HEALTH REPORT FOR 2019





This is the Dachshund Breed Council's 11th Annual Health Report

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Prepared by: DBC Health Committee

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

What we achieved in 2019

- We published our Breed Health and Conservation Plan
- We hit the milestone of 100 Dachshunds screened for IVDD
- Lafora testing achieved 98% of litters being safe
- 34 Dachshunds took part in our subsidised eye screening event
- We published the results of DachsLife 2018, our Cancer survey
- We redesigned and relaunched the Breed Council's website/blog and passed the 500,000 visitors mark
- We created new website resources for potential Dachshund buyers
- We created a set of "Tips for new owners" on our website
- We agreed a list of colours/patterns for the Kennel Club to use on puppy registrations (to end "Colour Not Recognised")
- We published a new "Dachshund advice for Vets" paper, based on our Breed Health and Conservation Plan.



Roger Sainsbury BVM&S, MRCVS Chairman, Health Committee

Roger Sainsbury BVM&S, MRCVS Chairman, Health Committee

The BVA have leaflets warning about Dachshund and Basset back problems to discourage people and are lobbying companies to stop them using Dachshunds in adverts.

The Breed Council was represented at Dachshund Town 27 July 1920 at Milton Keynes, and our team had a busy day offering advice to owners.

The Breed Council was also represented at the 4th International Dog Health Workshop, showcasing our approach to Health and Welfare.

The current popularity of Dachshunds

At meetings with the KC and BVA we discussed the rise in popularity of Dachshunds, particularly the mini smooths, and the health problems which may be posed by indiscriminate breeding. Dachshund Rescue and the Red Foundation are both reporting big increases in the number of dogs being rehomed. According to the Red Foundation, the recent increase in popularity of Dachshunds has led to a parallel growth in demand for their rescue and rehoming services. They say they helped 50 dogs in 2017 twice that in 2018 and in 2019 it looks like 200 Dachshunds will need rehoming. Nearly 7/10 dogs rescued are not KC registered and rehomed dogs often come from uneducated and irresponsible breeders.

Unfortunately, these breeders will offer 'rare' colours, sometimes at enormous cost, and these colours often include Blue and Isabella, which are the result of colour dilution genes. There is a high possibility that these dogs will suffer a lifetime of skin problems which cannot be cured because of damage the dilution gene causes to their hair follicles.

A quarter of the dogs were surrendered for rehoming because they had either bitten, snapped or shown aggression – probably because of a lack of early socialization.

Roger Sainsbury BVM&S, MRCVS Chairman, Health Committee

We have had many donations from Dachshund owners whose dogs are no longer with us, and bequests from people who were owners, and also donations from events ranging from a 10K run to a less energetic internet group raffle, as well as fun shows and Dachshund events.

Many thanks to everyone who was involved; your donations will be put to good use!

Intervertebral Disc Disease (IVDD)

More than 100 dogs have now had X-rays as part of the IVDD screening scheme. Of the dogs that have been screened, 7/10 had fewer than five calcifications in their intervertebral discs and are therefore considered to be at lower risk for IVDD.

A peer-reviewed paper has been published (written by Dr Marianne Dorn and Ian Seath) which provides evidence that dogs neutered early in life have a higher risk of IVDD. Evidence that bitches neutered early have a higher risk of incontinence has also recently been published, which together make the case for not neutering animals early unless there is a very good reason.

In August, we met with representatives of the Kennel Club and the British Veterinary Association in London to discuss the back screening programme. We have asked the Kennel Club to make IVDD screening a recommended test for the Assured Breeders Scheme.

Roger Sainsbury BVM&S, MRCVS Chairman, Health Committee

If your vets don't understand Dachshunds, you should quietly point them in the direction of our website which has recently been updated with a new paper specifically written for a veterinary audience.

There was a clinical eye screening session at the Dachshund Club Championship Show on the 16th November. Dachshunds were subsidised by our charity, so the cost was only £20.

Education

The Kennel Club have produced an information package for new puppy owners which is available as a free download from the KC website. An advice leaflet was illustrated in the October DBC Newsletter called "Should I get another Dog?" This suggested that you should sort out behavioural problems in your current Dachshund before introducing another one.

