



By your veterinary ophthalmologist

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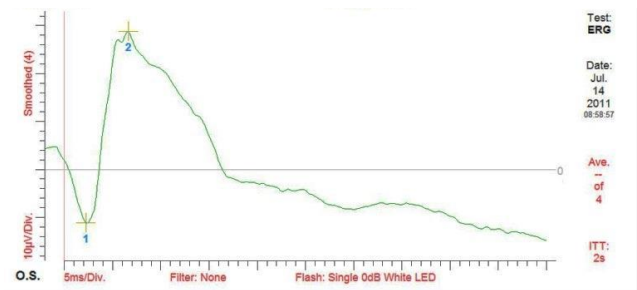
## Sudden acquired retinal degeneration (*SARD*)

The retina is a highly organized tissue layer that is located deep within the eye. When light entering the eye reaches the retina, a series of chemical reactions occurs which generates an electrical impulse. The impulse travels from the retina through the optic nerve and from there to the brain, where vision takes place.

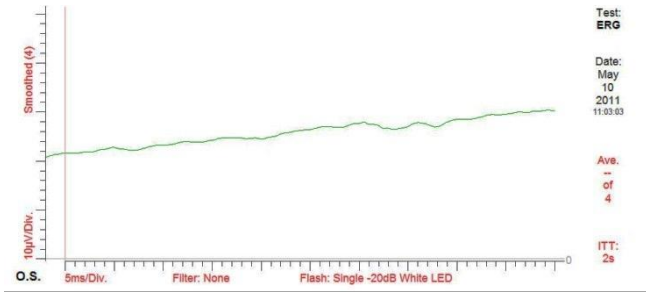
Sudden acquired retinal degeneration (*SARD*) is a condition where there is a sudden onset of vision loss due to a rapid degeneration of the cells of the retina that detect light (rods and cones).

It is yet unknown why this condition occurs, but it is more common in middle-aged to older dogs (6 yrs and older). Dogs affected by *SARD* often have additional signs such as increased drinking and urination, weight gain, and increased appetite. These signs are very common in dogs with hyperadrenocorticism (Cushing's disease) where the body is producing too much of its own cortisone (steroid). As of this time, no one has proven a cause and effect relationship between these conditions. Intense stress, such as that experienced with sudden blindness, may also cause many of these additional signs. Recent research studies have supported the theory that *SARD* is due to an auto-immune retinal condition. At this writing, treatment for *SARD* is in the experimental stage only.

Dogs affected with *SARD* have vision loss that occurs over a period of approximately one to four weeks. Ophthalmic examination in this early stage indicates retinal dysfunction, however there is minimal to no abnormalities detected when the retina is viewed. Diagnosis is based upon the above findings, and an additional test called an electroretinogram (ERG). The ERG is a test of the retina's functioning ability and measures the electrical impulses generated by the cells of the retina. A dog with *SARD* will have no electrical signals generated by the retinal cells when an ERG is performed.



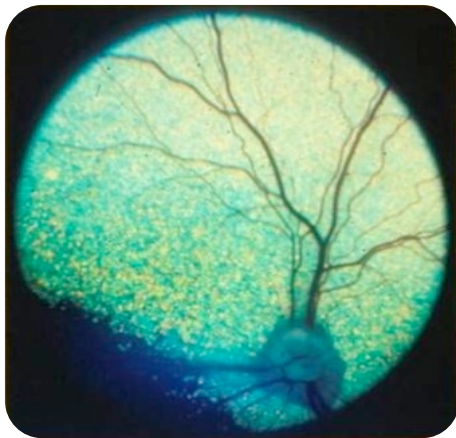
Aspect of a normal ERG



ERG of a dog with SARDs: flat curve indicating a retina that is not functional

Unfortunately, there is no proven treatment for SARD, but if there are other signs of systemic illness suggestive of Cushing's disease, and those signs persists for a few weeks, we may recommend having specific blood tests performed to evaluate for this condition. These follow-up blood tests can be performed by your veterinarian. Treatment for Cushing's disease, should it be present, will not restore vision, but it can improve your pet's quality of life.

Most dogs adapt well to blindness if their environment is not continually changed. The major concern is for the safety of affected animals. Swimming pools are particularly hazardous because blind animals cannot always find their way out if they fall in. You must help your avoid obstacles, pedestrians, bicyclists and automobile drivers who expect animals to move out of the way. You will quickly learn how to be a "seeing-eye" person for your companion. Numerous internet websites and books are available that contain helpful information in helping both you and your pet adapt vision loss.



Normal aspect of the retina in a dog : Visual eye - Nice retinal vessels - Normal reflectivity of the tapetum (green area)



Retina of a dog with SARDs: Aspect is completely normal at the beginning of the disease (tapetum is orange: normal variation)