

Dach-Facts: Lafora Disease in MWHD

Health & Welfare Information from the
Dachshund Breed Council



What is Lafora Disease?

Lafora Disease is an inherited form of epilepsy that affects Miniature Wirehaired Dachshunds, in particular.

The condition typically only becomes apparent any time from the age of 5 onwards and can take the form of major fitting, jerking of the head, apparent blindness, dementia and unsteadiness on the feet. It can affect both dogs and bitches.

Dogs that are "Affected" by the disease, or are "Carriers" of the genetic mutation, are at risk of producing more "Affected" puppies if they are bred from with others carrying the mutation.



This information sheet has been written in conjunction with **Laforadogs**, a support group dedicated to helping owners of affected dogs and working to eradicate this distressing condition.

Could your Mini Wire Dachshund be affected?

Myoclonus (jerking) is a feature of the disease and characteristically this can be induced by flashing lights, sudden sounds and movement, especially when close to the dog's head. Generalised or complex partial seizures may be seen in some dogs. The disease progresses slowly over many years and gradually other neurological symptoms such as ataxia, blindness and dementia occur.

The genetics of Lafora

The Toronto Hospital for Sick Children, with support from Dr. Clare Rusbridge in the UK, has identified Lafora as an inherited autosomal recessive disease. It appears likely that canine Lafora first appeared in the Mini Wire Dachshund population in the UK as the result

of a genetic mutation. This means that a dog must have two of the mutated genes, one from each parent, to be clinically "Affected".

If a dog has only one mutated Lafora gene, it will be a "Carrier". It will not become clinically affected by the disease but, if bred to another "Carrier" or "Affected" dog, some of the puppies born will be likely to receive the two mutated genes and thus be clinically affected. There is more information on the genetics of Lafora's Disease at www.laforadogs.org.

A DNA test is now available that can differentiate between "Affecteds", "Carriers" and "Clears".

The benefits of testing

The WHDC's 2010 screening programme identified approx. 10% "Affected" MWHDs in their sample. This could mean that over half the UK MWHD population is carrying the Lafora mutation. Because the disease is "late onset" most dogs will have been bred from before they exhibit any symptoms. The only way we will be able to avoid breeding "Affected" Mini Wires is to use the full DNA test to screen all breeding stock, prior to mating.

Dogs known to be "Affected" or "Carriers" should not be mated together. Avoiding such combinations will reduce the incidence of Lafora Disease. They should only be mated to "Clear" dogs.

You can [download](#) a pictorial guide to the genetics of Lafora which explains what "safe matings" you can make.

Parents	Puppie (expected proportion)
"Clear" parent + "Clear" parent	100% "Clear" puppies
"Clear" parent + "Carrier" parent	50% "Clear" puppies and 50% "Carrier" puppies
"Carrier" parent + "Carrier" parent	25% "Clear" puppies, 50% "Carrier" puppies and 25% "Affected" puppies
"Carrier" parent + "Affected" parent	50% "Affected" and 50% "Carrier" puppies
"Affected" parent + "Affected" parent	100% "Affected" puppies

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Advice for Owners of MWHD

The demands on responsible dog breeders grow ever greater, but it is imperative that we all focus on improving the chances that the puppies we breed will live a long, happy and healthy life, giving their owners the best possible dog-owning experience.

If you have a Miniature Wirehaired Dachshund and are considering breeding now or in the future, it is essential that you get your dog tested. The Breed Council's and all UK Dachshund Breed Clubs' Code of Ethics states:

I will not breed from any stock that has, or may carry, any serious hereditary faults. In particular, I will not allow any dog to be used at stud if he has, or could carry, serious hereditary faults and I will be very selective of the bitches on which he is used. If health screening/testing is available for any hereditary disease/illness carried by my breed, I will ensure all my breeding stock is tested.

Even if you don't intend to breed, it is still important to have the test. That way, if the worst happens and you find your dog is affected, you'll be prepared and can take action to reduce the impact on your dog. You'll also be able to advise the breeder of your dog, so that they are aware of the implications and can advise other puppy owners.

The Wirehaired Dachshund Club (WHDC) is co-ordinating a testing programme and you should contact them to find out the most up-to-date information.

Contact Nora Price (Coordinator):

T: 01543 276797

E: laforatesting@mypostoffice.co.uk

Canine Lafora Research

Canine Lafora was first identified in the UK by Dr. Sue Fitzmaurice in 1996. Later, Dr Clare Rusbridge another UK-based veterinary neurologist recognised a number of Miniature Wirehaired Dachshunds, many of whom shared common pedigrees, as having the Lafora symptoms.

Sue and Clare subsequently collaborated with Dr. Berge Minassian and his team at the Toronto Hospital for Sick Children in Canada (www.sickkids.ca) on a research programme using blood samples from these Mini Wires to develop a better understanding of Lafora in human teenagers. Future mutually beneficial cooperation between the DBC, WHDC and the Canadian team is a possibility. For the latest information on human Lafora research:

<http://www.chelseashope.org/laforaresearch.php>

Where to find out more

Dachshund Breed Council's Health website:

www.uk-dachshund-health-report.org.uk for the latest Dachshund health and welfare information and advice.

Laforadogs Support Group:

- Information on the disease and the genetics behind it
- Advice on how to manage and cope with a dog suffering from Lafora's
- Advice on diet and medication
- The latest information on opportunities to have dogs tested

www.laforadogs.org Phone: 07764 355153

E-mail: laforadogs@btinternet.com



We are grateful to the Laforadogs Support Group for their help in producing this leaflet and to Dr. Clare Rusbridge for the information she has provided on the disease, its causes and her advice on breeding it out of the MWHD population.