Lafora Disease

There have been several recent reports of mini smooth Dachshunds tested for Lafora in the USA being found to have one copy of the Lafora gene, and there have been three confirmed cases, the origin for these probably being in Canada. This will presumably have been because of cross-variety matings in the past and this strengthens the recommendation that imported Dachshunds should be tested for this disease.

In the UK, screening results showed that 98% of the matings in 2019 would not have produced affected puppies.



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, Bryony Fossett, 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:

- The Wirehaired
 Dachshund Club leads
 on Lafora Disease
- The Miniature
 Dachshund Club leads
 on eye disease,
 including cord1 PRA
 and Distichiasis.

Bryony Fossett, a veterinary student and Dachshund owner/breeder, was appointed to the Health Committee in October 2019.

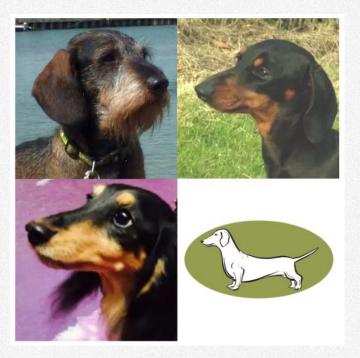


Gill Key, Charlotte Baldwin and Aimée Thomas are Pet Advisers to the Health Committee.

Our 3 pet advisers are active in raising awareness of responsible purchase and ownership, health issues including IVDD risk, giving them the tools to avoid/reduce the issues and suggesting ways that the DBC can improve communication with prospective owners and buyers. This year they:

- Assisted on the Dachshund IVDD UK Facebook admin team
- Spent many hours on Facebook Groups answering queries from pet owners
- Contributed to the updated DBC communications strategy and relaunching the DBC websites, making them easier and more appealing to access, and leading to an increase from 11,000 to 29,000 page views on our Health website in 2019 vs. 2018 (see p.26)
- Wrote and contributed to articles and new infographics including the definition of the 4 types of breeders (see image - left)
- Attended Dachshund events, including walks and pet shows





UK Facebook Dachshund Groups Poll:

A Facebook poll in December 2019 shows clearly that currently behavioural issues post-sale are by far the most frequent issue, suggesting that many of these new owners struggle with the reality of ownership, in turn contributing to the increase in the number of rehome requests and surrenders (see p.19):

Topic	4	Total	•	% -1
house training			197	42%
barking			74	16%
where to sleep (crate v bed v human bed	1)		50	11%
owning dogs whilst working full time			50	11%
Neutering age			33	7%
buying KC or not			22	5%
weight			18	4%
where to buy/avoiding puppy farmers			15	3%
colour/pattern			4	1%
breeding			1	0%
			464	

Dachshund Popularity and IVDD:

The exponential increase in the popularity of Mini Smooth Dachshunds (see p.19) has attracted large commercial breeders and novice breeders, drawn by the prospect of apparently easy profit from 'snap buyers', at the same time that new licencing laws and additional planning restrictions have led to some experienced hobby breeders reducing their activity.

With demand for pups so buoyant and buyers apparently more concerned about instant availability than future potential health issues, there is little incentive for breeders to take active steps to reduce IVDD risk. To quote a post on the Australian Facebook IVDD support group (DISA): "1 in 4 Dachshunds is going to develop this debilitating disease – and somehow that is seen as normal/acceptable".

Only 116 dogs have been back-scored through the DBC scheme since its launch in 2016 (p31), despite significant subsidies being offered in Q3/17, Q1/18, Q3/18, and Q1,2 and 4 2019. It seems that many breeders are still reluctant to take part.

Unfortunately, when the list of scored dogs in October 2019 revealed that key Breed Council committee members and other influential breeders had not yet tested their eligible dogs it appears to have had a negative impact on uptake.

Social Media Strategy:

As many owners only join Dachshund Facebook groups once they have bought their new pup, we are working on improving use of the Instagram platform.

In 2020, Instagram posts will use photographs with links back to DBC websites to catch would-be owners BEFORE buying.



