



## **Progressive Retinal Atrophy**

### **What is Progressive Retinal Atrophy?**

Progressive Retinal Atrophy, or PRA, is an inherited condition in which the retinal cells degenerate or die prematurely. Many breeds of dog are affected by forms of this condition, although the age of onset and rate of progression of retinal thinning varies between breeds and even between individual dogs. For most breeds, the clinical signs associated with PRA are first detectable between 2-5 years of age.

### **What are the signs of PRA?**

The earliest clinical sign of PRA is decreased vision in dim light conditions. Commonly, owners of affected dogs report that these pets are hesitant to go up or down stairs or to go outside until the lights are turned on. Gradually, usually over a period of months to years, the retinal degeneration progresses to affect vision even in bright light, and ultimately dogs with PRA become blind.

Ophthalmic examination findings of affected dogs vary depending of the stage of the disease, but typically there is abnormal dilation of the pupils along with some degree of visible retinal thinning.

### **How is PRA diagnosed?**

This diagnosis of PRA can often be made solely by the presence of characteristic findings on ophthalmic examination. Prior to the development of clinical signs or visible retinal thinning, though, a diagnosis can potentially be made by performing a test of retinal function called an electroretinogram, or ERG. In addition, genetic testing is now available for many of the more common forms of PRA. These tests are easy to perform, requiring only a small sample of blood. However, a negative genetic test result does not guarantee that a dog will not develop PRA, because these tests do not evaluate for all forms of this condition. More information about genetic testing can be found at [www.optigen.com](http://www.optigen.com).

### **What is the treatment?**

Unfortunately there is no proven treatment to alter the progression or reverse the changes of PRA. However, there is an antioxidant / vitamin supplement, Ocuvite, the MAY have beneficial effects on retinal cell health and slow or alter progression of retinal atrophy, though there are no studies demonstrating its efficacy in dogs, and it has only rarely been shown to have efficacy against a different type of retinal disease in humans (macular degeneration). Its administration is unlikely to harm dogs, and may help.

### **What is the prognosis?**



Although there is no treatment for PRA, fortunately most dogs affected by this condition adapt well to the vision loss because it happens gradually. In addition, this condition, in and of itself, is not painful. However, some dogs will develop secondary complications from PRA, such as cataract formation and rarely glaucoma (high eye pressure), which is painful and can necessitate removal of the eye.

### **Resources:**

We recommend several resources for owners of visually impaired dogs. One book, titled "Living with Blind Dogs" (by Carol Levin), is available at the website [www.petcarebooks.com](http://www.petcarebooks.com). This book is an excellent resource with information about PRA and other causes of vision loss in dogs, and with tips for considering the environment from a dog's perspective and making it safe. This author also has a companion book, "Blind Dog Stories" with heart-warming tales of how well blind dogs can do. We also recommend the internet as a valuable resource for information on visual impairment in animals and management of such, and support for owners of visually impaired animals. Some useful websites include: [blinddogs.com](http://blinddogs.com), [pepedog.com](http://pepedog.com), [angelvest.homestead.com](http://angelvest.homestead.com), [i-love-dogs.com/dog/rivers](http://i-love-dogs.com/dog/rivers), [mysticpup.net](http://mysticpup.net) and [doggles.com](http://doggles.com) (protective eye ware for dogs; also recommended as a potential resource website for owners of blind dogs, which may be more likely to damage their eyes at play if they bump into things as a result of their visual deficits).