

Ester-C: Miracle Cure for Hip Dysplasia???

*By Larry Mueller, Hunting Dogs Editor, Outdoor Life.
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An acquaintance of mine, B.J. Richardson, was calling from Texas, doubt and hope in his voice. "My English Pointer isn't a year old, and he's already lame in the rear end, especially the left hip," Richardson said. "The X-rays show hip dysplasia. The veterinarian says there are two choices: operate to alleviate the pain, or put the dog down. I can't afford one and won't do the other. Is it true that Vitamin C might help?"

I had to say that I'd never heard of Vitamin C curing canine hip dysplasia, but I was aware that veterinarian Wendell Belsfield of San Jose, CA, did prevent CHD -- or least its symptoms -- in eight litters of German shepherds, a breed that is prone to crippling abnormal development of a dog's hip joints. In those instances, all of the dogs' parents had CHD or had previously whelped pups that became dysplastic. Belsfield gave the bitches Vitamin C throughout pregnancy and lactation. The pups received Vitamin C from weaning until they were two years old. None of the pups developed CHD during that entire period.

Though Belsfield's work wasn't scientific in the strict sense, it certainly indicated that CHD could be prevented. Still I couldn't see how the joint could be remodeled once it had grown improperly, at least not without surgery. However, Vitamin C therapy seemed to be Richardson's only hope, so I told him what I knew.

Many readers had written and told me that their arthritic dogs normally were laid up after a few hours in the field, but when given Vitamin C, they could hunt several days in a row. None had said they did it with dogs that had CHD, but maybe....

I also recalled reading about the efforts of Dr. Bob Cathcart, a medical doctor in California who championed the use of Vitamin C in curing a wide variety of joint ailments and illnesses. Much of his work centered around using the vitamin in large quantities, increasing the doses until the body reaches "bowel tolerances." Though Cathcart's work was with human patients, many veterinarians adopted his method, saying that Vitamin C should be given in increasing doses until the dog's stools loosen, at which point the dose should be backed off a half a gram or a gram at a time until the stools became firm again. At that point, the dog's body receives the maximum Vitamin C that it can utilize.

I also understood that a superior form of the vitamin is Ester-C, which can be purchased in health food stores. The vitamin in Ester-C is molecularly locked to calcium, so it doesn't cause the acidity problems normally associated with ascorbic acid (the common form of Vitamin C), which can upset a dog's stomach. Ester-C also has natural C metabolites that get it into the cells faster and more effectively (common ascorbic acid is slower getting out of the blood serum, so it passes through the kidneys, where much of it is rapidly lost in the urine).

Pinto's Rebound

A month or two later, I heard that Pinto, Richardson's dog, had begun improving less than a week after receiving maximum doses of Ester-C. Pinto, the grandson of Miller's Chief -- an 11-time champion in horseback-style bird-dog trials -- was now running like the wind. I was as surprised as I was delighted.

Two years later, I was in Texas and dropped in to see Pinto. Richardson had kept him on a maintenance dose of Ester-C. The dog was moving with a fluid grace and power in the hips. Twice, for a step or two, I saw a bunny hop, suggesting that not everything was 100 percent correct. But both times, Pinto immediately shifted back to a normal gait.

I still couldn't understand how Ester-C could remodel a defective joint, but I was hopeful. Nobody I knew whose debilitated dog had improved clinically on Ester-C had ever taken X-rays of the joints, so I asked Richardson to have X-rays taken.

He did and mailed me the original X-ray taken two years before and a new one. I showed both to Dianna K. Stuckey, a board certified radiologist in St. Louis, who looked at the original and pointed out the hip dysplasia with the left hip most severe. The second? "Arthritis that customarily follows hip dysplasia," she said. I explained Pinto's quick and lasting response to Ester-C. "How could this dog go from lame to moving freely, and apparently without pain, in a few days -- and stay that way without something improving in the joints?"

"We occasionally see this," Stuckey said. "A dog is arthritic yet moves as if it feels no pain. We don't know why. Great 'heart' maybe, or high pain tolerance."