Pet Advisers' priorities for 2020:

- have a renewed focus on the Instagram platform
- assist in reviewing and suggesting changes to current DBC advice to prospective puppy owners, to include more information on IVDD risk and the reality of ownership
- revisit a previous idea of posting adverts on the dogselling sites, giving information on responsible buying and ownership – including IVDD risk and questions to ask breeders

Follow us on Instagram:

@DachshundHealthUK





Charlotte Baldwin, one of the Pet Advisers, now works full time on an unpaid basis running Dedicated to Dachshunds with IVDD. Charlotte and her team of D2D supporters are at the sharp-end of IVDD and feel strongly that breeders are not doing enough to help reduce the number of dogs going on to be struck down by this terrible condition. D2D offers invaluable practical advice and support to owners of affected dogs, including lending or donating equipment to support the recovery or improve the quality of life of paralysed dogs.

In 2019, they provided the extraordinary total of:

♥145 new strollers ඎ169 preloved strollers	Practical transport option for recovering dogs both in and outside the home
♥195 new Gingerleads th 125 preloved Gingerleads	Essential support during toilet visits to reduce stress on damaged spines
♥110 pens	To restrict movement and support conservative treatment – many dogs cannot cope with crate confinement
සි _ස 14 drag bags ● 6 sets of wheels සි _ස 98 pairs of bootees	For long term paralysed dogs, improving quality of life and preventing sores on feet and body

Health Fund



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

The 6 Trustees are: Katherine Herrington, Gill Key, Pauline Kerslake, , Anne Moore, Roger Sainsbury, Ian Seath.





£9400 donated in 2019



£9700 raised in 2019

During the year, DHUK supported several projects, including:

- Subsidies for IVDD screening of 55 dogs
- Subsidies for KC/BVA eye screening of 34 dogs
- Printing of educational leaflets and resources for seminars, awareness-raising events and Discover Dogs

In 2020, DHUK will be supporting an IVDD study at Cambridge University Vet School which will run for 3 years. We are grateful to everyone who has raised funds for us during 2019. Just some of those who have run campaigns include:

- The Dachshund Club Loose Change Challenge
- The Sausage Army (calendar)
- Devoted to Dachshunds (Xmas cards)
- Dachshunds 2020 Karen Dinsdale (calendar)
- Scottish Dachshund Club Fun Day



Planning

In this section:

- 2019 priorities
- Registration trends
- Health surveillance
- Partners
- Communications

2019 Priorities were:

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% (2019 average = 98%) achieved
- Continue to support the work of Dr. Minassian's to develop potential treatments for Lafora not 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 – achieved

Health Surveillance:

• Continue to promote the online illness, epilepsy and cause of death surveys – achieved and reported DachsLife 2018 survey

Education and Communication:

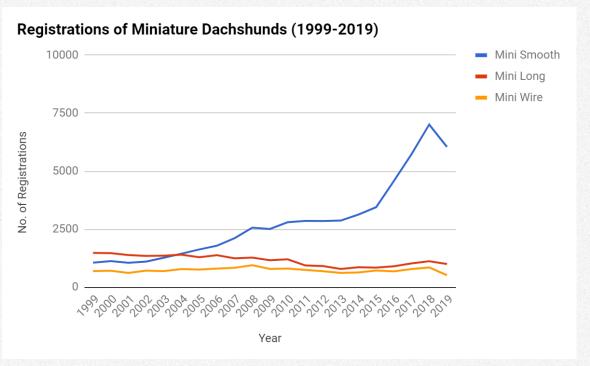
- Continue to make the most up-to-date breed health information available to potential puppy buyers (e.g. via online media, magazines and Discover Dogs) achieved
- Provide regular updates on the work of the Breed Council, using a variety of online and offline channels/media achieved

