



# Hyperuricosuria (HUU) in Weimaraners

This is a true story.

A new Weimaraner puppy owner noticed that her 8 week old puppy urinated excessively. Housebreaking was very difficult as the puppy squatted constantly. When blood appeared in the urine, the owner took the puppy to her vet. The vet prescribed a trial course of antibiotics, thinking the problem was a urinary tract or bladder infection. When the pup did not respond to antibiotic therapy, the vet performed a bile acid assay, to rule out the possibility of a liver shunt, which proved negative. The puppy soon passed a large stone in her urine, which the owner took to the vet to have analyzed. The stone was found to be 100% uric acid.

This pup and others like her suffer from an inherited disorder; Canine Hyperuricosuria.

Hyperuricosuria means elevated levels of uric acid in the urine. This trait predisposes dogs to form stones in their bladders or kidneys. Hyperuricosuria (huu) is inherited as a simple autosomal recessive trait. The trait can occur in any breed but is most commonly found in the Dalmatian, Bulldog and Black Russian Terrier. Dalmatians are considered to be homozygous for hyperuricosuria; this means that ALL Dalmatians carry this trait. Additional breeds that were found to have a high frequency of the trait are: Weimaraners, German Shepherd Dogs, Giant Schnauzers, American Staffordshire Terriers, Australian Shepherds, Large Munsterlanders and South African Boerboels. A DNA test for this specific mutation can determine if dogs are normal or if they carry one or two copies of the mutation. Dogs that carry two copies of the mutation will be susceptible to develop bladder/kidney stones.

### Hyperuricosuria Testing Information

The Veterinary Genetics Laboratory (<http://www.vgl.ucdavis.edu/services/Hyperuricosuria.php>) offers a DNA test for hyperuricosuria to assist owners and breeders in identifying affected and carrier dogs. Breeders can use results from the test as a tool for selection of mating pairs to avoid producing affected dogs.

Research of Hyperuricosuria is ongoing to determine other breeds with this problem. It is recommended to test any dog that has formed kidney or bladder stones composed of urate or uric acid. If the dog has the mutation, then treatment modalities for Dalmatians (e.g. low purine diet, keeping the dog well hydrated by adding water to the kibble and monitoring for signs of urinary obstruction) can be used to treat the affected dog.

In Weimaraners, reports from treating veterinarians suggest that there is a clinical presentation of recurrent urinary tract infections in very young pups.

It is recommended to send for analysis any urinary stones (voided or surgically removed) to rule out urate or uric acid stone production.

The Bannasch Laboratory at U.C. Davis offers low cost HUU DNA testing (using a cheek swab) for any dog, and free HUU tests any 6-9 month old Weimaraners participating in the HOD study as normal controls. The HUU test is now an “optional” test in the CHIC Weimaraner profile. <http://www.caninehealthinfo.org/brdreqs.html?breed=WE>

In closing, when testing your breeding animals please do not be alarmed if your dog turns out to have carrier (N/HUU) or even an affected (HUU/HUU) status. This need not be the end of this Weimaraner’s breeding career. Careful selection of a mate that is HUU clear (N/N) will result in puppies who are at most merely “carriers” and not affected by HUU. This is one area where responsible, knowledgeable breeders can easily eliminate an uncommon, but troubling condition from our gene pool without losing any bloodlines .

For more information about Hyperuricosuria in Weimaraners or about the HOD study please contact

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## LIFETIME ACHIEVEMENT AWARD NOMINATIONS – 2011

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As you may know, this is the third year for the WCA Lifetime Achievement Awards. The WCA Lifetime Achievement Award has been created to honor those persons who have made outstanding contributions to the welfare and advancement of the Weimaraner above the ordinary and beyond personal benefit. Their contributions must be of the magnitude that they would be recognized as the architects of the foundation on which the Weimaraner of today and tomorrow stands.

We are looking for nominations for individuals to be inducted at the WCA 2012 National Specialty in Belton, TX. A nominee does not have to be deceased. Please see the WCA Handbook on the WCA website ([www.weimclubamerica.org](http://www.weimclubamerica.org)) for the full set of rules and the nomination form; nominations are due by June 1, 2012. Nominations received after this date will be considered for 2012. Nominations may be made by any member in good standing with the WCA.