



Q: What does a HUU affected dog look like?

A: Not always what you think...

By Debra Konkol

Hyperuricosuria (HUU) is the inability to process purines from the diet. This can result in the formation of stones. First, let's address the issue that is foremost in the minds of breeders - Can or should a dog carrying a double allele (HU/HU) be used for breeding? According to experts in the field, yes they can, but with caution. An affected sire/dam **MUST** be bred to a CLEAR sire/dam. A carrier sire/dam must also be bred to a clear sire/dam. The goal is to produce only clear or, at worst, carrier progeny so that when carriers are bred to clear mates, we can eventually eradicate the disease from our breed altogether.

Many people say that HUU doesn't exist in Weimaraners, or that the number of Weimaraners affected is so small it isn't a problem in our breed, but how do they know? If we don't test, how do we know that our dogs aren't carriers? How do we know that our dogs aren't affected? Personally, I know of seven dogs and bitches that are HUU/HUU affected and one of them is mine. I've been a Certified Veterinary Technician for over 20 years and I didn't know. I missed it! And why? Because, he didn't present with "classic" symptoms. I couldn't make him "fit in the box." That is why, with the blessing and encouragement of his breeder, I'm sharing his story.

From eight weeks old, I affectionately called him my "slophund," my

messy boy, my little piggy, etc. His symptoms were only that he took a bit longer to house train, he drank a bit more water than the average puppy and he had more urgency when asking to be let out. He also had great difficulty crate training, even in the absence of fluid intake, but that's it. Just a messy puppy, right ?? It wasn't until he got a bit older and was still not fully crate trained, that I started to question whether a medical issue could be present. For the next year, I performed countless urinalysis, blood work panels, ultrasounds, etc. None revealed any remarkable findings. For the next year, I would cringe as I walked through the door after work. Sometimes it was to a dry crate ("Thank GOD! You're finally growing up!") but often to a crate flooded with urine ("Dog, I love you, but you're KILLING me! Why are you such a PIG?!"). I was exhausted both physically and mentally. I finally surrendered myself to the fact that it was a behavioral issue. What else could it be, right ? He wasn't sick, all diagnostic tests were normal, he's active and healthy, good appetite, nice coat, great muscle tone, blah blah blah. He's just my little slophund.

I had been waiting to DNA test my dogs until both the HUU and HYM test were available because, after all, there was really no urgency to do so. I didn't have a HUU dog, it's not in his line so it wasn't even a thought.

Wasn't I surprised when I read the email that told me he was AFFECTED. I was numb and I was crushed. How could I have missed it?! How could my vet have missed it?! He couldn't be HU/HU, he isn't "classic." In a weak moment I thought, "Maybe the samples were mislabeled or maybe there was a data shift in the spreadsheet." However, being a research scientist myself, I know that DNA doesn't lie. This is why his breeder and I feel it is so important to tell his story. As you can imagine, the next 24 hours were even more emotionally draining. What does this mean for him? How do I manage him? How does life change for him, for me and for the other dogs in the house? How do I tell his breeder? Over the next few days, all of these questions were answered.

Once I changed to a low purine diet, his symptoms, even as mild as they were, lessened significantly. He now had normal fluid intake as compared to other dogs in the home and he IMMEDIATELY stopped urinating in his crate. His urgency to urinate still remains today, but to a lesser degree. However, I wonder how much of this is a learned behavior, as opposed to a physiologic one? I truly believe that the number of both carrier and affected dogs in the current population is drastically underestimated. As more dogs are tested, I feel the numbers will rise significantly.

Of those seven HUU affected dogs that I am aware of, they are not all related, and to my knowledge, none of them had HOD. They include one male with mild clinical symptoms managed by diet alone, at this point; two males with severe clinical symptoms and stone production, not able to be managed by diet

alone; four females with no clinical symptoms managed by diet alone, at this point. Symptoms can range from very mild to very severe. Even as mild as the symptoms were in my male, I would not wish this on any dog, any breeder or any puppy buyer.

My breeder and I hope by sharing this story, it encourages those who have not yet tested your dogs to do so. Of all the health testing we do as breeders, the genetic testing for HUU/HYM is by far the least invasive procedure and is also one of the least expensive. Each test is \$50.00 per dog, both test run together at the same time is \$80.00 per dog. This is easily done through UC Davis (<https://www.vgl.ucdavis.edu/services/dog.php>). Eighty dollars, as compared to the several hundred that we most willingly will pay for hips and elbows, thyroid, CERF, cardiac etc ??

For me and for my dog, this was the most important eighty dollars I have ever spent.

We have the ability to either perpetuate or eradicate this disorder in our breed. I hope we can all work together to preserve our cherished breed for future generations.