

CHAPTER 6

Keeping Your Great Dane Happy & Healthy

All breeds (as well as mongrels) can and do have indigenous health problems. Great Danes are no exception. Because many of these problems can be inherited, it's imperative that breeders screen their breeding stock prior to making breeding decisions. Many of the problems affecting the skeleton of Great Danes occur during the very fast growth stages of puppyhood. It's been shown by several scientific studies that these problems can be prevented or controlled by paying close attention to the food, and the body condition of the puppy as it grows. The type of exercise the puppy receives during this time is also very important.

Although I continually stress that Great Danes are not outside dogs, they *do* need exercise and plenty of it. It's 'enforced' exercise that is not a good idea, especially for a puppy. I'm very lucky to have a large property with about 1½ acres of lawn and forest for my Danes to romp and play. And believe me, they *use it!* Exercise is very necessary in building strong bones, muscles and ligaments. Allow your Dane, both puppy and adult, all the exercise he wants. He knows when it's time to stop.

The health of a Great Dane starts with the breeder. Hopefully you have purchased your puppy from a breeder that consistently health checks her breeding stock prior to breeding. This means a lot more than simply having the veterinarian issue a health certificate. I'm referring to checking both parents for hip dysplasia, normal thyroid function, normal cardiac function, absence of von Willibrands Disease, and normal eyes. Besides this the breeder should select for long life span within the pedigree. With this kind of background in the parents, the likelihood that the offspring will live long and healthy lives is greatly increased.

Health in Great Danes is also heavily influenced by how the puppy is raised. It's no secret that large and giant breeds who are kept fat and supplemented with calcium, phosphorous and vitamin D during the early fast growth stages are far more likely to have hip dysplasia, OCD and other growth related and inherited illnesses (see below). If your puppy is kept lean and given a high quality food during it's growing period you're doing the best you can to help him achieve good health. (More on this in Chapter 7).

HEALTH PROBLEMS THAT CAN AFFECT GREAT DANES

Gastric Torsion, Volvulus or Bloat

This disease is, in my opinion, the worst of all the terrible problems our breed can have. The reason is because one minute you have a normal, healthy happy dog and 20 minutes later it's dying. Aside from this is the helplessness you feel since the only real way to help is to get the dog to a vet ASAP!

The causes of bloat are still unknown. Purdue University conducted research into the cause of bloat as have other organizations. Purdue has recently released information concluding that up to 25% of all Great Danes will bloat, making them the breed most likely to succumb to this terrible disease. It has been suggested that feeding foods containing soy, allowing the dog to gulp it's food too fast, allowing the dog free access to water, allowing the dog to exercise 1 hour prior to, or following eating or feeding only 1 meal per day contributes to the onset of bloat. So far none of these theories have been proven. The latest findings are suggesting that dogs of nervous temperament or under stress are also more likely to have bloat.

My dogs have free access to water, exercise at will (although I will say they all tend to sleep after a meal), I did not soak their food prior to feeding (when I fed dry, which I rarely do anymore because I'm feeding raw) and they *all* eat fast! I don't feed food with soy in it and I do feed twice a day. The one sure (well, *almost* sure) way to prevent bloat is to have a preventative gastropexy performed on the dog. I do this with every bitch I spay. Knock on wood, I've not had a dog bloat in many years!

What happens when a dog bloats? First the stomach will begin to produce large amounts of gas and it begins to swell up. For some as yet unknown reason, the gas cannot be passed by the dog. (Some studies are implicating that the cause could be gastric immotility). As the stomach continues to enlarge, it begins to turn on its axis until it has made a complete, 180 degree turn. (Picture a towel with a melon wrapped in the center. Then flip the towel so it's twisted, end to end). This is termed volvulus or torsion. Once this has occurred, the blood vessels and nerves are occluded and the stomach tissue served by these blood vessels begins to die. This in turn produces toxins that are spread throughout the body and the dog begins to go into shock. Cardiac involvement is common.

Most dogs are well past puppyhood when they bloat, but it *can* happen as young as 4 months. This, however, is very rare. The symptoms will consist of the stomach (abdomen) appearing distended beyond normal. The dog will attempt to vomit but only bring up foam. The dog will be restless, will perhaps pace or even dig and be unable to find a comfortable position. The gums may appear pale. If you even *suspect* bloat, GET TO THE VET AS FAST AS POSSIBLE!!!

Treatment consists first of establishing if it really is bloat. Most vets will first attempt to pass a tube into the dogs stomach. If the tube cannot be passed, it's a good bet it's a torsion. But it's possible for the dog to be in torsion and the tube *will still* pass. An X-ray will confirm whether or not the dog is in gastric torsion. If the dog is in torsion, the vet will stabilize his vital signs prior to performing surgery. It's a common occurrence to perform a successful surgery and then the dog dies of cardiac involvement a few hours later.

The surgery is called a gastropexy. There are several methods of gastropexy. All have their pros and cons. See the following:

VARIOUS GASTROPEXY PROCEDURES

Type of Gastropexy	Pros	Cons
Belt Loop	Fast, simple, strong Decreased risk of stomach leakage Stomach fixed to Right abdominal wall	Requires more skill than incisional pexy
Circumcostal	Strong, decreased risk of stomach leakage Stomach fixed to Right abdominal wall	Risk of pneumothorax, risk of rib fracture. Requires more time to do, more difficult
Incisional	Fast, simple Stomach fixed to Right abdominal wall Decreased risk of stomach leakage	More variation in healing and resultant strength Relies on only a few sutures in place until adhesion forms
Ventral	Fast, Decreased risk of stomach leakage	Adhesions may impair future surgery if ever needed Difficult due to depth of the Great Dane abdomen
Tube gastrotomy	Strong adhesions Allows for release of built up gas/fluid post GDV	Stomach has to be opened to insert tube risk of leakage Special post-op management, not as strong as other techniques, premature failure of tube, peritonitis, possible persistent fistula

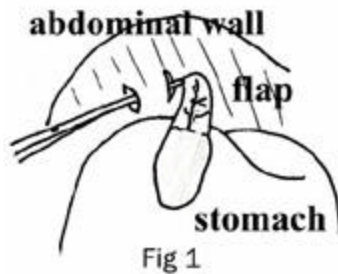
References: Ventral Gastropexy: JAVMA Nov 1993

(the following are all from Slatter, Textbook of Small Animal Surgery, Vol. 1 2nd Ed.)

Belt Loop Gastropexy p. 587-588, Circumcostal Gastropexy: p. 586-587

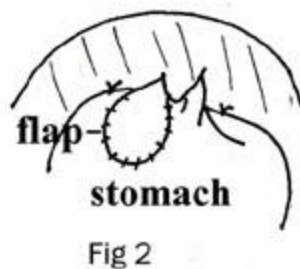
Incisional Gastropexy: p. 588-590, Tube Gastropexy: p. 586

Belt-Loop Gastropexy



This technique is simple, rapid, and safe, and is my personal favorite on large breed dogs such as the Great Dane. Belt loop gastropexy has a much lower recurrence rate of torsion than tube gastrotomy as well as a much stronger adhesion than either tube gastrotomy or incisional gastropexy. Since the stomach is not entered, there is not the risk of leakage of stomach contents or possible associated peritonitis. A 4 cm by 3 cm seromuscular flap is made in the pyloric antrum (stomach outlet), with a gastric vessel centered in the flap. Two small incisions, 3 cm apart, are made in the transverse muscle behind the last rib. The seromuscular flap of the stomach is passed through these incisions in the abdominal wall, and the flap is then re-sutured to the stomach (Fig 1 and 2). Stay sutures are also placed to hold the stomach to the abdominal wall. The flap incision in the stomach heals back to itself, and a strong adhesion forms between the stomach and the abdominal wall. The stay or tack sutures eventually break down, but the strength of the pexy is in the adhesions and the healed stomach flap. Anchoring the stomach to the right abdominal wall prevents the stomach from rotating on its axis.

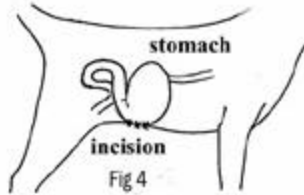
Circumcostal Gastropexy



Circumcostal gastropexy has comparable strength to the belt loop gastropexy, and similarly does not have the risk of stomach leakage, as does the tube gastrotomy. Circumcostal gastropexy is more difficult to perform and the surgical procedure has potential risks of rib fracture or pneumothorax. The technique of forming the seromuscular flap in the pyloric antrum is the same as the belt loop gastropexy. The flap is passed around a rib instead of through a muscle tunnel. A 5 cm incision is made over

the last rib through the peritoneum and transverse muscle layer. The flap is passed through this incision, around the rib, and then sutured back to the stomach.