Dachshund Breed Council Health Plan 2019 OBJECTIVES Demonstrate leadership for Develop evidence-based Engage with breeders, Improve breed health health improvement owners & buyers plans ACTIVITIES Reduce IVDD Implement the actions in the Breed Health & Collect & analyse breed health data via online Support owners & buyers via Facebook Groups Conservation Plan Promote IVDD Screening Provide resources for Discover Dogs & other Support campaigns to raise funds for breed Collect progression survey data from IVDD pet events Subsidise IVDD Screening screening participants improvement Promote education of lifestyle factors Develop further content for the Health Share DachsLife 2018 data/analysis with non-Analyse and present the results of DachsLife website **UK Breed Clubs** 2018 Reduce Lafora Publish a newsletter, monthly Collaborate with non-UK Breed Clubs on IVDD Collaborate with the AHT on the genetics of Run 2 Screening sessions research Influence/divert demand for Mini Smooths and "rare colours" Publish Safe/Unsafe litter data Share IVDD evidence with the veterinary community (e.g. diagnosis, neutering) Reduce Eye Disease Influence/divert demand for "rare colours". especially dilutes Support the AHT development of a Lafora Promote BVA/KC Eye Testing swab test Publicise the Breed Health & Conservation Promote genetic diversity Collect evidence of dogs with epilepsy Publish KC COI data & advice

Registration trends (Miniatures)

The inexorable rise in popularity of Mini Smooths saw registrations double between 2015 and 2018. In 2019 they were the 7th most popular KC registered breed (up from 16th in 2015). Sadly, because of this over-popularity, we are now seeing the predicted increase in dogs being surrendered to Rescue.

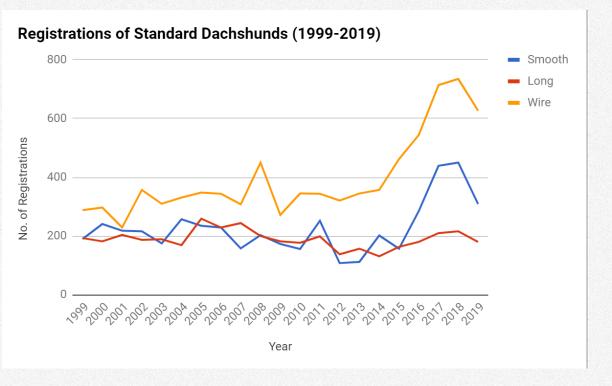
In the Miniatures, the Mini Smooths have increased by over 800% since 1999. Mini Longs have declined by about 40% while the Mini Wires have remained roughly static over that same period (based on the linear trend line).



The chart (left) shows Kennel Club registration trends since 1999. N.B. 2019 is for 3 Quarters only.

Registration trends (Standards)

In the Standards, the Longs have declined in popularity by about 20% while the Wires have doubled in popularity since 1999 (based on the linear trend line). Smooths have seen an increase in popularity since 2015, probably on the back of the growth of Mini Smooth registrations.



The chart (left) shows Kennel Club registration trends since 1999.

N.B. 2019 is for 3 Quarters only.

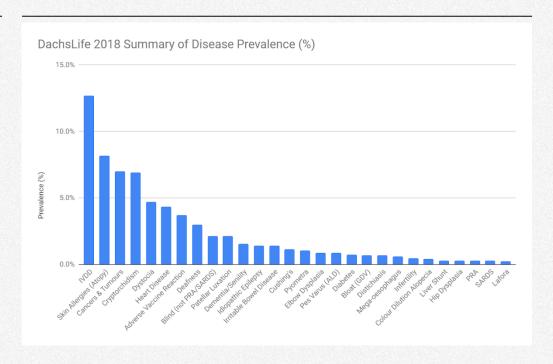
Health surveillance

Our online Health Survey continues to provide a source of useful data on Dachshund health issues and we received 174 reports during 2019; an average of 15 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 overall)
- Skin allergies were the 2nd most commonly reported condition (8%)
- Cancers and tumours were the 3rd highest category (7%) equal with Cryptorchidism (missing testicles)

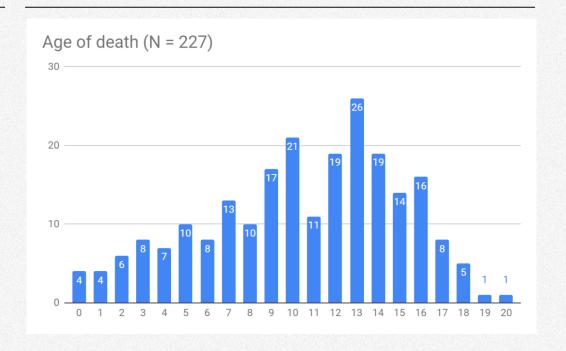
Longevity (Age of death)



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, mostly in old age.



