

## **INTRODUCTION TO GOLDEN RETRIEVER PIGMENTARY UVEITIS**

Golden Retriever Pigmentary Uveitis is a disease seen almost exclusively in purebred Golden Retrievers. The cause of the disease is unknown, but generally develops when they are middle-aged. With this disease, there is inflammation in the eye, along with deposits of pigment in the iris and on the anterior lens capsule. This disease is most commonly seen in conjunction with uveal cysts, but these are not always present at the time of examination. Generally the most common symptoms of the disease are squinting, redness of the eyes, and cloudiness.

With this disease, there is significant intraocular inflammation present. The most common complications seen with this condition include secondary cataracts and glaucoma (elevation in intraocular pressure). This can occur despite therapy, but anti-inflammatory therapy is the best way to prevent these complications. Typical treatment involves topical (and sometimes oral) anti-inflammatories and steroids are the most common medications used. Because glaucoma can cause loss of vision, these patients do better when closely monitored for early signs of glaucoma. If there is an elevation in intraocular pressure, then anti-glaucoma medications may be instituted or surgery to control the intraocular pressure may be necessary.

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## **Pigmentary and Cystic Glaucoma in the Golden Retriever dog**

This is an ocular syndrome described in the Golden Retriever breed of dog. This condition is chronic, low grade and slowly progressive. Clinically it is manifested by minimal inflammation, with most notably pigment on the surface of the lens, as well as the iris and free floating within the anterior chamber. Pigmented cysts are a common finding as well as pigment within the drainage angle of the eye often resulting in cataract development (37% of dogs) and glaucoma (46% of dogs) (elevation in intraocular pressure). (1,2) Glaucoma developed in dogs in one study from 3 weeks to 3 years following initial diagnosis, with an average time to development of 9.4 +/- 2.2 months. (1)

Clinical evaluation of pigmentary and cystic glaucoma in the Golden Retriever indicated that the age range of onset was between 4.5 to 14.5 years of age; with a mean age range of 8.6 +/- 2.1 years. (2) The most common symptoms noted by clients include squinting, tearing, redness, bluing of the cornea and enlargement of the globe.

The exact cause is unknown; however Dr. Wendy Townsend, a veterinary ophthalmologist at Purdue University School of Veterinary Medicine, is working to find a genetic link to this condition in Golden Retrievers. Treatment at this time consists of topical and oral anti-inflammatory medications as well as anti-glaucoma therapy. Surgical ablation of the ciliary body (site of aqueous humor production) may help alleviate elevations in intraocular pressure. Eyes that are blind and/or are uncomfortable due to chronic glaucoma may undergo salvage procedures to restore comfort including surgical removal of the eye (enucleation) or removal of the intraocular contents with placement of a silicone ball (evisceration and prosthesis).

The overall prognosis for this ocular syndrome is guarded. Blindness typically results from glaucoma.

Clinical evaluation by a veterinary ophthalmologist is recommended on an annual or semi-annual basis and should begin at an early age.

1. Sapienza JS, Domenech FJ, Prades-Sapienza A. Golden Retriever Uveitis: 75 cases (1994-1999). *Veterinary Ophthalmology*. 2000, 3, 241-246
2. Esson D, Armour M, Mundy P, Schobert CS, Dubielzig RR. The histopathological and immunohistochemical characteristics of pigmentary and cystic glaucoma in the Golden Retriever. *Veterinary Ophthalmology*. 2009, 12, 6, 361-368

For more information: <http://grca.org/health/uveitis.html> and <http://grca.org/health/uveitis1.html>