Mystery Unfolds

I'm sure that veterinarians do see this. But the answer to my question, Pinto's improvement was not because of great heart or high pain tolerance. He had been hurting and he had been limping badly. If his response to such pain improved in just a few days, something caused that change.

Dr. Chuck Noonam of Weston, CT also compared the X-rays. He noticed slight improvement in the severity of the dysplasia but said the hip joint had clearly succumbed to degenerate arthritis from the dysplastic hip joint banging around in and out of the socket.

"Eighty-three percent of dysplastic dogs either show an improvement in their hip dysplasia or they learn to deal with the problem as they grow older," Noonan said. "The second X-ray shows that the dysplasia is slightly less severe, but because of the arthritis, the joint is worse overall than in the earlier X-ray. It is possible that the Vitamin C was helping to sort of lubricate the joint so the dog felt less pain."

In my investigations, I had found that Pinto's results from Ester-C weren't unique. Soon after Richardson first called, I received a letter from Steve Dudley of Arizona. His young black Lab, who showed great promise at hunting Gambel's quail, went lame with CHD. Dudley's vet suggested that Dudley replace the hip -- or expect to put the dog down by age four. Dudley tried Ester-C instead and the dog promptly improved. Kept on Ester-C, the dog lived until age 13 without showing signs of soreness, lameness, or unwillingness to hunt, Dudley wrote.

Flood of Proof

My [investigation](#) also led to Charles Docktor, an Arizona veterinarian who was the first to test Ester-C for its effectiveness in healing joint problems. In 1983, he used Ester-C on a large number of arthritic dogs, finding that 75 percent improved in various [degrees](#) in a short period of time.

Independently, a continent away, Dr. Geir Erick Berge, a veterinarian in Oslo, Norway, performed a similar study, that was reported in the August-September 1990 issue of *The Norwegian Veterinary Journal*. Berge selected 100 dogs with a variety of joint ailments. His testing revealed that 75 percent of the dogs rapidly improved on Ester-C, some only slightly, some almost totally. Dr. Berge added that large amounts of Vitamin C metabolites, substances essential to a body's metabolic processes, are required in rebuilding diseased joint tissue.

Corroborating data were also reported by Dr. N. Lee Newman, who conducted 18 months of clinical tests using Ester-C to combat [degenerative joint disease](#) in performance horses. She reported a remarkable 90 percent success rate, ranging from good to excellent. Furthermore, 80 percent of the improved horses remained sound after Ester-C was discontinued. Newman credited supplemental Ester-C with maintaining the integrity of collagen and connective tissue and with mobilizing white cells in the immune system, while deactivating free radicals that [damage](#) cell membranes.

But other respected voices were making contradictory statements. The Cornell University College of Veterinary Medicine *Animal Health* newsletter in May 1995 denied that Vitamin C was of any value for either preventing or treating skeletal diseases in dogs. "There have been absolutely no confirmed reports that Vitamin C is helpful in any such instances," the newsletter stated. It went on to theorize that supplemental Vitamin C has no value because dogs produce adequate amounts of the vitamin in their livers.

But that reasoning is questionable. Vitamin C production varies from dog to dog, individual bodily needs vary, and circumstances -- health and environment -- vary enormously. "Adequate" in human medicine only means enough Vitamin C to prevent scurvy. What is adequate for a strict carnivore like a dog? And in any case, "adequate" should not be assumed to be a synonym for "optimum."

This is where a Vitamin C standoff occurs, and getting people to change their scientific opinion is like asking them to change their religion. In Cornell's favor, the evidence that has existed supporting the use of Vitamin C on dysplastic dogs is heavily anecdotal. Even the various veterinarians' research that has been cited was actually efficacy tests -- that is, all of the dogs tested were given similar doses of the vitamin and no controlled comparisons were made. Efficacy testing strongly suggests conclusive evidence, but it does not provide scientific proof.