Incisional Gastropexy

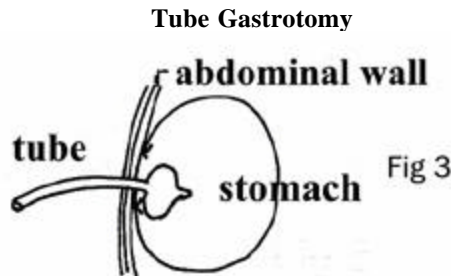


Incisional gastropexy is relatively simple and easy to perform. An incision is made into the seromuscular layer of the pyloric antrum, and a matching incision is made in the abdominal muscles. The edges of the gastric incision are sutured to the abdominal wall in a continuous pattern. As the incisions heal, adhesions form to hold the stomach to the abdominal wall

Ventral Incisional Gastropexy

This is a variation of the incisional gastropexy, except the stomach is incorporated in the mid abdominal incision as it is closed (Fig 4). This is a fast and simple procedure, but there are several possible complications. Due to the resultant position of the stomach and the adhesions, if a future abdominal surgery is necessary, the gastropexy will make it more difficult to enter the abdomen, and the pexy will have to be broken down. Also in a very deep-bodied breed, it is more difficult to correctly position the stomach

Tube Gastrotomy



Tube gastrotomy is relatively fast and easy to perform. It provides a means of

decompression of the stomach post-bloat, and forms adhesions that hold the stomach to the abdominal wall, thus preventing rotation. There are several potential complications from this type of procedure including: premature detachment of the tube, generalized peritonitis or cellulitis associated with leakage of gastric contents, persistent stoma or fistula . Post operative care is greater for this technique. Tube gastrotomy involves placement of a Foley catheter through an incision in the abdominal wall and then through an incision into the stomach lumen. Stay sutures are placed to hold the stomach to the abdominal wall (Fig 3). The tube is left in place for 7-10 days allowing adhesions to form between the stomach and abdominal wall. The tube is then pulled, and the stoma (or hole) gradually contracts and closes.

Although it is possible for the dog to bloat again, it cannot torsion. It is the torsion that is most life threatening. However it is a rare occurrence.

Is the tendency to bloat inherited? Probably. It would certainly seem so when a breed has a 25% chance of having it. Until more is known of this disease, we can only listen to the experts and do all we can to prevent it. And if the dog *does* bloat, speed in obtaining help for him will greatly affect his chances for survival.

As mentioned, I do a preventative gastropexy on my bitches when I spay them. They are usually around 4 or 5 years old at this time as they will have had 1 or 2 litters. I also gastropexy my males at around 2 years of age. It's a lot easier on the dog to have this surgery performed while it's in good health than to have to do it under emergency circumstances.

CANCER

Cancer is one of the major causes of death in all dogs. Unfortunately this also applies to Great Danes with osteosarcoma (bone cancer) being the most common. Besides osteosarcoma Danes can also have lymphosarcoma (cancer of the lymphatic system), fibrosarcoma (cancer of the connective tissues and a very slow growing cancer which does not metastasize) and various other cancers. If caught soon enough, chemotherapy and/or radiation can often extend time and quality of life a year or more, especially in the case of lymphosarcoma. Amputation of an affected limb can also be an option, but I, personally wouldn't do it unless the dog was sound enough to maintain itself on 3 legs. I have friends who have amputated limbs on younger dogs and the dogs did great. Each case is individual and must be evaluated separately.

Cancer treatment can be very expensive and perhaps not worth the money if it doesn't have a lot to offer the dog in the way of an extended, good quality life. I had always thought that I would not spend the money on this. Both of my parents died of cancer. My father opted for chemotherapy. Luckily he did not react as badly as some people do, but he still had side effects. Because of these side effects, I just didn't consider chemo or

radiation as being an option for my dogs. Then my 6 year old Poppy was diagnosed with lymphosarcoma. I was devastated! After talking to my vet and some friends who had Danes who went through chemotherapy, I decided to go this route with Poppy. After all, isn't this why God invented credit cards?

Poppy had an extra 15 months of life thanks to the chemo treatments. She had only 2 incidences where she vomited and didn't feel well. She began acting like a puppy again. Playing with her toys, knocking her daughter Skylark to the ground and standing on her and talking and 'wooing' her way through life! Lymphosarcoma responds beautifully to chemo in most cases.

Prior to Poppy's diagnosis, Jonquilla was diagnosed with fibrosarcoma, at the age of 8 years, in her left forefoot and pastern. Two years post diagnosis, except for a slight limp and a clubfoot caused by the cancer, she did great with no treatment. The only option given for her was amputation. She was beginning to show rear end weakness and I decided not to amputate. I'm glad I didn't. Eventually she was put down at the age of 11 due to hemangiosarcoma. (Oh I HATE cancer!)

I've had 2 other bitches who had osteosarcoma. Amber was diagnosed at the age of 10 and lived about 6 months. She was euthanized because I refuse to allow these wonderful girls to suffer needlessly.

My other was Pepita at the age of 11 years. Her cancer was in a foreleg. One of the side effects of osteosarcoma is that it greatly weakens the bone. Because of this, the dog may get up one day and the bone could spontaneously break. The last thing I wanted was to have something like this happen to my darling Peeps. But she was basically feeling so good and only limping slightly that I couldn't bring myself to euthanize her at that time. So my vet gave me a very strong injectable pain medication that I could give in such an event. It would have kept her comfortable until she could be euthanized. She was put down about 4 months after diagnosis.

CANINE HIP DYSPLASIA (CHD)

Hip dysplasia is an inherited laxity in the hip joint. This laxity keeps the joint from fitting correctly which, in turn, can cause painful arthritic changes in the hip. There are various degrees of HD, from mild, which will probably not cause much, if any pain to the dog, to such extreme malformation that the hip joint must be replaced or the dog should be euthanized. Although it isn't impossible to have a dog develop hip dysplasia even though there are several generations of normal hips behind it, it is far less likely.

Be aware that you *CANNOT* tell if a dog has HD simply by observing his movement. Sadly, there are still a lot of very well known breeders who do not X-ray hips. Their excuse? "Oh, we don't X-ray because we don't *have* hip dysplasia". That's just bull feathers! If a breeder won't certify the health of their breeding stocks hips, pass 'em by!

HYPERTROPHIC OSTEODYSTROPHY (HOD)

Most often affecting male puppies between 4 to 8 months of age, this disease causes acute and painful inflammation in the joints of the legs, usually the forelegs. The puppy will be lethargic and may run a fever up to 103° or higher. The degree of pain can be from mild with a reluctance to eat, to extreme with the puppy refusing to stand and screaming. The joints are usually painful to touch.

Unfortunately many veterinarians are not familiar with HOD and often misdiagnose it. This is one reason it's a good idea to discuss some of these breed specific problems with your vet before they occur. Diagnosis is by X-ray, symptomatic history and observation. Although I, personally haven't experienced this one (please God that I *never will!*), from all I've heard from others I can almost diagnose it over the phone or via email. (As a matter of fact this has occurred, but that's another book).

Treatment consists of medication to reduce pain, fever and inflammation. Most cases will resolve themselves quickly. It has often been thought that HOD is caused by lack of vitamin C even though it's known that dogs make their own. Treatment used to include IV cortisone and vitamin C, and perhaps may still with some vets.

I had a friend who's bitch had the lie-there-and-scream kind, and since there was little to lose, they used an injectable form of an analgesic called Banamine (a horse medication) which gave her immediate relief.

One thing many breeders say to do is immediately reduce the protein content of the food to 17-18%. In mild cases this is often enough to take care of it. This is almost exclusively a problem that affects puppies between the ages of 4-7 months of age.

If you even SUSPECT HOD do the following: (1) Immediately give 2000 mg of vitamin C orally. (2) Go to the vet and insist that x-rays be taken of the legs. This is the only way to diagnose HOD. (3) Give IV Banamine. (Deduce dosage by the dosage given for horses, usually by 1000 lbs.) If Banamine is not available, give Rimady orally. Give IV vitamin C if possible. Give IV cortisone. (4) The dog should be put on a wide spectrum antibiotic to prevent secondary infection. It is these infections that cause death in HOD. Pneumonia is the most common cause of death because the dog just lies around. If your puppy DOES just lie around, make sure he is moved from side to side periodically during the day if he's not doing this himself. (5) Reduce protein in diet to 21% or lower. (6) Continue vitamin C orally at the rate of 2000 mg AM and PM.

If caught early (first sign of lethargy and fever) and treated as above, recovery time should only be 2-3 days. However this does not mean your puppy is out of the woods. Relapse, up to 21 days post HOD, is still possible. Keep the puppy quiet (indoor play only) and don't stress him in any way. This means no shows, no car rides (except to vet), no nothing until the 21 day period is over. After that, all being well, he may resume life as normal.

Since HOD only seems to occur during the fastest growth phase, it seems reasonable to assume that it is somehow linked to fast growth. Another reason *to KEEP BODY CONDITION LEAN!!!!* The best cure is prevention:

(1) Give oral vitamin C daily, 500-1000 mg am & pm. (2) DO NOT add calcium, vitamin D, or phosphorous. This means no added yogurt, eggs, cottage cheese or dairy products more than 15% of the kibble fed. No Calcium/D/phosphorous supplement tablets.

