
Fanconi's Syndrome... A Problem in Westies?

By Dr. Steve Gonto

Dear Westie Owners,

I was asked by your breeds' Health Chairperson, Dr. Kay McGuire, DVM, to write a brief description of what **FANCONI SYNDROME** is, and why it is of concern to West Highland White owners, as it is a concern to owners of ANY breed of dog. I am the developer of a Fanconi Treatment Protocol, which has been in use, and improved on, for over 21 years. This Protocol, as well as my personal assistance, has been shared with the veterinary community freely for this entire time, and I stand ready to help any vet or owner who runs across this previously fatal, but now often completely controllable (if caught and treated in time) illness. To date I have helped over 2500 dogs, dozens of cats, a racehorse, a zoo hippo and dozens of human children with this affliction.



There are multiple websites (Google "Canine Fanconi Treatment", or "Fanconi Treatment Protocol") which can do far more justice to learning "in depth" about this disorder than this brief letter, but I will try to outline a simple description so if any of you ever encounter it, you will have some idea of what it is, and where to go. Above all, you will be armed and equipped to not accept a vet, out of sheer lack of current knowledge, telling you your dog has a fatal illness and there is "nothing you can do".

First off, Fanconi is a disease or disorder of the kidneys, where mammals, be they dogs, cats, horses or people, fail to reabsorb multiple substances that are needed for their bodies to function and they end up becoming deficient in these critical materials and, if these deficiencies are not addressed, can end up dying in a year or less, from onset of symptoms. Most critically, they lose bicarbonate, which is the body's natural buffer. Without bicarbonate they become ACIDOTIC and in a vicious cycle, cause more kidney damage and become worse and worse.

In some breeds, such as Basenjis, Fanconi is often a genetic issue. However, in other breeds it is genetically rare (all breeds have their own genetic issues), and if a Westie comes to my attention with Fanconi, it would likely be a case of INDUCED, rather than GENETIC, Fanconi. Induced

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Fanconi can be caused by many different "toxin" exposures, including an overdose of ZINC (such as from licking chicken wire or zinc coated cyclone fence material), ingesting certain high dose organophosphate lawn insecticides (mostly types used on golf courses), and even ingesting outdated Tetracycline antibiotic.

In the past two years there have been many hundreds of cases of Fanconi in assorted small breed dogs, including multiple Westies. The AVMA and other veterinary groups associated these outbreaks with ingestion of some Chicken Breast Treats which were imported to the USA, CANADA, AUSTRALIA and NEW ZEALAND from China. In all fairness, the FDA has tested multiple samples of these "treats" and found "no identifiable contaminants", so I am in no position to accuse

anyone or any product of being the cause of this sudden outbreak (which appears to be subsiding as very few new cases have appeared in the last few

months), but I will let you draw your own conclusions by directing you to several online sites.

<http://www.laciessite.org/>

<http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm048178.htm>

<http://www.avma.org/onlnews/javma/oct07/x070917a.asp>

http://www.avma.org/press/releases/081222_chicken_jerky_products.asp

In any case, if your dog should begin to show signs of INCREASED THIRST, and INCREASED URINATION, DECREASED ENERGY, LACK OF APPETITE, WEIGHT LOSS, or LETHARGY, then a URINE GLUCOSE should be conducted by your vet. This disorder often mimics the symptoms we would expect from DIABETES.

If the dog shows GLUCOSE in the urine, then please know, it SHOULD NOT BE THERE, regardless of what condition is at play. The next step is to obtain a BLOOD GLUCOSE (this would be done on the SAME VISIT). This is where many vets get confused, however. If the blood glucose is ELEVATED, then it is likely DIABETES and should be treated as such.

If, however, the BLOOD GLUCOSE is NORMAL or even LOW, many vets are unsure what to do, and often ask owners to "come back for a twelve hour fasting blood sugar". This is INCORRECT advices as no diabetes condition would cause a LOW or NORMAL blood sugar to be seen while it is still being lost in the urine. This finding is LIKELY Fanconi, unless proven otherwise. This is where YOU can help educate your vet by pointing them to the relevant information.

If the dog has increased thirst and urination, positive urine glucose in the presence of normal or low blood glucose, then the next tests that MUST be done are # 1. A **General Blood Chemistry Panel**, including CALCIUM, POTASSIUM, PHOSPHORUS, BUN and CREATININE. This will tell us a good deal about the level of losses to that point

and if the dog is already in renal insufficiency or renal failure. Critical information to have.