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

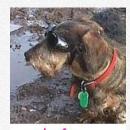
Partners in health improvement



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 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.



The International Partnership For Dogs have shared examples of our work on their website:

www.dogwellnet.com

Ian Seath, Chairman of the Breed Council, made a presentation at the 4th International Dog Health Workshop, organised by IPFD in Windsor.

Communications

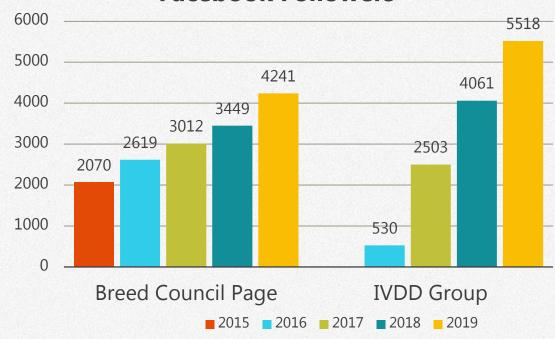
We have three key groups of people with whom we have to communicate effectively:

- 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

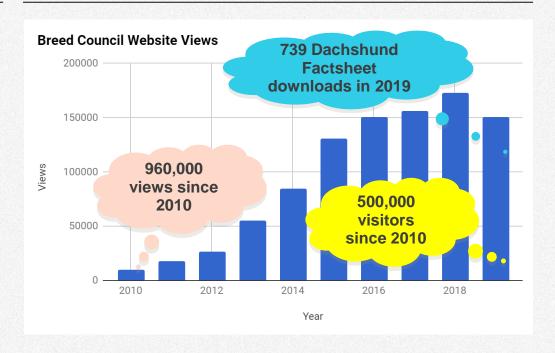


Communications

We have 3 websites:

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

136,603 visitors to our IVDD website in 2019 (+24% from 2018)





Communications

We launched our new Health website in September 2017. It had 29,000 visitors in 2019 (up from 11,000 in 2018). Monthly views increased from 3000 to 8000 when we relaunched in August 2019 with new buyer and owner advice pages. The most visited pages from the Home page are:

- Health priorities
- Tips for new owners
- Breeding from your Dachshund
- Caring for your Dachshund
- About Dachshunds

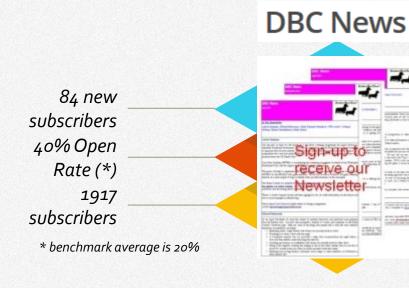
www.dachshundhealth.org.uk



37% of visitors came via a social media link & 48% from a search

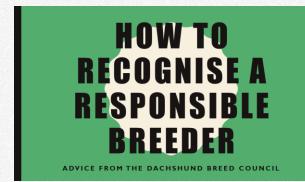


70% of visitors are from the UK



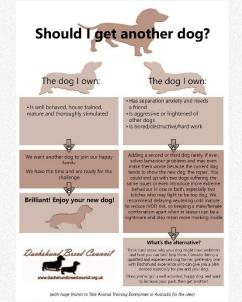
Advice for buyers and owners

During 2019, we developed new infographics with advice for buyers and owners. We also updated this information on our Health website to make it more visually appealing and mobile-friendly.









How much exercise does my Dachshund puppy need?

A puppy under 12 weeks does not need any formal exercise; playing in the garden will be sufficient. A puppy needs lots of sleep, so allow it to go bed whenever it wants to.