Here's another view of HOD which has helped many people help their puppies through what the author calls 'Pseudo HOD'. This article first appeared

**Hypertrophic Osteodystrophy (HOD),
or a Blood Infection (Septicemia)
by
Hazel Gregory (Von Riesenhof)**

My first experience with HOD, hypertrophic osteodystrophy was back in 1962 with a Great Dane litter. The best thing I can say about that long, sad and frustrating ordeal is that the learning experience for myself, as well as for my veterinarian has been undeniably valuable down through the years. The hopelessness of that situation led me to believe that as a serious dog breeder the need for a better understanding of the nutritional needs, and the chemistry of a dog's make-up as well as genetics, was of utmost importance. Thus a long and diligent study of animal and human nutritional needs is, to this day, a constant quest; a study of both medical and Mother Nature's facts and theories. I do believe it was this serious study of large, fast growing dogs' nutritional needs as compared to the commercial dog foods available, that has perhaps saved my Great Danes from a repeat episode of HOD as described in veterinary medical publications. Unfortunately that long (20 year) dry spell was soon to end.

It is my hope that this true story will help dog owners and veterinarians recognize that the symptoms of HOD and what I call 'pseudo-HOD', a blood infection, or septicemia, are quite nearly the same. My proof of this claim is a story that needs to be told.

My story starts back in September of 1984, the weekend of the Dallas/Ft. Worth Kennel Club's Dog Shows and the Great Dane Specialty. My husband and I lived about a two hour drive due west of Dallas. I had puppies to sell and I had buyers that wanted us to meet on that dog show weekend. Fortunately I had a friend in Dallas that had room at his home for my puppies and I. The Dallas Great Dane Club's Specialty party was to be at his home and I was looking forward to a fun weekend.

My friend had told me that his prize female puppy was sick with HOD. His vet said it was a classic case - but the prescribed treatment didn't seem

to help much. I hadn't seen a case of HOD since the 1960s. We discussed the pain, high fever, diet and the helplessness of coping with HOD. I couldn't believe HOD was back again. That weekend my friend's puppy was rushed back to the vet and although they did all they could the puppy died. My friend's disappointment and sadness was obvious, but like most dog people he knew one had to learn to hang in there and move on. That weekend I had sold several of my puppies to good show homes.

Four of the puppies had gone home with their new owners; one to Dallas, one to Houston, one to Alaska, and one to Wisconsin. Three puppies came back home with me. One of these, a male, was to be lead and house trained for his new owner.

The following Wednesday, while working with the male puppy, I noticed he didn't act up to par. I reasoned that he hadn't quite recovered from the stress of the weekend trip and strange surroundings. Thursday the puppy was not any better but was still eating, had no temperature, but was playing less. Friday morning the puppy was very sick, completely down with a raging fever. I rushed him to the vet where I had to leave him as I was to be gone for the weekend on a judging assignment. The vet had just opened her new clinic. She was young, eager to succeed and had a brilliant, inquisitive mind. I felt confident that the puppy would be fine and that I would get a call on Monday to come and get him. Monday I did get that call. The vet said that it took a high dose of antibiotic by IV to bring the fever down but he would be fine now. The pup's fever was gone, he was eating, had bright clear eyes, looked and acted fine except he couldn't walk. His rear just collapsed when he tried. The vet said, he'd be OK. In a few days he'd be stronger and able to walk. She said he'd had more than enough antibiotics to get whatever caused the problem and to take him home to rest. I did just that. The pup ate well and his eyes were clean he would struggle to stand but fell over when trying to walk. His hind legs just would not work. By Wednesday the puppy's fever was back again; full force! I took the puppy back to the vet and left him there.

The next day the vet talked to her professors at Texas A&M Veterinary School; she then called me to come to the clinic because we needed to talk. Dr. Pierce said A&M suspected HOD. This was her first case of this disease.

The X-rays she took were inconclusive at that point. (Note: X-rays usually are at this early stage). My reaction was instant. From what I had learned, HOD is not contagious. HOD is a nutritional chemical imbalance. I explained to the vet about my friend's HOD puppy and told her that my puppies had been at his kennel. My previous experience with HOD and this experience were very different. Could there be a connection

or is this just coincidental? We talked about the calcium-phosphorus blood serum ratio. It was normal. I asked her if this could be a spinal infection.

Her antibiotic treatment had brought the fever down even if only temporarily. I suggested trying Chloromycetin. I had learned years ago that Chloromycetin was the only antibiotic that crossed Mother Nature's natural barrier that protects the brain, the spinal cord, mammary glands, and bone marrow. The vet said, "with the rear end being affected it could be a myelitis, at this point the lab tests and the X-rays are inconclusive. If it is myelitis, chloromycetin is the drug to use. We'll have to make periodic blood tests to watch for a possible blood eclasia, which is unlikely but a necessary precaution when using this drug." (Since then I have been informed that a blood eclasia does not occur in dogs, only humans).

If this treatment wasn't successful and it was HOD, more X-rays would prove such as it progresses. Note again, early stages of HOD do not always show joint swelling. Fever and joint *soreness* comes first.

I left the puppy at the vets and he was started on Chloromycetin; the dosage to be 25 mg per pound of body weight, three times a day. The puppy stayed in the clinic through the weekend. The vet called on Monday and asked that I come in to see what I thought. It was amazing! The puppy was running around the clinic acting and looking like he had never been sick. The vet said that the Chloromycetin was responsible and I was to keep him on it for ten days to 2 weeks after which he would be fine. He was, but this puppy was only the beginning of more HOD -troubles to come.

Within the week I received a phone call from the puppy buyer who lived in Houston. Her puppy, "Beau" was from a different litter and was also with me that Dallas weekend; he was approximately two months older than the other puppy. I sold Beau as a top show puppy; his pedigree was excellent. It was a great home for this puppy. I kept his litter sister, my Daria Jane, ten years young, fat and healthy to this day. This new puppy owner said her puppy started acting sick shortly after they got home from Dallas. They had treated him with antibiotics. He improved for awhile but then gets sick again. He lay around a good deal and he cried if pressure is applied to his joints. At this point he could hardly walk, and his new owner was very concerned. Her vet in Houston suspected the beginning of HOD but his X-rays were not yet conclusive. He would X-ray again in seven days. I told her about my sick pup and suggested she start her puppy on Chloromycetin, which, she did. Beau showed signs of feeling better while on the Chloro. He was only on the Chloro two or three days when his 2nd X-rays were taken. The X-rays were sent to a radiology lab to

confirm the diagnosis, again a classic case of HOD. The vet said to stop using the Chloro as it can't help since HOD is a nutritional (mineral) imbalance. The new owner was very upset as she liked this puppy. Her husband, an orthopedic specialist, told her, "as bad as the puppy's legs are he will never be right." The vet's prognosis was also very discouraging.

I was frantic! By this time I was convinced that we were dealing with an infection that produced the same symptoms as HOD. I wanted the puppy treated with Chloromycetin. I offered to refund the purchase price if she would meet me half way between Houston and Dallas and return the puppy (an eight hour round trip for both of us). She agreed. When we met to make the exchange I was handed a copy of the lab report that had arrived that morning. We were stunned! It did the diagnosis of HOD but it also said, "New findings suggest hematogenous (blood) infection as a cause. Do not treat as prescribed for HOD, use antibiotic instead. WOW - I knew I was on the right track!

I brought Beau back home, took him to Dr. Pierce and began the Chloromycetin treatment. It required three series of ten days on and ten days off before we were sure that the infection was defeated. This was the recommended treatment when a chronic situation is suspected. Beau had a serious case. He had been treated with other antibiotics before HOD was suspected which I learned later usually suppresses the infection but will not cure it. Chloromycetin is the drug that works. All Beau's joints were much more swollen than the first puppy's and it took a long time before returning to normal.

Periodically during Beau's recovery the vet and I discussed the case. He was as surprised as I was regarding the lab report and will confirm the facts of this case as well as other similar cases he has since treated. A copy of this lab report was also sent to my vet. He was equally amazed and also supports this form of treatment.

This Great Dane, Beau, grew to his full potential; finished his AKC championship, produced fine puppies and never showed any negative after effects of his so called HOD.

(Note; a month later a litter brother to my friend's bitch that had died came down with so-called HOD. This dog was cured with Chloromycetin also. Two other puppies, litter mates to my puppy, the one in Alaska and the one in Wisconsin, had the same HOD symptoms several months later. When I received their owners frantic telephone calls I sent out copies of the lab report. Both dogs were cured after treatment with Chloromycetin.)

Remember all these dogs were exposed to my friend's bitch that died of HOD.