The other test that **MUST BE DONE** (and this may involve taking the dog to a specialty hospital, human hospital working with your vet, or veterinary emergency clinic) is **#2. a VENOUS BLOOD GAS**. No other test will substitute for the **VITAL and CRITICAL** life saving information this test will provide. Do **NOT** accept a response such as "I don't have that machine, and I am sure we can treat this dog without those values". **YOU CANNOT**. The results of the **VENOUS BLOOD GAS** not only give us a firm and absolute diagnosis, by telling us if your dog is losing bicarbonate, but also tells us everything we need to know about the level of your dog's losses and **HOW TO TREAT IT!** Also, please do not waste blood, or money shipping blood off to other labs for "Fanconi testing". It is a waste of time as well, since that Venous Blood Gas gives us **ALL** the information, along with the general chemistry panel, to being immediate treatment, and time lost is kidney function lost. The earlier you treat the better the outcome, long term, and the easier to manage this disorder will be.

The numbers we need from the **VENOUS BLOOD GAS** will be **PVO₂, PCO₂, pH, HCO₃ and Base Excess (or B.E.)**.

At this point you can do several things. First, have your vet contact **ME** for a letter of introduction and additional needed information. I am at **Outdoc@aol.com**

You can also access the needed basic information at multiple sites online, but two of the best would be [http:// basenjicompanions.org/](http://basenjicompanions.org/), and [http:// www.basenji.org/](http://www.basenji.org/)

Although these are **BASENJI** sites, the information needed to treat an afflicted Westie would be the **SAME**. There is even a potential advantage in treating

a Westie who would likely be suffering from an **INDUCED** (exposure caused) case. If you remove the source of toxicity and cause no further exposure, and treat appropriately to stabilize the dogs condition (acidosis, from lack of the bodies buffer, bicarbonate), then many of the induced condition dogs actually "recover" and can be weaned off treatment over several months to a year. Not all dogs, however, are this lucky and some may require treatment for life.

What does "treatment involve"? Well, thankfully, not much. We give tablets (needed vitamins and minerals), plus over the counter Sodium Bicarbonate tablets, in an amount dictated by the Venous Blood Gas, to



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normalize the dogs blood chemistry. We feed a diet appropriate to maintain protein and electrolyte levels, as indicated by the blood work and renal function values in the blood chemistry panel, and that is it. We recheck blood every few months in serious cases and as far apart as annually in chronic and well controlled cases.

Therefore, treatment really involves "treat time" (hidden pills) given twice a day, and a bit more medical attention to the dogs overall condition. However, while Fanconi was once an absolute death sentence, we now know that with appropriate treatment, dogs can live a full and normal...actually very healthy, and full life span with this disorder.

That is the reason I am always willing and happy to help any vet and owner to treat Fanconi. So no dog ever need die needlessly of this ever again.

Please feel free to contact me if I may ever be of assistance or if you need additional information on this subject.

Steve Gonto, MMSc, PhD

Author, Fanconi Treatment Protocol for Veterinarians

<http://www.google.com/search?hl=en&source=hp&ie=ISO-8859-1&q=Fanconi+treatment+Protocol+for+Veterinarians>

Dr. Steve Gonto currently serves as a Senior Resource Coordinator for Anesthesiology at a Level 1 Regional Trauma Center and Teaching Referral Hospital in Savannah, Georgia. He earned a Master of Medical Science Critical Care Medicine and a Masters in Medicine in Anesthesiology and Advanced

Life Support Systems from Emory University School of Medicine as well as a Doctorate degree in Clinical Pulmonary Physiology. Dr. Gonto became involved with Fanconi 24 years ago, when his own Basenji developed the disease and was told that the disease was fatal. After much research and input from the finest veterinary and human medical experts in the USA and overseas, he developed the Fanconi Protocol for treatment. This Protocol has helped save over 2500 dogs, dozens of cats, a racehorse and a zoo hippo, not to mention dozens of human children as well. Dr. Gonto has given freely of his time and knowledge to all who inquire. His Protocol is now taught at multiple veterinary schools and he has spoken at many veterinary conferences and specialty meetings. The Westie Foundation thanks Dr. Gonto for the informative article he has provided for us in hopes of making westie owners and veterinarians aware of the help that is available for this disease.

Westie News

Goes Electronic!

In an effort to be conscientious about the environment while also making the most use of our limited resources, the Westie Foundation plans to send the Fall and Spring issues of the newsletters electronically. The Summer and Winter issues will continue to be mailed. All quarterly issues will also be available and archived online at the Westie Foundation website (www.westiefoundation.org).

IMPORTANT NOTE: Send us your email address so you'll receive the electronic newsletter! Go to www.westiefoundation.org and click on the "Contact Us".