Once your puppy has finished its course of inoculations, start to take it for a short walk of about 5-10 minutes every couple of days or so to help it get used to traffic and other people and dogs. The general guidance is 5 minutes of "formal" exercise per day, per month of age.



Advice for Vets

During 2019, we published a new advice paper for veterinary surgeons, based on our Breed Health and Conservation Plan. It is fully referenced to published papers on the main conditions affecting our breed.

Dach-Facts:

Information for Veterinary Surgeons



DACHSHUND HEALTH INFORMATION

There are some health conditions which occur more commonly in Dachshunds than in other breeds and these are covered in this Factsheet. The information identifies those that may be particularly prevalent in Dachshunds as a breed, whilst also highlighting any possible differences between individual varieties of dachshunds.

This paper lists conditions in order of body systems. Those highlighted in red are current priorities for the Breed Council.

Points of importance for discussion with clients about owning or breeding are in bold.

References to relevant papers are included and this summary is drawn from the Dachshund Breed Health and Conservation Plan published by the Kennel Club and Dachshund Breed Council in 2018.

For more information, e-mail: info@dachshundhealth.org.uk or visit our website: www.dachshundhealth.org.uk where you will also find advice for buyers and new owners.

Breed Priorities

The Breed Council's priorities, agreed with the Kennel Club, are as follows (Nos. 1-6 are conditions to watch out for in veterinary practice):

- Intervertebral Disc Disease (IVDD) which can affect around 1 in 4 Dachshunds and its welfare impact ranges from mild pain to life-changing paralysis. A UK Screening programme exists for breeders.
- <u>Lafora Disease</u> (a form of myoclonic epilepsy) in Miniature Wirehaired Dachshunds, for which a DNA test exists.
- Eye disease including PRA (for which DNA tests exist) and Distichiasis; therefore, we recommend all breeding animals are screened using the BVA/KC/ISDS Eye Scheme.
- 4. Mitral Valve Disease in the Smooth and Wire Standard varieties.
- 5. Pes Varus and Patellar Luxation in the Miniature varieties.
- 6. <u>Colour Dilution Alopecia</u> is a concern in Dachshunds with "dilute" colour genetics (Blue, Isabella/Lilac) but atopy is also prevalent across all 6 coats and sizes.
- Maintenance of genetic diversity. The Kennel Club will now allow puppies born with a different coat type to their parents (so-called recessive coats) to be registered as per their coat.



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.





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

116 dogs have now been screened. 55 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 2020.

IVDD CALCIFICATION GRADE FOR EACH DOG		DOG ONE (Sire or Dam)					
		GRADE 0	GRADE 1	GRADE 2	GRADE 3		
DOG TWO (Sire or Dam)	GRADE 0						
	GRADE 1						
	GRADE 2						
	GRADE 3						

68% of dogs screened had 0, 1, 2, 3 or 4 calcifications.

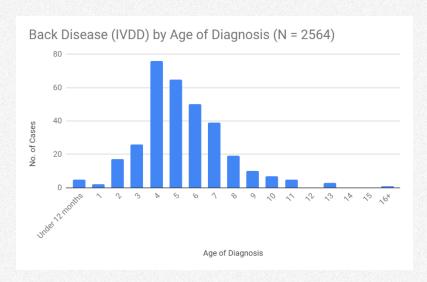
It would not be sensible from a genetic diversity perspective to remove all high-scoring dogs from the gene pool by not breeding from them. We therefore updated our advice on breeding to show a risk matrix, rather than absolute cut-off limits.

We will be working with the KC and BVA in 2020 on formalising the screening programme.

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 anti-inflammatory drugs, through to paralysis which may require surgery, or in the worst cases, euthanasia.

www.dachshund-ivdd.uk

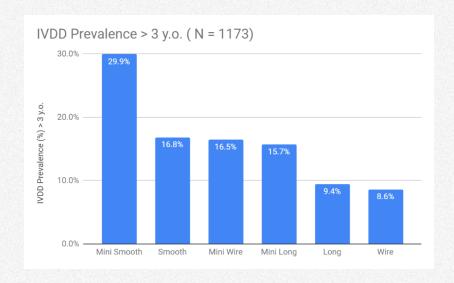
Intervertebral Disc Disease (IVDD)



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.

