

# PRA

## What is the retina?

The retina is a very thin tissue at the back of the eye which contains specialised cells (photoreceptors) which can convert light into electrical signals. These electrical signals are passed along nerve fibres through the optic nerve and into the brain for processing. Vision is the interpretation of these electrical signals by the brain.

## What is progressive retinal atrophy (PRA)?

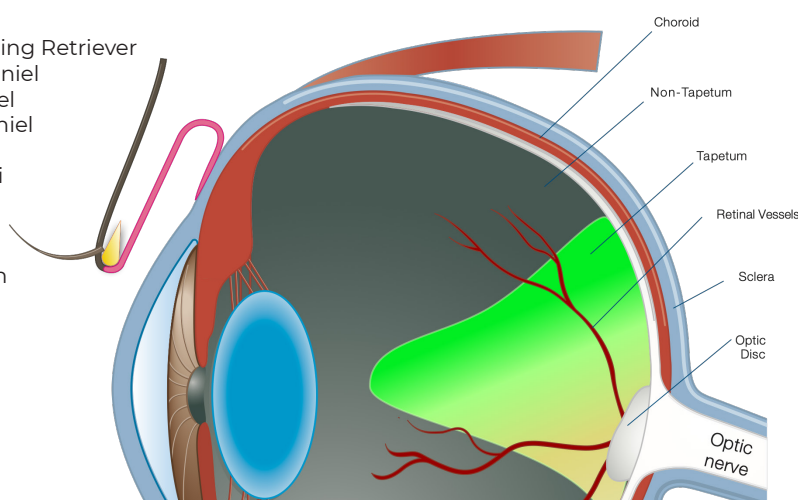
This is a group of genetic diseases affecting the canine retina resulting in irreversible blindness due to the destruction of photoreceptor cells.

## Are particular animals at risk of PRA?

PRA has been reported in many breeds and observed in some cross-bred dogs. The breeds with known hereditary GPRA include:

- Australian Cattle Dog
- Collie, Rough Collie and Smooth Collie
- Miniature Long-Haired Dachshund
- Finnish Lapphund
- Glen of Inmmal Terrier
- Irish Setter
- Red and white Setter
- Irish Wolfhound
- Lhasa Apso
- Miniature Schnauzer
- Norwegian Elkhound
- Miniature Poodle
- Toy Poodle
- Chesapeake Bay Retriever
- Golden Retriever
- Labrador Retriever
- Nova Scotia Duck Tolling Retriever
- American Cocker Spaniel
- English Cocker Spaniel
- English Springer Spaniel
- Tibetan Spaniel
- Cardigan Welsh Corgi

Further breed information can be found on:  
<https://www.bva.co.uk/>



## Are there different types of PRA?

Yes, but the majority of PRA seen in the UK is known as generalised progressive retinal atrophy (GPRA).

## What are the signs of PRA?

The disease does not normally result in acute loss of vision, but a gradual change over many months or years. Vision may be noticeably poor at night or under dim light conditions. Both pupils may appear very large with increased reflective 'eye-shine'. As the disease progresses a total loss of vision may be observed along with the development of cataracts.

## Can both eyes be affected?

In all cases both eyes will be affected although the ophthalmological changes may be more advanced in one or other eye.

## How can PRA be diagnosed?

We can normally diagnose clinical cases of PRA during an ophthalmic consultation by carefully examining the back of the eye. In cases where cataracts obstruct visualisation of the retina, we may recommend an electroretinogram (ERG) or colourmetric light testing which assess retinal function. GPRA is an autosomal recessive disease and can be hidden in carrier dogs. If two carrier dogs mate there is a one in four chance of a puppy being affected with PRA. DNA analysis can be used to aid pre-breeding screening and is particularly useful in the identification of carrier dogs. The British Veterinary Association and Kennel Club recommend pre-breeding screening to avoid passing the genetic abnormality from one generation to another.

## What are the treatment options for PRA?

Unfortunately there is currently no treatment available and vision is likely to deteriorate. There are no known successful treatments, but hopefully this will change in the future as research continues. Thankfully PRA is not a painful disease, and most dogs adjust to their gradual loss of eyesight.