The Acid Test

But in 1994, veterinarian L. Philips Brown presented the results of scientifically acceptable "double-blind crossover" study on the effects of Vitamin C to a national conference on holistic veterinary medicine. Brown, the owner of the largest veterinary hospital on Cape Code for 22 years, tested Vitamin C on 50 dogs with serious joint problems. The dogs were among a population of more than 500 canines at a large animal sanctuary in Utah. It should be noted here that representatives of Inter-Cal, makers of Ester-C, specifically asked Brown to study the vitamin because they felt it could have a major role in the treatment of joint abnormalities. Dave Stenmoe, one of the representatives of the manufacturer, says "We

told [Brown] not to take our word for anything." Just to keep an open mind and conduct a scientific comparison of Ester-C, ordinary Vitamin C, and a placebo. He finally agreed to do it.

Brown, along with the Utah sanctuary's resident veterinarian, hand-picked the dogs with the worst cases of joint disease and placed them in five groups.

After four weeks of testing, the supplements were withdrawn for three weeks. Then, each dog was crossed over to a different group and received another supplement for another four weeks. After yet another three-week layoff, 60 percent of the dogs were switched to a third supplement. The remaining 40 percent went back to whatever they were given during the first four weeks. At the end, mobility scores were calculated to determine the average for each of the five groups.

The results were impressively in favor of Ester-C therapy. Seventy-eight percent of the dogs on 2,000mg of Ester-C experienced improved mobility within four or five days. The average improvement score was 1.52. About 60 percent of the improved dogs relapsed when Ester-C was discontinued, but the group that returned to Ester-C in the third phase then regained mobility. Handlers reported no negative side effects.

On the low (850mg) dose of Ester-C, only 52 percent of the dogs improved, with an average score of 0.45. Obviously, size of dose was important. Of dogs receiving 2,000mg of Ester-C with extra minerals, 62 percent improved by an average score of 0.87. Why Ester-C without extra minerals had better results remains unknown.

Ordinary Vitamin C improved 44 percent of the dogs, with a score of 0.67. As expected, no noticeable change occurred among dogs on the placebo.

Not even the most dyed-in-the-wool skeptic can ignore the results of such a double-blind crossover study. But the success of Vitamin C in treating CHD can still be questioned, or even denied, because X-rays show that the joints remain loose or arthritis remains. Even Brown confirms that X-rays taken for his study reveal defective skeletal structures even after the Ester-C treatment.

Soft Tissue Factor

But those who see improvement with Ester-C are looking primarily at an animal's behavior - they see an improved ability to function. How can both proponents and skeptics consider themselves correct? Perhaps by each being half right.

A joint is not bone alone. Soft tissue -- cartilage and synovial membrane -- exist between bones to permit movement. If such tissue deteriorates, movement becomes more painful. Vitamin C is essential in the making and rebuilding of soft tissue because it promotes the growth of Collagen, a tough, stringy "mortar" that holds cells together. At the same time, the soft tissue also holds water, which maintains compression resistance to cushion the joint -- this is the "lubrication" described by Noonan in his assessment of Pinto's X-rays.

In healthy cartilage, normal cell loss is balanced by the rebuilding of cells. Under diseased or inflammatory conditions, cell loss is excessive. In the case of a dog's hip joint, this can mean that adequate cushioning no longer exists. The high demand for Vitamin C may begin

exceeding the amount made in the dog's liver, so deterioration continues. Or supplemented Vitamin C may turn the process around.

Field experience, although still anecdotal, suggests that dogs on Ester-C lead full lives without terrible pain and debilitation. Ester-C may prove to be a wondrous holistic cure, but OUTDOOR LIFE cautions that it's too early to state definitively that Vitamin C can cure or rectify canine hip dysplasia. Some doctors contend that the treatment is merely a Band-Aid on a far more serious problem.

We should add one point. Hip dysplasia is at least partially inheritable. And it is not a simple, single-gene defect. There is now concern that dysplastic dogs returned to mobility may also be returned to reproduction, which would further spread the malady. It is fair to say that there appears to be a great deal of hope for the benefits of Vitamin C, but before administering the vitamin to your dog, consult your veterinarian. And until more is known, don't breed that dog.