In our online survey from December 2009 to December 2019, 6% of IVDD cases were in the neck and 94% in the back (N=274).

The data here is from our DachsLife 2018 survey.



Overall prevalence 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, researchers at the University of California, Davis, 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. This is a second gene associated with chondrodystrophy.

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

Received: 5 July 2018 | Accepted: 26 October 2018 | Published: 15 November 2018



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.

Keeping Dachshunds at an ideal body condition (fit, not fat) is also recommended.

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

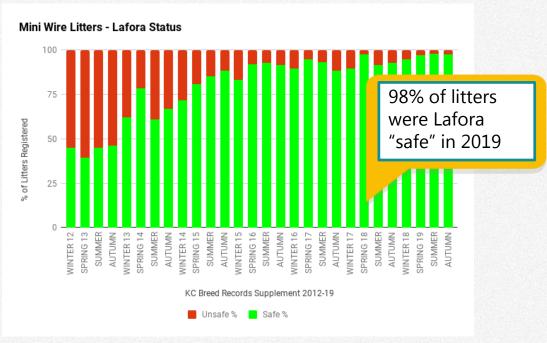
Lafora Screening is now available from Laboklin UK.

Results are recorded by the Kennel Club and reported in the Breed Records Supplement.

The AHT continues research to develop a reliable cheek swab test for Lafora.

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

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%.

The risks of cord1 PRA are now very low and breeders/ buyers should not be prioritising cord1 DNA test results above other health conditions.

We recommend clinical eye screening for all varieties of Dachshund.

In 2019, the KC announced that, as of 1st January 2020, Mini Smooth Dachshunds will no longer be listed under Schedule B of the KC/BVA eye scheme for Generalised progressive retinal atrophy (GPRA). Schedule B will also cease to exist from this date. Mini Longs remain on Schedule A (for known inherited conditions).

During 2019, Dachshund Health UK subsidised a clinical (KC/BVA) eye screening session at the Dachshund Club Championship Show. This was carried out by Prof. Peter Bedford.

Examination under the Eye Scheme is not restricted to the identification of inherited eye disease, but also includes general assessment of the health of the eye and adnexa (eyelids, tear ducts and other parts around the eyeball).

Peter Bedford reported:

I examined the eyes of 30 minis and 4 standard dachs. All the dogs were clear for retinal disease and apart from 3 minis with distichiasis (of no clinical significance) no other ocular or adnexal problems were found. With PRA in the history of the MLH, awareness of this blinding disease is essential and the regular checking of the breeding stock is advisable. Recessively inherited disease can skip generations, but DNA testing can detect carrier stock and awareness of emerging potentially inherited ocular disease should prompt regular eye checks.

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 oldest 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.

We added information to our website for owners and vets to highlight the relatively low risks of cancer compared with the risk of IVDD.

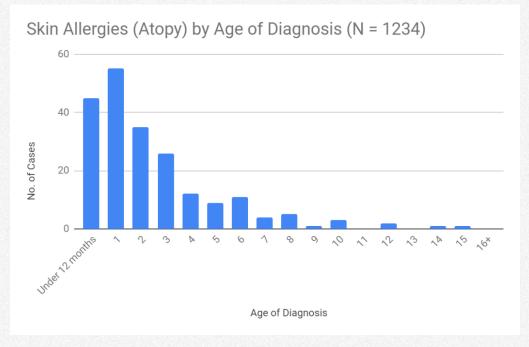
Skin allergies (Atopy)



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.



Heart Disease

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	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. The KC COI data has not been updated since November 2017.

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.



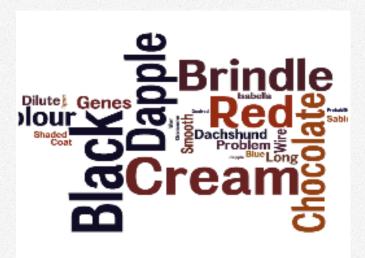
In 2017, the Kennel Club decided to amend Annex D to the B regulations, allowing the registration of Dachshunds born with a recessive coat type.

