



Progressive Retinal Atrophy (PRA)

What is PRA?

Progressive Retinal Atrophy (PRA) is an inherited disease of the retina, in which the eyes are genetically programmed to go blind. It has been termed 'night blindness' because this is the first thing that happens – the dogs cannot see at night. In latter stages of the disease the dog's daytime vision will deteriorate. PRA occurs in both eyes simultaneously and is non-painful. In Irish Wolfhounds the condition manifests when the dog is an adult.

This is one of the breed's success stories as the incidence in the breed is very low and we have not had a case for several years now, due to the vigilance and sharing of information within the breed. It is not only because people have tested for it.

Mode of Inheritance

In Irish Wolfhounds this is an autosomal recessive gene, this means that both parents of an affected puppy have to carry the faulty gene. It is considered a rare condition in this breed, and fortunately carriers for PRA are known and care can be taken to avoid putting carriers together.

While there have been genetic tests developed for many other breeds, there has yet to be a test developed for the Irish Wolfhound. For a more in depth article discussing PRA in Wolfhounds follow this link:

<http://www.iwhealthgroup.co.uk/progressive-retinal-atrophy.html>

Testing for PRA

The test that is available only tells you if a dog is affected or not, but cannot identify carrier status, so it cannot prevent you from possibly producing it. If a breeder knows that they have carrier lines in their pedigree, then they would be advised to test their stock before breeding at an earlier age as the disease might not have shown up by this stage. However, unless you are aware of the carrier lines, this test would not prevent you possibly breeding with a carrier. As there are new people coming into the breed all the time and also those carrier lines disappearing off the 5 generation pedigree, it would be worthwhile keeping PRA at the forefront of our minds as a reminder to check our pedigrees thoroughly before going ahead.

Breeding with Carriers

If a carrier for PRA appears on one side of the pedigree, none of the puppies will be affected – but some will have inherited the gene from the carrier parent, although it is not possible to establish which of the dogs these will be. A list of known carriers can be found on the IW Health Group website <http://www.iwhealthgroup.co.uk/progressive-retinal-atrophy.html#carriers>. Breeders must be aware that they will have to research well beyond a five generation pedigree to establish whether these dogs appear within it. In a breed with a small gene pool breeding with carriers is often a necessity, but they must be bred to known clear lines. With each generation the risk of the faulty gene being passed forward decreases exponentially until six generations of breeding in this manner produces a risk of 1/132. At this point the known carrier line can be considered in the same way as a clear line and the risk of producing a PRA affected puppy is negligible. However, recessive genes can never be regarded as completely bred out.

It is possible to get a Risk Analysis for PRA prior to breeding a litter by applying by email to Ann Janis email: iwrisk@yahoo.com citing who the prospective Sire and Dam will be; breeders are encouraged to use this facility. This will give you a percentage risk of whether or not PRA might result from this combination. If you are not sure, don't take chances, ask someone more experienced. Although there have been no cases for several years now, it could still reappear.