



*The Golden Retriever Club
of America, Inc.*

Swallowing Problems in Golden Retrievers

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Every breeder should strive to produce Golden Retrievers that are outstanding breed representatives that excel in some Golden Retriever endeavor. However, this is not sufficient, and every breeder must also strive to produce healthy Golden Retrievers. In examining pedigrees and seeing bloodlines that persist after the owner is gone, in general, to have a significant impact on a breed, a dog or its descendants must be extraordinarily successful. It is the job of our breeders to assure that the dogs that are extraordinarily successful, but also pass on a legacy of good health to the next generation.

In breeding Golden Retrievers, our Code of Ethics clearly states that our Golden Retrievers should be examined for evidence of “The Big Four”: hip dysplasia, elbow dysplasia, hereditary eye disease, and hereditary heart disease. For these conditions, there are tests and specialists to help us detect Golden Retrievers with health disorders that might not be apparent to the owner or even on an ordinary physical exam by a veterinarian. However, there are an almost overwhelming number of additional conditions which can affect Golden Retrievers and inheritance is believed to play a role in these conditions as well. A few of these include bleeding disorders, cancer in young Goldens, epilepsy, kidney failure in young Goldens (renal dysplasia), ectopic ureters, vascular shunts, hypothyroidism, hypertrophic osteodystrophy, knee cap (patella) problems, osteochondrodysplasia, hypoadrenocorticism (Addison’s disease), X-linked muscular dystrophy, congenital diaphragmatic hernias, cryptorchidism, overshot bites, undershot bites, skin conditions, food allergies, swallowing disorders, and temperament problems. Our Code of Ethics states that Golden Retrievers used for breeding should be in good health, which should prevent, or at least raise questions about, the breeding of Golden Retrievers with many of these conditions. However, breeders and owners of Golden do need to be aware that these conditions exist, so that they can limit the use of mildly affected dogs, close relatives of affected dogs, or repeated producers of these conditions, in pedigrees. With the large number of potential problems in our breed, breeders are encouraged to discuss these problems during the planning of a breeding. In this article, we will try to provide information on one of these conditions, swallowing problems in Golden Retrievers. This is part of a series of articles on genetic diseases of Golden Retrievers which began with the publication of the article, HIPS, ELBOWS. EYES AND HEARTS: UPDATE ON THE BIG FOUR (Hubbs, 2004).

SWALLOWING PROBLEMS IN GOLDEN RETRIEVERS

Swallowing problems (dysphagia) occur in Golden Retrievers (Boria ET AL., 2003; Davidson ET AL., 2004). Other breeds of dogs also have swallowing problems. In some cases it appears

that inheritance plays a role. For example, in the Bouvier des Flandres, a specific form of muscular dystrophy appears to cause the problem (Peeters ET AL., 1991; Peeters ME and Ubbink GJ, 1994). In the miniature schnauzer, a swallowing condition is inherited but appears to be complex with some, but fewer, affected offspring from outcross breedings (Cox et al., 1980).

Golden Retrievers are more likely to develop an enlarged or dilated esophagus (megaesophagus) than are most dogs (Gaynor ET AL., 1997; Boria ET AL., 2003). In addition, the GRCA Health & Genetics Committee has received numerous inquiries from owners of Golden Retrievers with swallowing problems that do not involve megaesophagus. Recently, researchers at the University of California, Davis described a condition in Golden Retrievers where megaesophagus is not present but there is difficulty swallowing (Davidson ET AL., 2004). In this condition, as the dog eats and forms a bolus of food in the back of the throat, there is a delay opening the esophagus (the tube to the stomach). In the most severe form, the sphincter to the esophagus may not open at all (Davidson ET AL., 2004). Thus, it appears that there is a swallowing condition in Golden Retrievers which usually does not cause megaesophagus, and may cause significant disease even without megaesophagus.