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, currently 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.

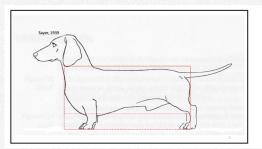
IVDD is one of those risks, as is Bloat which is reported in Dachshunds and other breeds with proportionately more depth of chest. Angular limb deformities such as Pes Varus are also a risk.

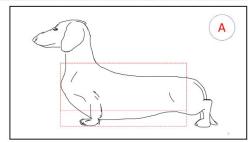


In 2018 we published an article on the dangers of exaggeration: "Dachshunds: Not long and low; please read the Breed Standard".

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

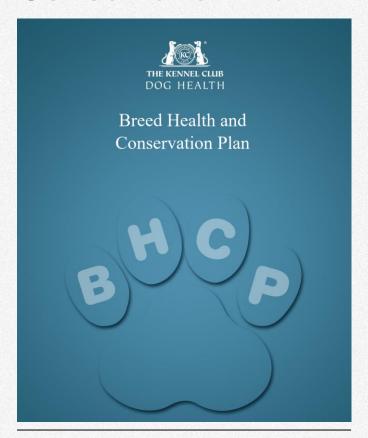


Plans for 2020

In this section:

- Breed Health and Conservation Plans
- 2020 priorities
- Objectives and key activities

Breed Health and Conservation Plan



During 2019, members of our Health Committee updated our Action Plans in conjunction with the Kennel Club and these were published in November 2019.

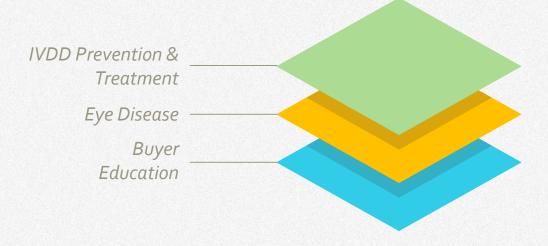
The Kennel Club's programme to develop Breed Health and Conservation Plans was launched in 2016 to ensure that, for every breed, all health concerns are identified through evidence-based criteria, and that breeders are provided with useful information and resources to support them in making balanced 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 first <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 2020



In 2020 we will be working with the Kennel Club and BVA on the formal recognition of an IVDD Screening Programme.

We will also be supporting an IVDD research programme at Cambridge University Vet School to study the recovery of IVDD-affected dogs with conservative treatment.

Breed health

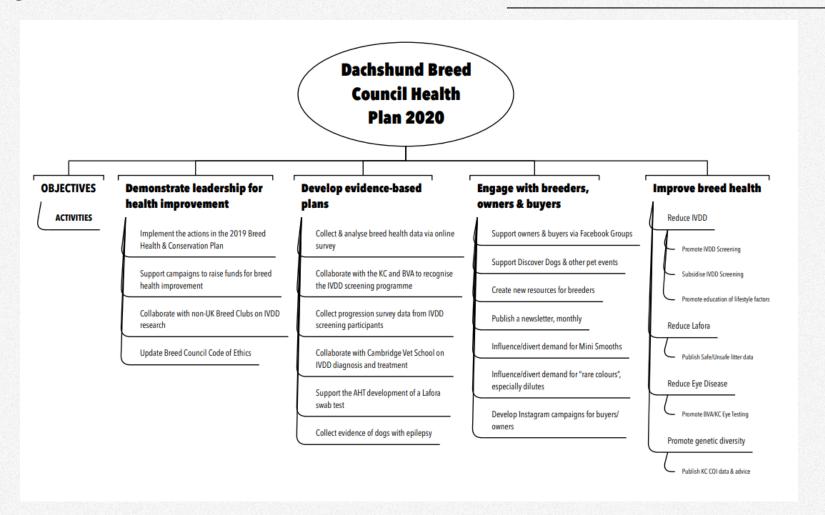
- Reduce the risk of IVDD by promoting the use of Screening and educating owners about lifestyle risk factors
- Achieve 98% Lafora safe litters
- Promote the use of KC/BVA/ISDS eye screening

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

2020 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