

LIVER DISEASE IN DOGS

A CASE STUDY

By: Cyndi Smasal

The author of *Hope for Healing Liver Disease in Your Dog* presents this case study for you to examine and determine the validity of this holistic treatment for Canine Liver Disease.

Treatment under the supervision of:

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Dear Protector of Animal Health,

A concerned pet owner has probably just received news from you that her dog has some form of Liver Disease. She is worried the dog is going to die. Frantically, as she searches the Internet to find more information about liver disease, she finds my website and book *“Hope for Healing Liver Disease in Your Dog”*.

I know you must be thinking...this is another Internet story claiming to cure an incurable disease...and there is no data to prove that this really works. Why give the pet owner hope, if there's really no scientific evidence to support the claim?

As shown in the following pages, the results are real. This is an actual case. This has worked for many dogs. In fact, there is evidence to support that it has helped save or prolong the lives of more than 1,967 dogs over the last 20 years.

As a Doctor of Veterinary medicine, you have taken an Oath to 'accept as a lifelong obligation the continual improvement of [your] professional knowledge and competence. Please take a few minutes to review this short case study and consider the benefits of this holistic treatment for liver disease.

Sincerely,
Cyndi Smasal

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Liver Disease in Dogs

A CASE STUDY

INTRODUCTION

I know that you get bombarded with information about the next 'great cure' on a regular basis and you probably don't have much time to sort through all the materials you receive.

Because of this, I've made a concerted effort to keep this special report brief. The following is a Case Study of Cirrhosis using my dog Norman as the subject.

CIRRHOSIS OF THE

LIVER A CASE STUDY

NORMAN – 10 1/2 YEARS OLD

PRESENTING PROBLEM:

A ten-and-a-half-year-old neutered AKC Cocker Spaniel weighing 31.2 lbs, named Norman, was presented for being Listless; In-active; Polyuric/Polydipsia; and a large lump on the left side just behind the ribs.

HISTORY:

Norman had a history of Osteoarthritis in his hip joints, for which he was taking 75mg off Rimadyl each day for over 2 years. Two and a half months before this visit, Norman received a Dental Cleaning, Vaccinations, and skin Tumor removal.

PHYSICAL EXAM:

During Norman's physical examination, his veterinarian concluded that he did seem listless, his left side just behind the ribs had a large lump that felt like a Lipoma, his abdomen felt as if it might have some fluid, his Heart sounds OK and Lungs clear.

TEST RESULTS:

Needle biopsy of lipoma confirmed that it was just fat.

Since the signs of polydipsia and polyuria can be seen in multiple disease processes, both blood work and urine tests were performed to determine which disease was present.

The urinalysis results showed no evidence of a urinary tract infection, no glucose, or ketones, nor blood or protein in the urine.

Norman's blood test results showed signs of liver problems: (low and high results)

Test Results	Reference Range
General Health Profile	Ref. Range
ALB=2.02 (L)	2.60-3.90
ALT=199 (H)	12-130
BUN=10.2 (L)	16.0-36.0
CREA=0.73 (L)	0.80-240
Blood Test	Ref. Range
HCT=36.6 (L)	37.0-55.0
WBC=17.8 (H)	6.0-16.9
GRANS=15.2 (H)	3.3-12.0

Next a **Bile Acid Test** indicated a significant decrease in liver function.

Bile Acids Test	Normal
Pre Meal=81.8 (H)	(< 13)
Post Meal=152.6 (H)	(<25)

Finally, an **Ultrasound** was performed and revealed an **extremely small hypoechoic and coarse liver** within a large volume of anechoic fluid throughout the abdominal cavity. ([complete radiographic/sonographic report](#) included in chart below).

INITIAL THERAPEUTIC PLAN:

- 1) Rimadyl use was discontinued
- 2) Amoxicillin 250 mg caps 1 tablet 2x/day for 20 days
- 3) Silymarin (Milk Thistle) 150mg 1 tablet 1x/day to support liver function
- 4) Prescription L/D diet
- 5) Antioxidants (Vitamin E and selenium)
- 6) Ursodiol Tabs 250mg 1/2 tablet 1x/day for liver disease
- 7) Adequin 0.6 cc 2x/week for 3 weeks, then 0.6 cc 1x/month for arthritis

RESULTS:

Norman was doing much better after two weeks of Milk Thistle, Amoxicillin, and Hills Prescription L/D diet. The abdomen was not as bloated, liver enzymes looked good, and Albumin levels increased. Antioxidants (Vitamin E with selenium) were added to aid the healing process.

A week later, Norman was still vomiting, had diarrhea, mild bloating, and a ravenous appetite resulting in eating his on feces. Another blood workup was done and showed a drop in Albumin, CREAT and BUN. At this time the diagnosis of Cirrhosis was given along with a poor prognosis of only weeks or a month to live.

Ursodiol (Actigal Rx) was added to the treatment plan to help keep the bile flowing and protect the liver cells from destructive bile salts. This seemed to stop the early morning vomiting of bile.

HOLISTIC TREATMENT AND RESULTS:

It was at this point that I took over Norman's treatment plan. I spent hours on the Internet doing research. I read every book I could find with any reference to the treatment of liver disease. The two major changes I made immediately were to **stop the Antibiotics and change to a homemade/natural diet**. This natural holistic treatment was used to detoxify and support his liver.

I started with Sunny's Miracle Diet which I found on the Internet. ([see Appendix A](#))

This recipe includes rice, which was hard for Norman to digest. Ultimately, I created a variety of recipes using the following.