Periodically through the years I have received many telephone calls from people all over the country who heard that Hazel Gregory knows how to cure HOD. All the calls have been word of mouth reference through Great Dane people. Usually their dogs are in terrible condition by the time they call me and their vet is willing to try "whatever it takes". These vets and owners have all been astounded by the positive results attained when Chloromycetin is administered.

Several vets have called me because they were skeptical but agreed to try the Chloromycetin treatment after we talked; I usually sent a copy of the lab report to them. Later on they (all but One) acknowledged successful results. This vet refused to treat as I suggested. He could not accept what I told him and said he didn't like to use Chloromycetin. This is a comment I often hear when talking to veterinarians. The puppy's owner said the vet did prescribe half the required dosage for five days only. That helped a little but wasn't enough. After the five days the puppy went back down and eventually had to be put to sleep.

More recently I have heard from an Irish Setter breeder. She had two different dogs diagnosed as having HOD. She was told by a friend to call me. Her vet willingly started the treatment as suggested, again with successful results. One of the puppies had a more severe case and had to receive two series of treatments. This Irish Setter breeder showed me her dog at a recent dog show. She said his legs had large knobs and swollen joints before treatment. When I saw him his legs were fine; he was a beautiful dog. This lady and her husband, are well known and respected breeders and professional handlers. They, as well as many others, have encouraged me to write this article. It seems that the dreaded symptoms of so called HOD are continuing to occur randomly in not only Great Danes but in different giant, large and medium size breeds. More often than not those afflicted dogs' prognosis leads to a painful, hopeless, heartbreaking end.

The reason I call this terrible disease Pseudo-HOD is because, as I see it, the symptoms are the same as real HOD but the cause and treatment are totally different. The lab report I have previously referred to seems to prove I am correct regarding antibiotic treatment with reference to a blood infection. [Also see Ref. 3].

Notice the antibiotics list does not emphasize that Chloramphenicol (generic name for Chloro) is the drug of choice. But remember the Mother Nature barrier -Chloramphenicol is the only one listed that gets to the core of the infection - the bone marrow where blood is made. As I see it, the preliminary use and periodically changing of different antibiotics creates a seesaw effect and possible chronic condition. Then as the infection hangs

on, the joints become inflamed and calcium deposits start to build up on the outer extremities of the long bone just above the joints. When this happens, the pup is well into the disease, perhaps 1-2 weeks. X-rays are then taken and HOD is diagnosed. HOD, medically speaking, is listed under the heading of "Disease of Undetermined Etiology" (see Ref. #7) which basically says they don't know the cause or cure of HOD. Veterinarians are advised that treatment should be directed toward controlling fever and reducing pain using analgesics and/or corticosteroids. Prognosis is grim. Antibiotics are used only to control possible secondary infections such as tonsillitis, etc.

With my vets help I have obtained several pertinent veterinary medical documents on HOD research and findings. These date back to the early 70's, 80's, and into the 90's. Actually very little scientific help is available that shows consistent facts and findings that work or help. They all basically have the same conclusion. Medical science does not have any scientific proof as to the cause or treatment of HOD (see Ref. 47). All these documents are listed in the References. Over the years, whenever I received a phone call asking about HOD I have always suggested the same treatment and diet. It always works - I only ask for a follow up progress report. So far I've had 99% success. The treatment I recommend is:

1. Always work with your veterinarian. Do not give Vitamin C supplements while on antibiotics.
2. Start immediately on Chloramphenicol, 25 mg per one pound body weight 3 times a day for 10 days - 2 weeks. Example: a 40 lb. pup gets 1 gram 3x day - do not under dose.
3. For fever and inflammation use only as needed Ascription and/or Phenylbutazone.
 - * try not to use any cortisone shots or pills.
 - * give plenty of rest in crate or x-pen with soft bedding and water always available.
 - * do not force exercise - only free choice.

DIET

1. Mix and feed twice a day - AM and PM - same time always. Continue with your regular good quality dog food - protein should range 20-25%, fat should range 8-10%. Add small amount of tasties (chicken is good).
2. Important - add to each feeding 2-3 Tbs. Tonic

TONIC FORMULA

To mix tonic formula use equal amounts each of pure Apple Cider Vinegar and Honey.

Example:

1 pint Apple Cider Vinegar

1 pint Honey

NOTE: slightly warm honey (not hot) mixes easier with warm vinegar - store at room temperature.

- * do not free feed dry dog food
- * do not force feed
- * do not feed fancy high powered - high fat - high protein -low roughage (stress type) dog food

Stay with this kind of diet plus the tonic which is an old time recipe used for years as an arthritis remedy. (see Ref #8).

Remember the old saying, "an apple a day keeps the doctor away." IT WORKS! This over all general tonic is the best formula I've found in raising fast growing large bone dogs. The Apple Cider Vinegar helps keep the calcium intake in a soluble state so it can be more easily absorbed into the system. It also helps dissolve and flush out acid crystals that build up in the muscles and joints.

A must read for dog breeders is Dr. D. G. Garvis's book on Vermont Folk Medicine. This book was my start in learning how to appreciate the many benefits of natural foods and healing. Up until then my studies were more concentrated on vitamin and mineral requirements and supplements. I can't imagine raising Great Danes without the help of Apple Cider Vinegar and Honey Tonic. All our dogs - youngsters, oldsters and in between - even my husband and myself have a daily shot with a glass of ice wafer. It tastes like Apple Cider - GOOD!!

Good Luck and God Bless. HAZEL GREGORY, 414 Richland St., Lewisville, Texas 75057, (972) 434-1134.

In the foreseeable future this subject will be addressed with more in-depth considerations regarding unanswered questions. Much is yet to be learned and explored regarding HOD. In the meantime I hope this article will be of some help to our dogs and their owners.

Any questions or inquiries regarding this article are most welcome. Copies of the documents listed are free with \$4.00 each for postage and handling.

The book, Vermont Folk Medicine by D. C. Jarvis, MD, Is \$6.00 plus \$4.00 postage and handling. Thanks again.

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CERVICAL VERTEBRAL INSTABILITY (CVI), OR SPONDYLOLISTHESIS, OR WOBBLERS SYNDROME

Wobblers syndrome is caused by an instability or malformation of the cervical spine (neck) vertebrae. This puts pressure on the spinal cord, which causes a lack of coordination (ataxia) in the rear legs. In severe cases the forelegs are also affected and in some cases the dog cannot walk at all. There is usually no pain associated with this disease. What actually causes the malformation is unknown although an inherited tendency is a major suspect. Although the tendency can be inherited, it can also be brought on by injury.

The usual age of onset is around 7-8 months of age in Great Danes but it can occur much earlier or later. I had one puppy whose movement I never liked from the moment she could walk. By 6 weeks old she was an obvious wobbler. She'd totter along until one of her littermates crashed into her and over she'd go. But she'd pop right back up and

continue playing. She was such a little fighter that I just didn't have the heart to euthanize her. I placed her in a great home with a friend who was well aware that this little girl might not make it to a year of age, but who was willing to give her the chance. Well, our sweet Sadie made it to 10! She lived a long and happy life and by the time she was 2 she had compensated so well for her malady that you could barely tell she was a wobbler.

I had another that was a completely normal male until one day when he was playing with the other dogs. I heard him yelp and when I looked over, there he lay on his side, unable to arise. He was paralyzed! A friend helped me get him into the car and off we went to the vets. By the time we arrived after a 15 minute ride, he arose and walked on his own. However he was a severe wobbler at that time. So severe that I didn't feel I could handle him along with all my other dogs, so he was euthanized.

The prognosis for wobblers is varied. There is a surgery that fuses the affected vertebrae to each other, thus stabilizing this part of the spine. The problem with this is that it then puts more stress on the adjoining vertebrae and it is common that they, too, will also become malpositioned. Most vets will not recommend the surgery, and I fully agree.

I have had first hand experience with 3 wobblers. The puppy above that I just mentioned lived a long, happy pain-free life until the age of 10 years. My first, a bitch I purchased was diagnosed at the age of 7 months. The vet did a myelogram, and sent her home on steroids, anti-inflammatories and a neck brace. She was terrified of the brace. I couldn't stand watching her stand trembling in fear. Yes, I know she would have become used to it, but I wanted her to be able to live as a normal dog. I removed the brace and we never looked back.

She was affected at first behind and later (at around the age of 3 years) in front. She lived until the age of 5 when she was euthanized. She had become incontinent and would fall over when she squatted to urinate. She had also developed pancreatitis and it was just time for her to go. Life was no longer a pleasure to her. Although she bounced around like a flubber ball, she was able to lift heavy objects in her mouth, ran and played and had a wonderful happy life.

The other was mildly affected and lived until 9 years of age. None were treated any differently than a normal healthy Dane.

