

The relative risks of health issues in Dachshunds

Dachshund Breed Council Health Committee
May 2019





*“Dachshund puppy wanted - must be
PRA Clear”*

“Stud dog wanted - must be PRA Clear”

*“My vet has advised me to get my bitch
spayed after her first season to avoid
the risk of Mammary Tumours and
Pyometra”*

*“My male 5 month puppy only has one
testicle descended and I have been
advised to neuter him soon to avoid the
risk of testicular cancer”*

These are common statements we see in social media discussions where people are looking for a Dachshund or asking for advice on neutering.

In isolation, they all seem to be perfectly sensible statements. Unfortunately, taking them in isolation, without considering other health factors, can lead to misleading advice. We need to consider the whole dog, not just its eyes or reproductive system!



Our current advice on health risks (1)

- **Back disease (IVDD)** is the single biggest risk for Dachshunds, particularly Mini Smooths (which have become very popular in the past 4 years)
- Breeders can reduce the risks by participating in our screening programme and selecting dogs/bitches where there is a family history of good backs
- Owners can reduce the risks of IVDD through lifestyle factors such as exercise and maintaining a healthy, well-muscled, body condition (not overweight)
- The risks of **PRA** are now very low and buyers/breeders should not be prioritising cord1 DNA test results above other health issues
- The risks of **Lafora Disease** in Mini Wires are low as a result of the DNA screening programme, and buyers should ask for proof that any potential puppy's parents include at least one (sire of dam) that is tested Clear or is Hereditarily Clear



Our current advice on health risks (2)

- While there are risks to bitches of **mammary tumours** and **pyometras**, these are lower than the risks of IVDD
 - Owners should discuss the relative risks with their vet before making a decision to spay a bitch under the age of 12 months
 - Our advice is to wait until a bitch is mature before spaying, to allow bones and growth plates to develop fully
 - Cancers, generally speaking, are diseases of mid to old age, so delaying until a puppy is fully mature is relatively low risk
- Similarly, for male dogs, the risks of **testicular cancer** resulting from retained testicles are significantly lower than the risk of IVDD and are, in any case, more likely in older dogs
 - Owners should discuss the relative risks with their vet before making a decision to castrate a dog under the age of 12 months
 - Our advice is that there is very little evidence of any health benefits from the neutering of male dogs and to wait until a dog is fully mature before castrating cryptorchid dogs (unless there is a medical reason to do so). See comment above about age of onset.



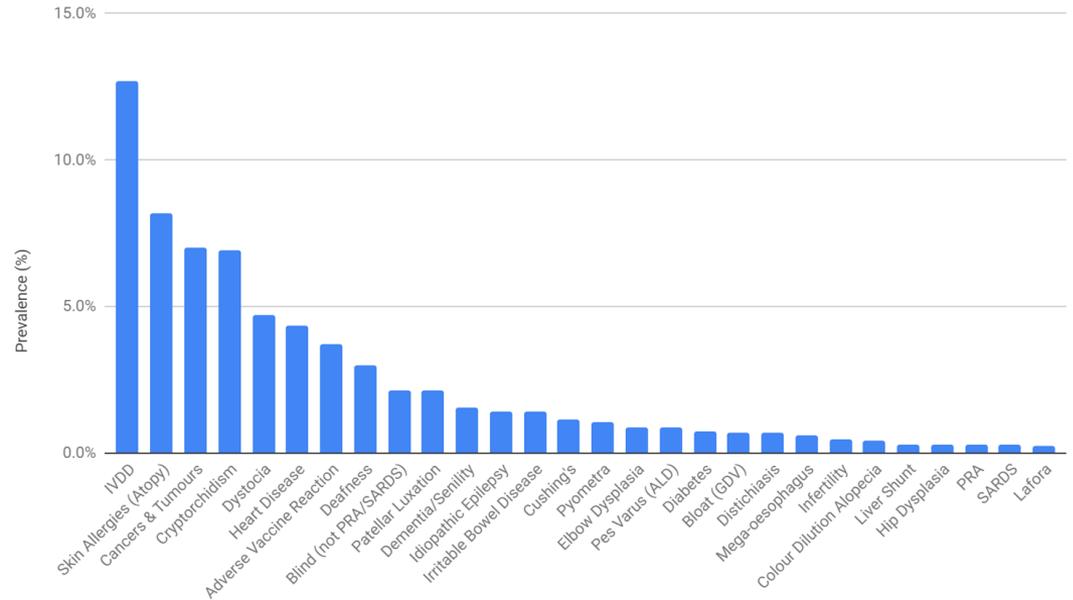
Health Survey Data

The Dachshund Breed Council has conducted surveys in 2012, 2015 and 2018, and we now have data on more than 6000 Dachshunds. This gives us a clear picture on the relative prevalences of different health issues.

