in the breed. The quality of decision-making by our team far outweighs anything that any one of us could achieve, on our own.

We published our <u>Breed Health and Conservation Plans</u> in January 2019. There is one for each Dachshund variety but a single, common action plan which we have linked with our existing plans for the breed.

Our priorities for 2019



We need to use all available communication and education channels to divert demand away from Mini Smooths and "rare colours". Otherwise, we risk a Rescue crisis in the near future.

Breed health

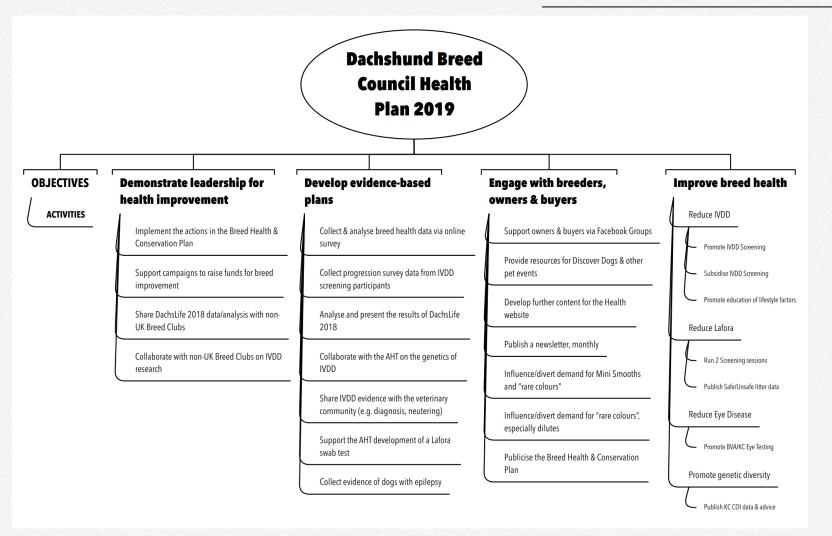
- Reduce the risk of IVDD by promoting the use of Screening and educating owners about lifestyle risk factors
- Achieve 95% Lafora safe litters
- Promote the use of KC/BVA/ISDS eye screening

Enablers

- Increase buyer awareness of the breed to influence responsible buying decisions
- Implement the agreed actions in our Breed Health & Conservation Plan
- Analyse and publish data/ evidence to support breed improvement

2019 Objectives and key activities

These are our key activities. In addition, we expect to continue to carry out the many other activities that are already under way.



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www.dachshundbreedcouncil.org.uk

The Breed Council's website and blog

www.dachshundhealth.org.uk

The Breed Council's Health website

www.dachshund-ivdd.uk

The Breed Council's IVDD website

https://www.facebook.com/The-Dachshund-Breed-Council-UK-118521654856320/

Our Facebook page.



https://www.facebook.com/groups/VI TALDachshundIVDD/

Our IVDD Facebook Support Group