Wobblers syndrome has many degrees of severity. It seems to me there is no way to accurately predict just how one will do in the future. No one was more surprised than I when Sadie continued to improve and lived a long normal life. The advice I'd give to someone having to face this is:

1. Don't do the myelogram unless there's some real doubt that it's Wobblers Syndrome. If it's a slipped disk or some other malady, surgery is often a good choice. But if it is wobblers, and you're not going to put the dog through surgery, why bother. Myelograms can have unwanted side effects, the worst being death if the dye gets into the brain.

2. Do keep your dog on the lean side.
3. Don't despair if the vet gives you a grave prognosis. An honest vet will tell you that no one can know for sure what's going to happen.
4. Do allow the dog to live life as a normal dog.

OSTEOCHONDROSIS DESSICANS (OCD)

Affecting the shoulder joint, OCD can also be termed a developmental disease. It is an irregularity in the cartilage of the shoulder joint, which sometimes develops into a cartilage flap. This flap can sometimes become detached and float around in the joint capsule. It is then termed a 'joint mouse'. When not obstructing movement, there is no pain, but when it interferes with the workings of the joint, you'll see a marked limp in the dog. The cartilage flap can also cause pain. OCD is often bilateral but because there is pain in both shoulders, the dog will limp on the more painful side. OCD usually affects dogs around the age of 7 to 8 months.

Surgical treatment is fast and effective, and *expensive, AND*, according to AKC, grounds for disqualification! So if you have a show potential puppy and are considering this surgery, also consider that a judge might disqualify your dog upon seeing the scar. Recent studies have shown that if there's no joint mouse involved, enforced rest and treatment with Adaquan and Cosequin and an anti-inflammatory may be equally as effective as surgery.

As a breeder you must evaluate each case when the time comes to breed. It is thought that this is an inherited tendency that is brought about by injury. There's also evidence to suggest that pushing the growth of our giant breed during puppyhood, contributes to the development of OCD. I've had 2 Danes with OCD. The male was bred once to his cousin. Of the 3 pups, none developed OCD. The other was a bitch who produced 6 pups. None of them ever developed it either.

For more information: <http://www.sunstrike-great-danes.com/health-OCD.htm>

CARDIAC PROBLEMS

Although they can and do develop other heart problems, the most common cardiac problem that affects Great Danes is cardiomyopathy. It most frequently affects males. The developing cardiomyopathy is usually undetected until severe symptoms occur. Sudden weight loss, lack of energy, exercise intolerance, and abdominal distension are common. Clinical signs are atrial fibrillation and the heart ventricles are often grossly enlarged and flabby. The heart is no longer able to pump blood efficiently. Prognosis is never good. Few dogs live much more than 3 months post diagnosis although some have lived up to a year.

The Orthopedic Foundation for Animals (OFA) now certifies dogs that are free of *congenital* heart defects. This test is done by auscultation. A veterinarian uses a stethoscope to listen to the heart of a dog over the age of 12 months. Most congenital diseases, such as valvular and subvalvular aortic stenosis and patent ductus arteriosus are accompanied by a heart murmur. If a murmur is present, it is then advised that the dog undergo more extensive testing to discover the cause of the murmur and thus, the heart disease. It is important to realize that a dog who has received OFA Cardiac certification is not *necessarily* free of cardiomyopathy genetically. A dog who tests clear of cardiomyopathy in January, may well test positive in June. This makes it difficult to screen for this problem as you may already have a litter on the ground when the sire is diagnosed with cardiomyopathy. In any case, it is *still* very important for breeders to screen for this devastating disease.

For more information: <http://www.sunstrike-great-danes.com/health-cardio.htm>

von WILLIBRANDS DISEASE (vWD)

This is an inherited bleeding disorder more commonly found in Doberman Pinschers. However it has been diagnosed in Great Danes. The definitive test for this is a simple blood test. However, I would think that if a Dane were affected by this, it would be found out at the time of cropping. Dogs affected by vWD should not be bred.

CATARACTS

Unfortunately we are hearing more and more of juvenile cataracts being diagnosed in Great Danes. Unless you suspect that the dog cannot see well, you probably won't be aware that it has a cataract until it's examined by a board certified veterinary ophthalmologist. The eyes must be dilated and then the lens (the clear, oval part behind the iris) examined by a special ophthalmoscope. Cataracts come in all sizes and shapes and affect either one or both eyes. Sometimes a vet can tell you if it's an inherited cataract, and sometimes not as there are many causes of cataracts. Although some types of cataracts can affect vision at a young age, some vets have said that our breed probably doesn't live long enough to be adversely affected by most of them.

This does not mean that a breeder shouldn't test for cataracts. The Canine Eye Registry Foundation (CERF) will register dogs that have passed their eye exams. This certification is valid for only one year since cataracts may appear at any time during the dogs lifespan.

For more information: <http://www.vmdb.org/cerf.html>

PANOSTEOITIS

If your Dane *has* to have *one* disease and you are allowed to choose it, this would be the one to select. Panosteitis, or pan, or pano, or ‘traveling lameness’, is an inflammation of the long bones of the legs that can affect the growing puppy from 4 to 8 months of age. Normally it will begin with a mild limp in one limb and then will migrate to another limb, affecting each limb in turn. During its active phases, it can be diagnosed via X-ray. The beauty of this one is that it is self-limiting, usually disappearing by the age of 1 year or perhaps a little older.

There is usually not a lot of pain associated with pan, but if there is, your vet can prescribe an anti-inflammatory medication to ease your puppy through the worse times. The cause of pan is unknown and there is no medical cure other than tincture of time. Count your blessings if this is the only problem your puppy encounters.

INFLAMMATORY BOWEL DISEASE/IRRITABLE BOWEL

Ever since I’ve been in Danes I’ve heard people talk about having a dog that was a ‘picky’ eater. Sometimes it would have a good appetite, and sometimes not. It was not unusual to hear of Danes having to be literally force fed in order to keep them in show weight. I would hear people say that Danes were naturally finicky eaters. That made no sense to me. Good appetite is a major building block to good health and longevity. Mother nature, left on her own, would see to it that the dog that wasn’t eating well, wouldn’t live very long. Not enough energy or stamina to feed itself spelled death. So this ‘so called’ trait, didn’t seem normal to me. Something must be wrong physically with such a dog. I’d *NEVER* had a Dane that wouldn’t eat *me* if I didn’t put its dish down fast enough!

Then, several years ago, we had a litter that had major problems with IBD. There were 4 in the litter that had to be euthanized prior to the age of 3! From the beginning all 4 were somewhat ‘picky’ eaters. Sometimes they’d have good appetites, other times not. There was often watery diarrhea involved and sometimes vomiting. Aside from that, the dogs showed no other symptoms and were happy and active. Type of food didn’t seem to matter although a sudden change of food was catastrophic! Instant diarrhea time! Although one from this litter had had an intestinal biopsy that did not support the diagnosis of IBD, *something* abnormal was definitely going on. This litter was the result of a breeding to a stud who, himself was a finicky eater. When four littermates show the same disease, a breeder had better take a good look at the pedigree!

Then, in another breeding we also bred to an unrelated stud. Four of these littermates bloated prior to the age of one year! This was not something that had ever happened to us before. I’ve had Danes bloat, but it was always at older ages, usually after 8 or 9 years. I wonder if perhaps there are two kinds of bloat, early age onset and old age onset. I don’t know but they seem different.

FINDING A VET FOR YOUR DANE

Sad to say, there are few vets who are totally familiar with problems affecting giant breeds. Many have no idea what they're dealing with when presented with a classical case of HOD or even bloat!

I once rushed a bitch into emergency who was a week away from her whelping date and in bloat. The vet on duty that night happened to be my own vet. He X-rayed Kiwi and found that her stomach was beginning to twist (torsion) and called the clinic's owner to come in and help him do the surgery. He was summarily told that it was physically impossible for a bitch to bloat if she were pregnant and he refused to come in and help! We were lucky, as John was able to place Kiwi's forelegs on his shoulders and by bouncing her around on her hind legs, he got the stomach to flop back into place. This incident took place in a very well known, top notch emergency clinic and the owner wouldn't even believe his night vet!

If the breeder of your puppy cannot help you locate a good vet, I would suggest that you start searching by calling up and interviewing the vet. Ask them what their experiences have been with emergency situations such as bloat and HOD. What experience have they had with the giant breeds? If a vet refuses an interview, move on. Ask owners of other large breeds where they take their dogs. Locate and get directions to the nearest emergency clinic *before* you ever need one!

When you *do* find a good vet, take his advice and ask *him* your medical questions. It's all well and good for owners of Great Danes to share information, and in many cases, they have more solid knowledge than many veterinarians. But if your dog has diarrhea, it only makes sense to take dog and a stool sample to your vet rather than fooling around with the advice of your fellow laypersons! I can't tell you how many times I've had this kind of subject presented to me. People will email me over the internet and ask why their dog's hair is falling out! I mean, come on! How the heck do *I* know! Maybe their dog has flea allergies, food allergies, mange, the creeping crud. I'm NOT a vet and I DO have a lot of practical experience, but even *I* won't give medication I have on hand to my dogs unless I consult with my vet first.