We also refer to peer-reviewed research papers to ensure we are up-to-date with other evidence from around the world.

Our most recent survey showed the following disease prevalence (from 2564 Dachshunds):

DachsLife 2018 Summary of Disease Prevalence (%)



Back Disease (IVDD)

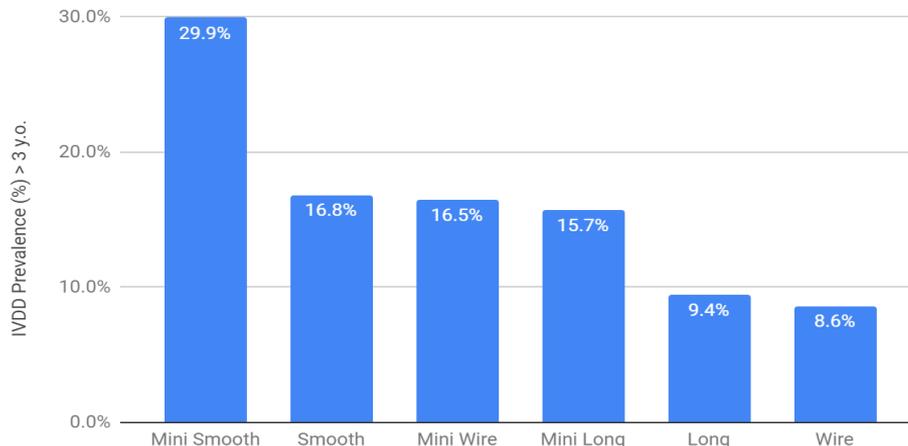
IVDD is the highest risk condition in the breed. However, it is important to recognise that there are variations in this risk across the 6 UK varieties of Dachshund.

As IVDD typically occurs over the age of 3, we usually show the prevalence data having excluded young dogs that would be unlikely to be affected:

IVDD may also be referred to as IVDH – intervertebral disc herniation.

Overall, in the 2018 survey, 21% of Dachshunds over the age of 3 had reported an IVDD incident. Previous Breed Council surveys have shown a similar pattern, with Mini Smooths and Smooths at highest risk and Longs and Wires at lowest risk.

IVDD Prevalence > 3 y.o. (N = 1173)





Back Disease (IVDD)

Other studies have shown that Dachshunds have 10-12 times the risk of IVDD compared with other breeds (not just compared with cross-breeds). [References for further reading can be found at www.dachshund-ivdd.uk].

Even if there may be a bias in reporting in our surveys, resulting in some inflation of the figures, consistently across all DBC surveys IVDD always takes a significant lead compared to reports of other health conditions, and this is replicated in independent research from other sources.

We also know that IVDD is a complex, multi-factorial disease. While it has a strong hereditary component, lifestyle factors are also associated with IVDD risk. Notably, both our 2015 and 2018 surveys showed neutering to be a risk factor. Our 2018 paper (*Dorn, Seath: Neuter status as a risk factor for IVDH*) concluded that neutering, especially if performed before 12 months old, increases risk of IVDH in this breed. For early neutered males, risk ratio was 1.54. For early-neutered females, risk ratio was 2.12.



Skin conditions - allergies

Skin allergies had the 2nd highest prevalence in our 2018 survey, at 8.2%. (2015: 13.2%). This means about 1 in 12 Dachshunds had some form of skin allergy.

Neutered Dachshunds were nearly 3 times as likely to suffer skin allergies as entire Dachshunds (Odds Ratio: 2.71; P<0.0001).

These conditions are notoriously difficult to diagnose and to find suitable treatments. Atopic dermatitis, for example, results from a combination of genetic and environmental factors. They are often first diagnosed at a young age and are therefore something a dog can suffer with for the whole of its life.

Dilute coloured dogs (Blue and Isabella) are also reported to have a higher risk of skin problems such as colour dilution alopecia.



