

PROGRESSIVE RETINAL ATROPHY

The retina is a highly complicated tissue located in the back of the eye. Light strikes the retina and starts a series of chemical reactions that causes an electrical event (nerve impulse). The impulse passes through the layers of the retina to the optic nerve and from there to the brain where vision takes place. In the retina, cells called rods are involved with black and white or night vision and cells called cones are involved with colour or day vision.

WHAT IS PROGRESSIVE RETINAL ATROPHY?

Progressive retinal atrophy (PRA) [also known as progressive retinal degeneration (PRD)] refers to several different retinal diseases that cause blindness. There are two distinct patterns to this disease. Some breeds have blindness caused by abnormal development (dysplasia) of the retina. Other breeds have a slow progressive death of the retinal tissue (degeneration). These two types of disease affect many breeds. In general, these diseases are inherited. The patterns of inheritance may be different in each breed. In all patients with PRA, the outcome is the same - blindness. The age and breed of the patient and what the ophthalmologist finds during the examination are the basis for the classification of exactly what type of condition the patient has. Different breeds of dogs have variations in the age at which the problem starts and speed with which the blindness develops. As the name implies, a slow degeneration or death of retinal tissue occurs. PRA may affect the rod cells, cone cells, or both rod and cone cells together.

WHAT CAUSES PRA?

PRA, or the gene for PRA is known to be passed from parents to offspring even though the parents may have normal eyes and vision. Identification of breeding animals with, or related to patients with PRA is essential to prevent the spread of this condition. At this time, researchers are working to find a blood test to identify “carrier” animals.

WHAT ARE THE SIGNS OF PRA?

Because PRA is not a painful condition, your pet will not have reddened eyes or have increased blinking or squinting. For this reason, most people will not notice the earliest stages of the condition. Early signs of PRA include night vision difficulties. People often remember that their pet seemed disoriented when going out in the yard at night and they had to leave a light on for them. Night blindness may be manifested by a pet that is afraid to go into a dark room, or one that gets lost in the house after the lights are off. Some people will eventually notice a shine coming from their pet’s eye because the pupil is dilated and doesn’t respond to light as quickly as normal.

HOW IS PRA DIAGNOSED?

The ophthalmologist examines the retina with an instrument called an indirect ophthalmoscope. Specific changes in the retinal blood vessel pattern, the optic nerve head, and the reflective substance within the dog’s eye (tapetum) are classic for PRA. Cataracts may occur in some patients with PRA and generally occur later in the disease. Formation of cataracts may interfere with the ophthalmologist’s examination of the retina

and make other tests such as an electroretinogram (ERG) essential for accurate diagnosis. This test involves sophisticated instrumentation used to measure the response of the retina when a light is shone upon it. Your pet will need to be sedated and placed in a dark room. A special contact lens connected to a computer is placed on the eye and two tiny needles are placed under the skin. A light source is flashed periodically into the eye and a computer evaluates the response.

WHAT IS THE TREATMENT FOR PRA?

Unfortunately, there is no cure for PRA. A number of vitamin therapies have been suggested by various people, but none have proven to be effective. Again, it is important to understand that the disease is not painful, but you and your pet will need to adjust and deal with the blindness.

We have included information for a wonderful book about living with a blind dog, we encourage you to purchase this book as it is very helpful.

“Living with Blind Dogs: A Resource Book and Training Guide for the Owners of Blind and Low Vision Dogs” by Caroline D. Levin 8.5”x11” paperback, 182 pages, illustrated.

This is the first-ever resource book of its kind. It embodies helpful hints from dozens of blind dog owners, as well as years of ophthalmic nursing, veterinary, & dog training experiences. Topics include dealing with loss, causes of blindness, how dogs react to blindness, pack interactions, training new skills, toys & games.

“Blind Dogs Stories: Tales of Triumph Humor and Heroism” by Caroline D. Levin 5.5”x8.5” paperback, 100 pages, illustrated.

More than 20 short stories, collected from around the world - some of them humorous, some of them heroic, all of them heartwarming. This book demonstrates that blind dogs can live useful, happy lives, offers encouragement to blind dog owners, and celebrates the beauty of the human-canine bond.