VACCINATIONS

Your new puppy will hopefully have had *at least* his 6 week measles/distemper and 1 parvo shot by the time you pick him up. Hopefully he will have had a couple of his adult vaccines (DHP & another parvo or 2) also. If at all possible, try and persuade your veterinarian not to give your Dane puppy the 7 in one combination shots. Jean Dodds, DVM has done extensive research on this practice and feels that it contributes to autoimmune problems in dogs. She recommends that killed virus vaccines be used and that the parvo be separated from the DHP. I try and separate all my vaccines by at least a week. However, I do use an MLV (modified live virus) vaccine for parvo. I use Progard brand as they've had 100% efficacy when given as recommended. They even guarantee

to pay all vet bills that might be associated with parvo treatment should your dog contract the disease! DHP (distemper, hepatitis & parainfluenza) and parvo are the only vaccinations I give. You should consult your veterinarian for advice on what else you should vaccinate against for your area. Rabies vaccine, of course, should be given at the age of 4 months and boosted as per your veterinarian.

Because of the possibility that some autoimmune problems could be associated with vaccination, I now do antibody titers on my dogs. This is a blood test that will ascertain what antibodies your dog has in his blood. If he's has a working immunity to a disease, this will show up on the test. If his antibody count is high enough to establish immunity, there is no reason to revaccinate at that time. Although antibody tests can be expensive, they can make it unnecessary to risk your dogs health by giving annual boosters.

Many accredited veterinary teaching institutions have now revised their vaccine recommendations as follows:

New Vaccination protocol being recommended by Colorado State University

January 1998 the CSU Veterinary Teaching Hospital will be offering it's clients one additional vaccination program. We are making this change after years of concern about the lack of scientific evidence to support the current practice of annual vaccination and the increasing documentation that over vaccinating has been associated with harmful side effects. Of particular note in this regard has been the association of autoimmune hemolytic anemia with vaccination in dogs and vaccine-associated sarcomas in cats.....both of which are often fatal. Boosters, the annual revaccination recommendation on the vaccine label is just that ...a RECOMMENDATION, and is not a legal requirement except for Rabies. At this writing (2006) the vaccine companies are now recommending vaccination boosters be given every 3 years.

The only commonly used vaccine that requires duration of immunity studies be carried out before licensure in the US is Rabies. Even with rabies vaccines, the label may be misleading in that a 3 year duration of immunity product may also be labeled and sold as a one year duration of immunity product.

Based on the concern that annual vaccination of small animals for many infectious agents is probably no longer scientifically justified, and our desire to avoid vaccine-associated adverse events, in January of 1998 we will be recommending a new immunization protocol to our small animal clients.

This program recommends the standard 3 shot series for puppies (parvovirus, adenovirus 2, parainfluenza, distemper)...to include rabies

after ... 16 weeks of age in dogs. Following the initial puppy ...immunization series, ... dogs will be boosted one year later and then every 3 years thereafter for all the above diseases. Similar programs to this one have been recently adopted by the University of Wisconsin, Texas A & M and the American Association of Feline Practitioners.

Other available small animal vaccines may need more frequent administration (Bordetella..., Lyme, etc) and may be recommended for client animals on an "at risk" basis. Recent studies clearly indicate that not all vaccines perform equally and some vaccine products may not be suitable for such a program.

A BRIEF DESCRIPTION OF SERIOUS DISEASES

Canine Distemper

A highly contagious, viral disease that used to kill thousands of dogs. Although today's vaccines are extremely effective, dogs still die from this disease. Distemper can affect the respiratory, nervous and gastrointestinal systems. It can occur at any age but is most devastating to very young and very old dogs. Symptoms include a thick, yellowish discharge from the nose, matter in the eyes, high fever and refusal to eat. Pneumonia can develop and encephalitis can result from the high fever, which sometimes leads to brain damage.

Canine leptospirosis

A bacterial infection that may lead to permanent kidney damage. It is spread through the urine of infected wildlife, such as mice or rats. The bacteria attacks the kidneys, causing kidney failure. Symptoms include fever, loss of appetite, possible diarrhea and jaundice. Antibiotics can be used to treat the disease, but the outcome is usually not good due to the serious damage to both kidneys and liver that is caused by the disease. Leptospirosis is highly contagious; other dogs, animals and people are all susceptible. (This disease has become so uncommon, that it is often not included in the vaccine 'cocktail' given to dogs anymore).

Infectious Hepatitis

This is a highly contagious virus that primarily attacks the liver but can also cause severe kidney damage. It is not related to the form of hepatitis that affects people. The virus is spread through contaminated saliva, mucus, urine or feces. Initial symptoms include depression, vomiting, abdominal pain, high fever and jaundice. Mild cases may be treated with intravenous fluids, antibiotics and even blood transfusions; however, the mortality rate is very high.

Parvovirus

Parvovirus, or parvo as it is commonly known, attacks the inner lining of the intestines, causing bloody diarrhea that has a distinctly unpleasant odor. It is a rampant puppy killer and is extremely contagious. It can even be transmitted on one's shoes if you've stepped in a contaminated stool. In puppies under ten weeks of age, the virus also attacks the heart, causing death, often with no other symptoms. The virus moves rapidly and dehydration can lead to shock and death in a matter of hours.

If puppies are started immediately on IV fluids and antibiotics (to prevent any secondary bacterial infection) and are aggressively treated symptomatically, they have a fair chance of recovery. Dogs that have been infected with parvo are immune for life.

Corona virus

Another unlovely virus that is rarely fatal to adult dogs, but can frequently cause death in puppies. Symptoms include vomiting, loss of appetite and a yellowish, watery stool that might contain mucus or blood. The stools carry the shed virus which is highly virulent.

Parainfluenza (Kennel Cough)

This disease of the respiratory system, can be caused by any number of different viral or bacterial agents. Highly contagious, it is easily spread in a kennel situation where there are many dogs confined to a restricted space, thus the common name of kennel cough. Symptoms include of course a cough caused by inflammation of the trachea, bronchi and/or lungs. Antibiotics may be prescribed to prevent pneumonia and a cough suppressant may quiet the cough. Most cases are mild and many dogs recover spontaneously having received no treatment whatsoever.

Lyme's Disease

A bacterial disease caused by a spirochete (*Borrelia Burgdorfen*) and is spread through direct contact with ticks. The most common host is the deer tick which is very small and often will go unnoticed. Arthritis-like symptoms may occur and one of the first symptoms in the dog is lameness, which if untreated subsides but returns and gets progressively worse. In humans the disease usually begins with a rash and mild, flue-like symptoms. The dog may have had a rash that went undetected because of the coat. If treated early with antibiotics, most patients will recover without complications, but the disease is often either undiagnosed or misdiagnosed. Always check yourself and your dog for ticks after an outing in grass or woods. In case of illness, keep any ticks found imbedded in the skin in alcohol for further examination.

Rabies

A highly infectious virus usually carried by wildlife, especially bats, raccoons and skunks. Any warm-blooded animal, including humans, can be infected. The virus is

transmitted through the saliva, through a bite or break in the skin. It then travels throughout the body. Behavior changes are the first sign of the disease. Animals usually seen only at night will come out during the day; fearful or shy animals will become bold and aggressive or friendly and affectionate. As the virus spreads, the animal will have trouble swallowing and will drool or salivate excessively. Paralysis and convulsions follow. There is no cure for rabies short of euthanasia.

PARASITES

Puppies of all breeds are susceptible to parasites, both internal and external. Most brood bitches carry the encysted form of round worms (ascarids) in their bodies, although the worms aren't in an active phase. When the puppies are born, they will almost always have the worm larva in their bodies as they contract it through their dam's milk.

The breeder should have a stool sample checked at 4 weeks of age, to ascertain what kind, if any, of parasite the pups have contracted. Then he should treat the pups to eliminate the parasite.

Besides round worms (probably the most common) puppies can have tape worms (the larval form of the flea), hook worms etc. Giardia and coccidiosis are not uncommon. Both are microscopic intestinal parasites that can cause diarrhea, vomiting and general unthriftiness. While coccidia is easily eradicated with an oral antibiotic called Albon, giardia can be frustrating and take a long time to clear up. Information on giardia is difficult to find. The problem seems to be that the main treatment for it, Flagyl, doesn't always get rid of it completely and repeat outbreaks are common. My own experience has been that the dogs eventually build up their own immunity to it.

I don't think that Great Danes have any more trouble with fleas and ticks than other breeds. Occasionally I've had one that seemed to be bothered by fleas more than my others. Usually this turned out to be a flea bite allergy. Where I live now, fleas *DON'T*, thank God! However, I've been told that the new flea treatments, both oral and the drop on the back, used in conjunction with flea larva nematodes (they attack the flea larva) that you can spray in your back yard, and the use of Flea Busters, or some similar service indoors, has all but eliminated fleas for those who are consistent in this war.