The term for this recently described swallowing disorder of Golden Retrievers is cricopharyngeal dysfunction (Davidson ET AL., 2004). In the study at Davis, 21 Golden Retrievers with cricopharyngeal dysfunction and 96 Golden Retrievers without cricopharyngeal dysfunction were studied using a radiographic technique known as video fluoroscopy. The abnormality was located in the upper esophageal sphincter and there was a lot of variation in the affected dogs. In some affected Golden Retrievers, the sphincter did not open. In some affected Golden Retrievers, contractions continued after swallowing. In some affected Golden Retrievers, the sphincter opened later than in normal Golden Retrievers. These abnormalities were diagnosed in some Golden Retrievers without clinical signs of swallowing problems. Specifically, 13 of the 21 documented affected Golden Retrievers did not have clinical signs of disease. Documented **UN**affected Golden Retrievers could produce documented **AFFECTED** Golden Retrievers. However, excluding the breeding of all Golden Retrievers with clinical swallowing problems or with video fluoroscopy detected swallowing abnormalities, eliminated cricopharyngeal dysfunction from the breeding colony at Guide Dogs for the Blind Inc. The condition is considered inherited in Golden Retrievers (Davidson ET AL., 2004). An additional study on the swallowing problem of Golden Retrievers in being administered by The Canine Health Foundation and is funded by the Golden Retriever Foundation (Casal and Henthorne, online abstract).

Thus, current studies indicate that there is an inherited swallowing disorder that should be considered in breeding Golden Retrievers. This condition is usually distinct from megaesophagus, so a normal barium x-ray of the esophagus does not exclude this diagnosis. In the one detailed study published at this time, video fluoroscopy appears useful in detecting some dogs that appear to be clinically normal but actually have abnormal swallowing. Video fluoroscopy is expensive, can involve significant radiation exposures for the humans conducting the studies, tends to be available only in specialized veterinary settings and may not be appropriate for routine screening of all breeding Golden Retrievers. The swallowing condition is currently called cricopharyngeal dysfunction because abnormalities appear to involve the upper esophageal sphincter. Golden Retriever owners and breeders should know that this has been

defined as an inherited condition in our breed (Davidson et al., 2004). Specialized testing at referral centers shows some promise in identifying the affected dogs.

Swallowing Problems in Golden Retrievers: Questions and Answers

The Canine Health Foundation is supporting a study entitled “Cricopharyngeal Dysphagia in the Golden Retriever”. The investigators on this grant are Margret Casal, DVM, PhD and Paula Henthorn, PhD; University of Pennsylvania. The GRCA Health and Genetics Committee asked Dr. Casal a couple of questions about the swallowing problem of Golden Retrievers and she kindly provided answers for the membership.

Question from the GRCA H&G: We sincerely thank you for all of your work on the swallowing disorder of Golden Retrievers. We believe that your work will help to improve the health of our breed. In the recently published study on the swallowing disorder of Golden Retrievers, Golden Retrievers with normal swallowing could produce affected offspring. Yet, when all of the affected dogs at Guide Dogs for the Blind were removed from the breeding population, this swallowing condition disappeared. In making informed breeding decisions for their dogs, what advice would you give to Golden Retriever breeders?

Answer from Dr. Casal: My recommendations include not breeding affected dogs and not breeding the parents of affected dogs. That's spoken as a true geneticist trying to eliminate the disease from the breed. However, you will always come across a dog that has all the best qualities that you are looking for but he/she just happens to be a producer of affecteds, making him/her a carrier. Or this top quality dog is a littermate to an affected dog, which could potentially make him a carrier or a normal dog, but you will never know without a DNA test. Now, you would like to keep the good qualities but not pass on the disease. I would do a risk analysis: you already know the risk is fairly high for the top dog to pass on the disease. When you go pick a mate for this dog, it will have to be one that has no history of having affecteds in its background. Then one must keep in mind that the offspring might be carriers as well. So, when these get bred later, another risk analysis will have to be done. There are computer programs available for the risk analysis.

Question from the H&G: This condition has just been described and not all veterinarians will be familiar with the swallowing disorder of Golden Retrievers. If a Golden Retriever owner believes that their Golden Retriever may have this condition, how should they approach the diagnosis and treatment of this condition in their dog?

Answer from Dr. Casal: If a Golden Retriever owner suspects that his/her dog has this swallowing disorder, then the owner may need to educate the vet :-). I would suggest taking the information from the Health Foundation's web site and showing it to the vet. Sometimes, you'll need a little diplomacy "I think my dog has a swallowing disorder. This has been recently described in this breed and my dog is related to some of the other affected dogs." This way the vet won't feel like a fool for not knowing and even if your dog is not related to other affected dogs, you have given the vet a legitimate reason to look. It also very important that video fluoroscopy is performed to accurately document and evaluate the swallowing process. As to the

treatment: there have been many suggestions: feeding in an upright position and finding out if your dog does better with liquid diet or solid food. This appears to be quite variable from dog to dog. What I have found to be not such a good idea is surgery to correct those with the most severe swallowing disorders (cricopharyngeal dysphagia). Thus, treatment is really just management and finding out what works best for your dog.

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