Cancers and Tumours

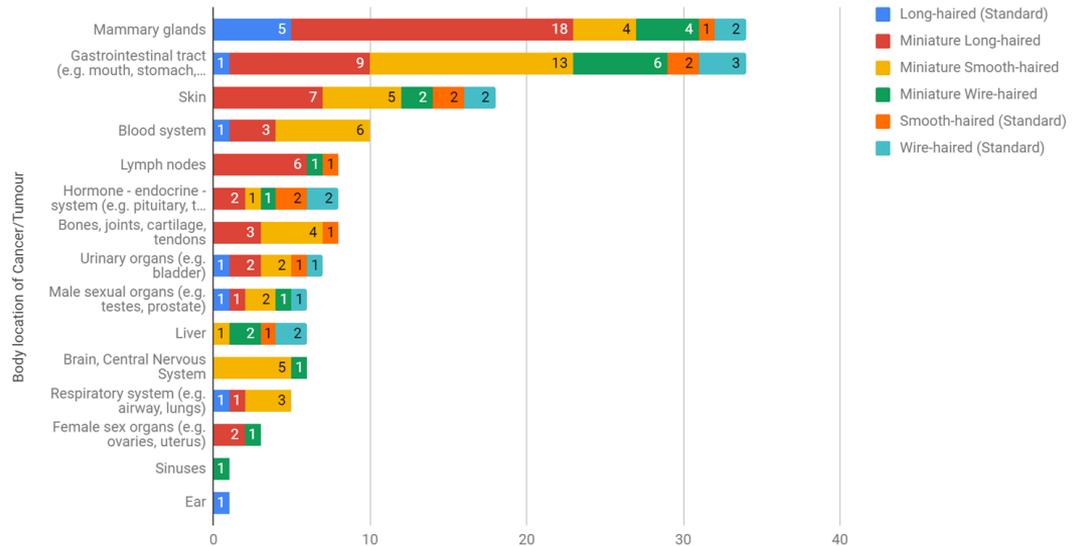
Overall, cancers and tumours were the 3rd highest prevalence conditions in our 2018 survey (7%).

The Long and Mini Long varieties were about 3 times more likely to be affected than the other 4 varieties.

Mammary tumours and gastrointestinal cancers/tumours were the most commonly reported types of cancer (each being 22% of reported cases).

The median (average) age of diagnosis was 9 years so, on average, these are a condition of old age. The median age of death was 11 years.

Body location of Cancer/Tumour by Variety (N = 155)



A 2013 study (*Dobson: Breed-Predispositions to Cancer in Pedigree Dogs*) showed that Dachshunds were a breed with a lower cancer risk than others (17% of deaths due to cancers).



Mammary Tumours

A Swiss study (*all breeds; Grüntzig et al 2016*) showed neutered females were half as likely to have mammary tumours as entire females. A Swedish study (*Egenvall et al, 2012*) showed 16% of Longhaired Dachshunds had developed Mammary Tumours by the age of 10.

An Italian study (*Vascellari et al; 2016*) showed that mammary tumours were less frequent in dogs younger than 6 years and increased up to approximately 60% for ages between 8 and 13 years.

A Spanish study (*Pastor; 2018*) showed that 60% of canine cancers were mammary tumours in a group of 858 dogs (all breeds), of which 88% were not spayed. The age range with the greatest risk of mammary tumours was 6-10.

In our survey, bitches that had been bred from were twice as likely to have been diagnosed with Mammary Tumours (Odds Ratio = 1.9; P-value = 0.0295).



Testicular Cancers

Testicular and male reproductive system cancers in male Dachshunds were 4% of all the cancer cases reported in our study.

Our 2018 survey showed that 6.9% of male Dachshunds had a missing testicle (that is around 1 in 14). We also know that an undescended testicle can descend at any time up to around 12 months of age, so there is usually no urgency to deal with this surgically, under that age.

Hayes et al (1985) found testicular tumours were diagnosed in 5.7% of the 2912 cryptorchid dogs in their study. Their 1976 study found that cryptorchid dogs have a 13.6 times higher risk of testicular tumours than normal dogs. *Maguire et al (1969)* found among dogs under 6 years of age, the incidence of testicular tumours was 7%.

Liao et al (2009) found that 93%% of testicular cancers were identified at age 6 or over in dogs with both testicles present and 92% of cryptorchid dogs were identified at age 6 or over.