SPAYING/NEUTERING

It is a kindness to your dog and to the breed in general, to sterilize a dog that will not, or should not, be used for breeding. A bitch that is spayed prior to her first season, will likely never get breast cancer. Alter your male early and prostate cancer is unlikely.

Bitches are messy when in season. They are also very sneaky and it is quite common to find out that the 6 foot chain link fence that you had so much confidence in, is *not* impregnable! Now you have a bitch who has been bred by a mongrel or another breed and you want to spay her immediately! Guess what! You'll be risking her life if you do!

A bitch should not be spayed during heat or 60 days after going out of heat. This is because the hormones that bring her into estrus and then keep her in a false whelp post estrus, also keep the blood from clotting as quickly as it normally does. This can allow capillary bleeding that just keeps seeping at the incision site. I almost lost a bitch this way before I knew better.

Your male dog should be castrated while he's young. Neither dogs nor bitches *need* to have a litter or be bred. This is just an old wives tale. Your dog will be a lot happier and healthier if he's altered when the unspayed neighborhood bitches come into season. You won't have to worry about prostate problems due to sexual frustration, nor the constant whining, pacing and panting to be allowed out to visit the lady in question. And gentlemen, *please* quit transferring your own 'male' fears to your dog. The dog doesn't care that he can't breed. He doesn't even think about it unless he's unaltered and around a bitch in season! If it *really* bothers you that much, you can now have your vet implant 'neuticles', a device that makes the scrotum look like it still contains testicles, sort of like breast implants. (Sorry, I have to laugh when I think about the mentality that would actually *do* this!)

Here are some valid reasons NOT to breed your Dane!

1. So the kids can see the miracle of birth. Children can learn about birth from books and videos. This does not justify bringing a litter of perhaps 10 puppies into the world needing loving homes. Take a trip to the local animal shelter and see the sad results of the many litters born for just this misguided reason.
2. She/he should have one litter before she/he is spayed/he is altered. **WRONG!** There is absolutely NO medical, physical or emotional reason that a dog or bitch needs to reproduce itself except to continue the species. In the case of a pet quality dog (or even some show dogs) this does not apply.
3. You want to recoup your investment. Ha! Especially in the case of breeding Great Danes, this reason makes those of us who breed them laugh! I doubt there are many breeds more expensive to breed than Great Danes. Even if you don't count the expense of showing your bitch and just start with the medical health screenings, it's expensive. All Danes that are even being considered for breeding should, at the very least, have their hips x-rayed to rule out hip dysplasia. More and more breeders are now screening for cataracts, von Willibrands Disease (vWD), normal thyroid, cardiac and elbow dysplasia. These tests will probably cost somewhere around \$500.00. Routine check for any uterine or vaginal infections will help ensure a live litter. Add \$100.00. Stud fee to a good quality stud who is right for your bitch and has, himself, passed all the health screenings will run about \$1000.00. If a C-section becomes necessary, add at least \$600.00 and probably more. Assuming there's no need for a section (there rarely is in Danes), you now have a nice healthy litter of, oh, say 8 puppies. At the age of 6-7 weeks you're likely going through at least 50 lbs. of dog food a week. Add in the first vaccines (likely \$20 each at your vets, less if you give your own), that's about another \$160.00.

Next it's time to crop the ears! Oh joy! Add \$150.00 per puppy! AND, if you've bred a bitch and have no market for her pups, chances are you may end up supporting several of these pups until they're 4 or 5 months old or older! Do you have any idea how expensive this is getting? And if you have no ready market for your pups, you cannot get the \$1500.00 that is about average for a show potential puppy from top show stock. You'll be lucky to get 2 or 3 hundred dollars a puppy. Are you prepared to keep, feed and properly care for 3 or 4 puppies at the age of 6 or 7 months until you can find the right home for them? Do you realize what your dog food bill will be at this time?! You *CERTAINLY* wouldn't want to resort to taking your puppies to the pound. The chances that they'll survive there is almost nil! Do you want this on your conscious? Still think you're going to recoup your investment? Better stick with an altered pet!

4. She/he's just so nice all my friends want one of her/his babies and I want one just like her/him. I refer you to number 3 above. Those friends who just have to have one of the pups have a strange way of back peddling when the time comes to actually purchase the puppy. They're hoping that you'll *give* them the puppy. And there's no guarantee that you'll have a puppy even remotely like your dog or bitch. So is it worth all the expense to take the chance? It's a lot cheaper to just go to a reputable breeder and buy another dog!

5. Perhaps the best reason *not* to breed your bitch is that you could lose her! This happened to some good friends who had purchase a lovely bitch from me. She was bred and then died of bloat 4 days after her litter of 7 was born. Ed and Wendy fought to save that litter for several long and sleepless weeks. Several times they feared that they'd lose some of the puppies. As they mourned their beloved Heidi, they fought all the harder to save her babies. They *did* save them, but I can guarantee that if they had the choice to make over, knowing they'd lose Heidi, they would not have bred her.

EMERGENCIES AND FIRST AID

Recognizing that there's a problem is the first step in managing an injury. In the case of Great Danes it's most important because this is a very stoic breed. A miniature poodle with a thorn in its paw is likely to scream and hop around on three legs like it's been shot. A Dane is more likely to limp slightly and perhaps quietly lie down and lick the injury. You must be observant. Before you treat a *seriously* injured dog, even though it's your own, you should muzzle the dog. Keeping a suitable muzzle around is an excellent idea. Lacking one, you can use any soft cloth or a belt or whatever is handy for the purpose.

LIFE THREATENING EMERGENCIES

Bleeding

This is one of the most obvious signs of an injury and can also be one of the most deadly. Wounds that slowly seep blood are probably not life threatening. Wounds from which blood is actively pumping or spurting are very dangerous and must have the bleeding stopped immediately. Direct pressure on the wound is the best method. If you're alone make a pressure bandage by wadding up some cloth or other absorbent material and then binding it to the wound with a cloth or tape while transporting to the vet. If there is a foreign object lodged in the wound, it's best to leave it there. It may be in a major blood vessel and removal could cause more bleeding.

Bloat (Do not muzzle a dog in bloat!)

Although this is covered in depth earlier in this chapter, it can't hurt to re-list the symptoms. If your dog is 'off', just not himself, watch him closely. The abdomen usually, but not always, appears distended. There will be attempts to vomit but the dog will only bring up foam. The dog may be restless or try to dig. If you even suspect bloat, get to the vet ASAP! This is a life threatening emergency!

Poisoning

There are far too many poisonous substances to mention them all here. However, some of the more common ones are; certain house and garden plants, antifreeze (dogs are attracted to it because it tastes sweet), certain household cleaners, especially ones containing pine tar, insecticides and herbicides. Symptoms of poisoning are retching, vomiting, diarrhea, salivation, labored breathing, dilated pupils, weakness, collapse or convulsions. Sometimes there may be several symptoms appearing at once. Contact your vet immediately. If you cannot contact him or get to an emergency clinic contact the National Animal Poison Control Center hotline at 800/548-2423.

Choking or obstructed airway

If your Dane is pawing at it's mouth, gagging, trying to cough and acting like it's terrified, it may either have an obstructed airway (MAJOR EMERGENCY) or be choking. The first thing you must do is to look into the mouth and try to see the obstruction. If you can, remove it. If it's stuck tightly into the throat, performing the equivalent of the Heimlich maneuver on the dog may save it's life. To do this have your dog standing and grasp both sides of the rib cage and squeeze your hands together sharply. The idea is to get the lungs to force enough air up the throat to dislodge the

object. If this doesn't work, try the abdominal thrust by laying the dog on it's side and using your palms together, press in quick, sharp motions just behind the rib cage.

If the dog is choking on the object, but can still breathe, get it to the vet as quickly as possible.

Bee Stings

This will fall into a life threatening emergency category only if your dog is allergic to bees. If the dog is stung and you begin to hear raspy breathing, get to the vet immediately. You should keep some liquid Benadryl on hand for just such emergencies. Just before you leave for the vet give the dog the adult dosage recommended on the bottle. You should also remove the stinger immediately as it will continue to pump venom into the dog. Do this by scraping it out with a fingernail rather than trying to grasp it. This way you won't inject any more venom than necessary.

If the dog does not seem to be in any respiratory distress, remove the stinger as above and give a dose of Benadryl. If you have any kind of cortisone cream you can apply this to the sting site.

Snake bites

This is of course a major emergency and the dog should be transported to the vet. If you cannot see the typical puncture holes of a viper bite, you'll see the swelling and of course the dog will be in pain or worse. Transport immediately.

Cardiac arrest

If your dog loses consciousness and you suspect cardiac arrest, place your thumb under one front leg and your four fingers in the other armpit area to determine whether or not the heart is still beating. This places the chest between your fingers. If the chest is too large to do this, use both hands instead. Reach up to feel for a heartbeat. If you cannot feel a heartbeat, put your ear on the dog's chest to listen for one, then check for a pulse either in the side of the neck or inside the hind leg where the leg meets the body. A normal pulse rate is 80 to 140 beats per minute.

