



LIVING WITH PRA

Animals adapt well to vision loss, especially with help from their owners. Blind pets learn to rely not only upon hearing and smell, but also texture and temperature. Veterinary ophthalmologists can discuss training techniques to help your animal adjust and even thrive with blindness.

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PROGRESSIVE RETINAL

ATROPHY

{ PRA }

ARE THERE COMPLICATIONS

ASSOCIATED WITH PRA?

Cataracts (an opacification or cloudiness of the lens) are the most common secondary complication seen with PRA. As the retina degenerates, it can release toxins that cause the cataract to form. Cataract removal is not usually recommended in PRA cases since vision may not be improved. An ERG prior to surgery will help determine whether a dog with cataracts is a good surgical candidate based on the health and function of the retina. If vision is improved immediately following surgery, it often deteriorates as the PRA progresses.

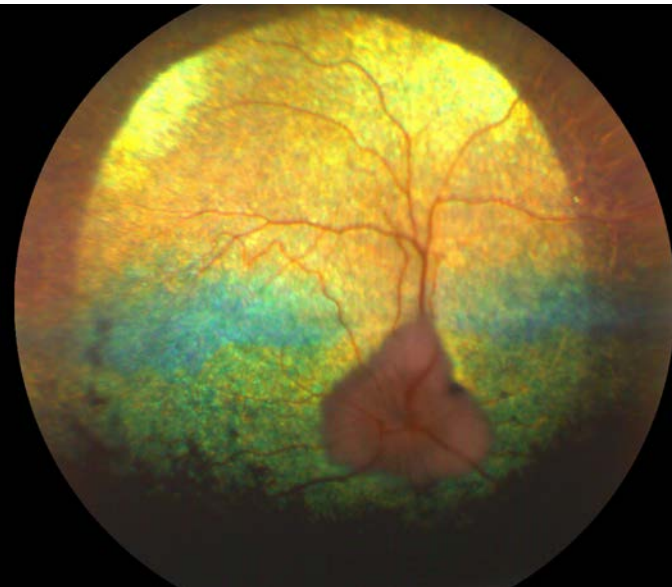
The ACVO® is continually involved in basic and clinical research developing new diagnostic procedures and treatment regimens. The genetics committee of the ACVO® works closely with breeders to better define and help eliminate inherited ocular diseases. The name of a Diplomate closest to you may be obtained from a general practitioner in your area or on-line at:

www.ACVO.org

For information about our free eye exams for Service Animals, visit:

www.ACVOeyexam.org

“...that light shall prevail over darkness...”®



WHAT IS PROGRESSIVE RETINAL ATROPHY { PRA }?

Progressive Retinal Atrophy (PRA) is a degenerative disease of the retina. When comparing the eye to a camera, the retina is the equivalent of the camera's film. In PRA the "film" or retina is no longer functioning properly. Similar to a camera with damaged film, an eye with PRA cannot produce a usable image.

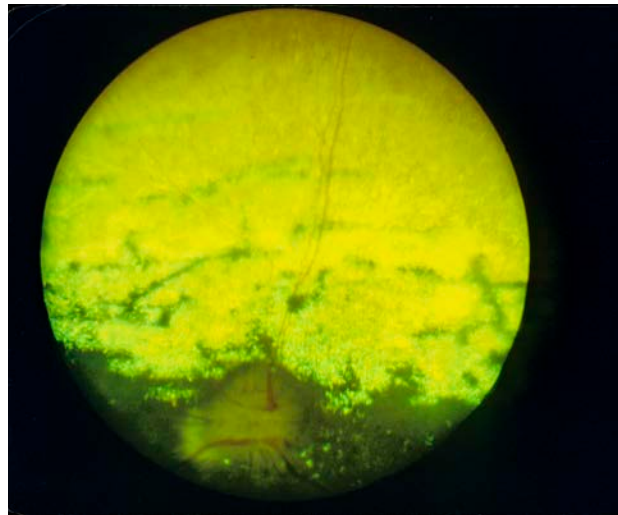
PRA is an inherited disease. It is most commonly observed in purebred dogs but may be seen in mixed breeds. In most breeds, the disease is inherited by simple autosomal recessive mode. Autosomal recessive inheritance requires one bad gene from both parents. Neither parent may be affected by the disease, but if both are carriers of the trait their offspring can exhibit blindness from PRA. The age of onset varies with the breed affected with some breeds demonstrating clinical signs within the first years of life while others may be elderly before vision loss is observed.

PRA is an inherited disease.

Animals with PRA should not be bred as the condition may be passed on to offspring.

WHAT ARE THE SIGNS OF PRA?

Most cases of PRA are recognized by a gradual decrease in vision generally with the initial vision loss occurring in dim light (early in the morning or late evening). Other dogs may exhibit no signs of vision loss until they are taken to an unfamiliar setting. Animals have an amazing ability to adapt to vision loss and some animals hide their vision loss well until they present to the ophthalmologist for cataract surgery or when furniture is rearranged in the home.

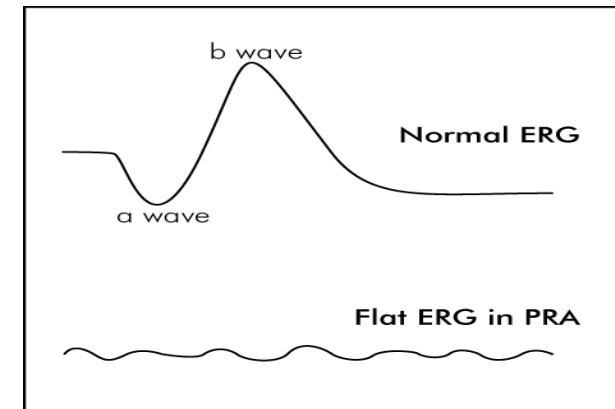


HOW IS PRA DIAGNOSED?

A diagnosis of PRA can be made based on history of decreasing vision and an examination by your veterinary ophthalmologist. The examination will typically reveal signs that the retina is degenerating, including thinning of the retinal blood vessels and signs of hyperreflectivity. Hyperreflectivity means that the thinning retina allows more light reflection from tapetum, the layer of the eye that causes the "eye shine" seen when light reflects from dogs' eyes in the dark.

If further clarification is necessary, additional diagnostic information is now available through genetic testing and electroretinography (ERG). Genetic testing using DNA can be performed on many breeds to identify both affected dogs and those who do not exhibit the blinding disease but are carrying the causative gene. This can be an invaluable screening test that allows breeders to halt breeding of dogs that will put their offspring at risk.

DIAGRAM OF ERG



An ERG is a test that records the function of the retina cells (i.e. rods and cones) by producing a waveform in response to a series of flashing lights. Dogs with PRA will exhibit a "flatline" or diminished ERG waveform.

CAN PRA BE TREATED?

There is currently no treatment for PRA, however, both veterinary and physician ophthalmologists are conducting research to find treatments for this disease and its human counterparts. Fortunately the condition is not painful.