Pyometra

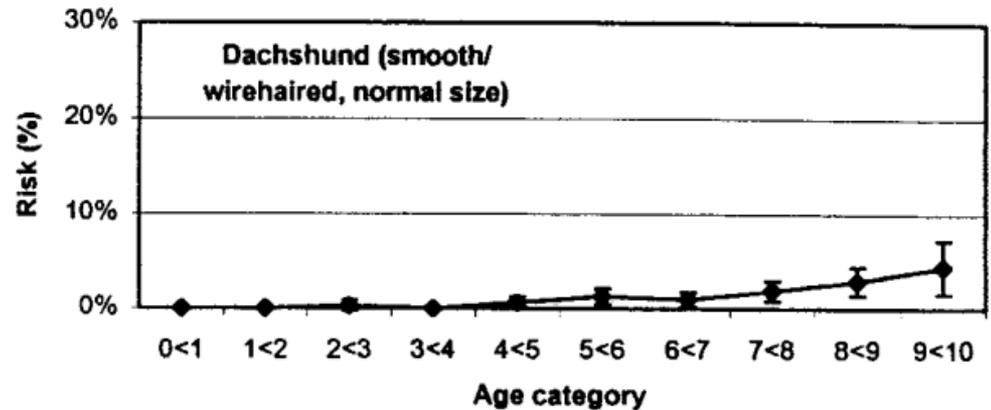
The overall prevalence of pyometra in our 2018 survey was 1.1%.

Reproductive disorders such as pyometra are reduced/prevented with neutering.

Egenvall et al (2001) reported Miniature Dachshunds as being one of the lower-risk breeds for pyometra (Odds Ratio 0.2 vs all breeds).

In that study, 0.3% of Miniatures and 1.1% of Standard Dachshunds experienced pyometra in one year (1996).

Egenvall et al (Sweden, 2012) found the incidence rate (IR) for pyometra (all breeds) was 199 dogs per 10,000 DYAR (~2% per year). The mean age of diagnosis pyometra was 7.0 years.



The chart above shows the age-specific 12-month risk of pyometra (with 95% CIs) in Smooth and Wire Dachshunds before 10 years of age, using data for 1996.



Progressive Retinal Atrophy (PRA)

Dachshund breeders have been DNA testing for cord1 PRA for around 15 years. The test was originally developed in response to incidents of early onset PRA in Miniature Longhaired Dachshunds.

We now know that at least one other mutation (MAP9) is associated with early onset PRA blindness and that dogs that do not have the MAP9 mutation may only go blind in old age.

In our 2018 survey, the overall prevalence of clinically diagnosed PRA (as opposed to DNA tested as “Affected”) was 0.3% and the median (average) age of diagnosis was 11 years.

Other causes of blindness had a prevalence of 2.1% and a median age of diagnosis of 12 years.

We recommend breeders should carry out clinical eye testing (KC/BVA/ISDS) to check for eye conditions in addition to PRA.

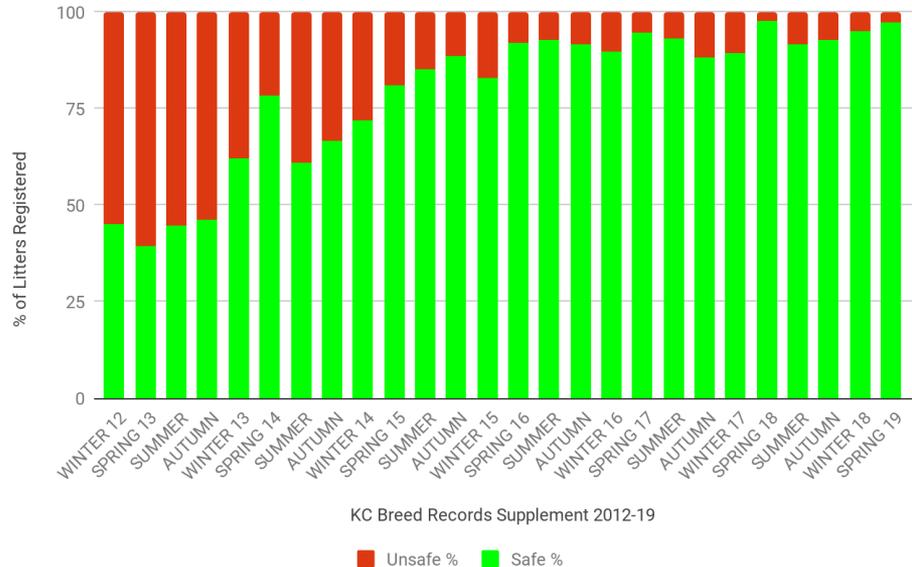


Lafora Disease

Since the adoption of the Lafora DNA test, we have seen a steady increase in the number of breeders using the test and, currently, around 95% of litters are “safe” (i.e. no risk of having affected puppies).

In our 2018 survey, just 1.6% of Mini Wires were reported as being clinically affected with Lafora Disease. The risk has been dramatically reduced over the past decade and there is now no excuse for anyone breeding an at-risk litter.

Mini Wire Litters - Lafora Status



For more information, please
visit our website:
www.dachshundhealth.org.uk



Follow dachshundhealthuk on Instagram