Cardiopulmonary resuscitation (CPR) can be performed on a dog by first examining the dog's mouth to make sure the mouth and airway are clear. Then close the mouth and, holding it shut, blow three short breaths into the nose while watching to see if the chest rises. Then, with the dog on his side, press down with two hands on the chest to stimulate the heart and force air in and out of the lungs. Chest compression should be rapid, and you should stop about every thirty seconds to see whether the heartbeat has resumed. Get the dog to an emergency clinic, giving the described CPR all the way, unless the dog begins breathing on his own.

NON-LIFE THREATENING INJURIES

There is nothing so sad as an injured dog. But you should be able to distinguish between true emergencies and injuries that are simply in need of urgent care. Having worked as a vet tech for several years, I'm always amazed at how many pet owners have no idea of what constitutes a true emergency. They storm into the vets hysterically screaming that they **MUST SEE THE DOCTOR RIGHT NOW!** Little Fifi is *dying!* These are likely the same people who have watched little Fifi while she refused to eat, had diarrhea and ran a high temperature for the previous 3 days. **NOW** it's 2 o'clock Sunday morning, and they want priority at the emergency clinic over the dog that has just been hit by a car and has a torn artery! Oh, *Puuullleezzzee!*

Animal bites

Few dog bites or fights are life threatening. Most dog fights are, 'much sound and fury signifying nothing'. However, it is likely there'll be a few puncture wounds. Most are in the skin and nothing to worry about. The few fights I've had here have almost always concluded with a tooth hole or two in each dog which healed easily on it's own. Any wound, of course does bear watching for infection.

Wild animal attacks are not unusual, even in city or suburban areas. Coyotes are bold and in many areas have lost their fear of man. They are even seen in highly populated city areas from time to time. Dogs are very inquisitive and Great Danes are natural hunters who will most likely attack the wild animal first. Wild animals such as the skunk, the opossum or the raccoon have little chance of escaping from a Great Dane, but can inflict nasty bites and scratches. They can also carry rabies. Do not neglect your dog's immunizations against this dreaded disease.

If a skunk sprays your dog, it can be very painful to his eyes, the area that seems to be just where the skunk takes aim. Wash your dog's eyes with warm water, and apply a few drops of vegetable or olive oil to them. If you have any ophthalmic ointment on hand, that will also suffice to ease the pain to the eyes. The usual treatment for the overpowering skunk odor is a bath in tomato or lemon juice, which can be followed by soap and water. The one time I had to try this remedy, it was basically worthless! There are now products available in the pet store and through some of the catalogs that guarantee to get rid of the skunk odor on your dog.

One night, about 2 am, I heard one of my dogs thumping around in the hall just outside my bedroom. As I started to get out of bed to investigate, I was suddenly hit by the unmistakable odor of *skunk!* About the same time, the other 4 Danes came thundering up the stairs, each smelling worse than the next! I immediately chased them all downstairs into the kennel area and locked them out of the house. I only had V8 vegetable juice in little cans and some tomato sauce. I opened every can I had, grabbed the first victim and into the shower we went. (I have a walk in 'dog shower' in the kennel area, which has proved to be a godsend for such emergencies!) One by one I scrubbed each dog with the

tomato sauce and V8, shampooed them, and then locked each one in the indoor/outdoor kennels. Oh how they stunk! Oh, how the *house* stunk!

Once everyone was bathed, dried and locked into her kennel, I pulled the sliding door shut to try and keep the house from smelling any worse.

Next morning I was fairly used to the stench and it *had* dissipated somewhat. The girls were quite indignant at their overnight confinement and were jumping up and down anxious to be out. I opened the gate to the back yard and let them all out of their runs. They went galloping off up the back hill (I have an area behind the house of lawn and fenced in old growth forest, which they love to investigate) and I went into the kitchen to fix their breakfast. Suddenly there was an increase in skunk odor and I turned around to find all 5 girls standing there each with a dead baby skunk in her mouth!

It took about a week for the odor to clear from the house but the dogs still had some lingering fragrance when they got wet for about the next 3 or 4 weeks!

Away From Home

When planning an outing in the country with your dog, take a few precautionary measures and a small first-aid kit – if not for you, for your dog. Include a muzzle, knife, eye ointment, pliers, some antiseptic such as peroxide, meat tenderizer or ointment (for insect stings) and, should you anticipate meeting a porcupine, a small bottle of vinegar. If you are going into a part of the country where you know there are poisonous snakes, take along a snakebite kit.

If your Great Dane accompanies you on a trip to the country where he might encounter a porcupine, it is helpful to know what to do if your dog's curiosity gets the best of him. With the porcupine, there's no contest! Should your Dane end up with quills in his body, get to a veterinarian right away because the quills will invade the tissues more and more as the dog moves around. If you are far away from a vet, you will have to remove the quills yourself as soon as possible. This should be done gradually and will be very painful to your dog, which may necessitate the use of the muzzle. If one is unavailable, you can use a strip of soft fabric to tie around the muzzle, first on top, and then bring under the muzzle, tie again and bring the tails of the cloth up around the head behind the ears and tie yet again. Tie it snug, but not so tight as to cut off his air. It's best to carry a manufactured cloth muzzle with you. You can buy them at most pet shops.

Beginning in the chest area, cut off the tips of the quills at an angle to release pressure, making them easier to remove (vinegar may also be used to soften the quills). Use an instrument such as pliers (if none are available, your fingers will have to do) to slowly twist out each quill. Do not jerk them out. As they are removed, clean the wound with an antibacterial agent such as peroxide.

Bone fractures

Although serious, this is seldom life threatening unless there's a punctured lung or cut artery involved. Immobilize the limb or whatever part of the body is injured as well as you can and transport to the vet. A rolled up newspaper taped around a limb makes a quick and easy makeshift splint. Don't try setting the bone yourself, especially if it protrudes through the skin.

Heat Stroke

Every summer, at almost every dog show I attend I hear this announcement over the public address system. "May I have your attention? There is a dog in a blue van, license plate 'DUMBJERK' who needs his owner attention. It's very hot out here today folks, please check your dogs!"

Now I ask you, just how much intelligence does it take for people to remember that even cars with windows open can heat up dangerously in the summer!? Wouldn't you think that people who show and love dogs, who purport to have their best interest at heart, would be super aware of this problem? There's always one idiot in the crowd.

Danes do not take heat well. Especially dark colored Danes such as black, blue or dark brindle. Symptoms of heat stroke include rapid panting, difficulty breathing, vomiting and collapse. Check the gums for color. They may be blanched. If you can find a container big enough, place the dog in the container and fill with cool, but not cold water. Or cover with towels and keep cool water running over the dog. In lieu of all the above, wet the dog as best you can, and place cold packs (with ice) in the arm pit, groin, and under the throat. Offer water in small amounts. Get the dog into a cool environment as soon as possible.

Burns

Immerse area in cold water immediately. Transport to vet.

Fever

Fever can be a symptom of many diseases. In a Great Dane between the ages of 5-9 months it could be a symptom of HOD. In any case, a dog with a fever needs medical attention. Your vet is going to want to know what the dog's temperature is. You can take your dog's temperature using a rectal thermometer used for people. Normal temperature for a dog is between 101 and 102 degrees Fahrenheit. Shake the thermometer down below 98 degrees and apply a small amount of Vaseline to the end. If you have an assistant, have him hold on to the Danes head. Lift the tail and insert the thermometer into the anus approximately 2 inches. Hold on to it while the temperature is being taken. After about 2 minutes you'll have an accurate reading. Wipe the thermometer off and read the temperature.

Vomiting

Vomiting is often a normal occurrence in a dog and should not cause alarm if it only happens once. But continued vomiting coupled with other symptoms such as fever or diarrhea is cause for medical attention. Note the presence of any foreign objects in the vomit such as plant material, glass or anything else.

Diarrhea

Like vomiting, occasional loose stools are probably not a reason for alarm. However continued diarrhea needs attention. It can be a symptom of anything from intestinal parasites to parvo virus.

While diarrhea in and of itself is not an emergency, it can cause dehydration. For this reason it's a good idea to not allow your dog to go more than a couple days with this problem before seeking veterinary advice. Dehydration itself *can* become an emergency, especially for young puppies. You can check to see whether a dog is seriously dehydrated by pulling up the skin on the back. If the skin feels plump and quickly returns to its original position, the dog is probably not seriously dehydrated. However, if the skin feels pliable and remains 'pulled up', then that is an indication that the dog/puppy is becoming dehydrated. Dry or 'tacky' gums may also indicate dehydration. The dog probably is too sick to be expected to drink enough water to correct the condition. Take him to a veterinarian who, if she confirms dehydration, will inject fluids that are slowly absorbed into the body.