HOMEMADE NATURAL DIET

The diet consisted of several small meals with:

- vegetables, (alfalfa sprouts, carrots, artichoke hearts, squash, and broccoli)
- carbohydrate (oatmeal, barley, potatoes, pasta, or yams), and
- high quality protein (soy, yogurt, cottage cheese, tofu, chicken, eggs)
- seasoned with garlic, basil, and kelp

After two months of the holistic treatment, Norman's blood was rechecked and a Superchem profile was run to make sure this diet was not causing any imbalances. The [test results](#) were very positive.

From this point on, I kept doing research while I adjusted Norman's diet. Off and on, Norman would have various stomach problems. I was able to determine which food items caused digestive upsets, vomiting, diarrhea, bloating and stomach pain. In Norman's case, anything with rice caused diarrhea, gas and vomiting.

Digestive enzymes were added to each meal to aid digestion, absorption and maximize the utilization of the nutrients in his diet.

My original veterinarian was not in support of this homemade diet. So I sought the services of a Holistic Veterinarian who would help me improve Norman's diet and recommend other beneficial supplements.

I had an initial consultation with Dr. Deborah Forster to get a second opinion. She reviewed Norman's history and last blood test results. Then she consulted with an Internist and recommended adding the following supplements to Norman's regimen.

- Taurine 500mg 2x/day for liver and cognitive
- L-Carnitine 500mg 2x/day for liver and cognitive
Alpha-Lipoic acid (ala) 100mg 1x/day for cognitive
Lower Vitamin E from 400 to 200 IU – d alpha form
- Double dose of Milk Thistle from 150mg 1x/day to 150mg 2x/day
- Add Turmeric 1 tsp daily to his food

- Switch from human vitamin to Canine Plus Multi-Vitamin with antioxidants
- Switch from human digestive enzymes to Prozyme® digestive enzyme

I added these supplements and continued Norman's treatment with Dr. Forster. Blood tests were run every three to six months to monitor Norman's liver condition. Norman's blood test results remained normal for over a year and a half.

Norman's diet was adjusted to provide a variety of healthy meals that produced normal stools and eating behavior.

SUMMARY:

This case of cirrhosis of the liver was successfully treated without the use of conventional medications like steroids. Instead, the liver was supported through a homemade diet and beneficial supplements:

- Milk Thistle (Silymarin),
- Ursodiol
- Antioxidants: Vitamin E with Selenium, Taurine, Alpha-Lipoic Acid, Omega-3 Fatty Acids,
- Multi-Vitamin and other useful supplements,
- Digestive enzymes in every meal.

Although the exact cause of the liver disease could not be determined, it was clear that drugs like Rimadyl should be eliminated to prevent further liver damage.

Once all potentially harmful items were removed from Norman's environment and care was taken to support the liver in every way possible - all blood test results returned to normal and no further symptoms occurred. ([see Norman's complete Chart and test results below](#))

NORMAN' S CHART

PATIENT
INFORMATION

Name: Norman
Sex: Male, Neutered Birthday: 04-05-91
Breed: Cocker Spaniel

Date	Vet	Description of Examination and Treatment	Test Results	Reference Range
1/31/96	RG	Heartgard Green chew 26-50 Program Yellow 21 to 45# (flea)		
5/10/97	RG	Dental Tarter		
7/3/98	RG	Dental Clean & Polish Teeth <50 DHLP/Parvo Annual, Rabies Advantage DOG 2.5ml RED		
10/26/98	RG	Upset Stomach Liquipect liquid with Antibiotic Centrene Injection Subcutaneous Fluids		
6/11/99	RG	Dental Care Recommendation DHLP/Parvo Annual, Rabies Geriatric Health Profile Rimadyl 75 mg tabs - ½ pill every 12 hours as needed for pain Advantage DOG 2.5ml RED Heartgard Green chew 26-50		
12/28/99	RG	In Pain Heartgard Green chew 26-50		
5/30/00		Grooming	Weight:34.5	
10/10/00	RG	Lipoma Left Rib Cage Osteoarthritis hip joints Patellar Luxation Bilateral DHLP/Parvo Annual, Rabies X-Ray, Routine Rimadyl Caps 75mg x 60 - ½ tablet 2x/day		
12/09/00 to 12/15/01	RG	Rimadyl Caps 75mg x 60 - ½ tablet 2x/day Heartgard Green 6 Month Supply		
3/30/01		Grooming	Weight:34	

Date	Vet	Description of Examination and Treatment	Test Results	Reference Range
09/21/01	RG	Gingivitis ++++++ Sebaceous Adenoma Tumor Removal DHLP/Parvo Annual, Rabies Torbugesic Inj (for pain) Dental Clean & Polish Teeth <50 Moderate calculus and tartar build up. Rinsed mouth with Hexarinse	Weight:28.9 GLU=100.3 BUN=4.9 (L) ALT=34 <u>Blood Test</u> HCT=34.9 (L) HGB=12.4 MCHC=35.5 WBC=12.6 GRANS=10.0 % GRANS=79% L/M=2.6 %L/M=21% PLT=165 (L) Retics=0.6% TP=6.0	76.0–145.0 16.0–36.0 12–130 <u>Ref. Range</u> 37.0–55.0 12.0–18.0 30.0–36.9 6.0–16.9 3.3–12.0 1.1–6.3 175–500 5.70–8.90
		Initial Diagnosis of Liver Disease		
12/15/01	RG	Listless. Not active. Eating not normal. Polyuric/Polydipsia Left side just behind the ribs a large lump feels like a Lipoma Needle Biop - Just Fat Abdomen feels as if might have some fluid Heart sounds OK Lungs clear Canine l/d cans STOP taking Rimadyl	Weight: 31.2 Temp: 102.5 <u>General Health Profile</u> ALB=2.02 (L) ALKP=103 ALT=199 (H) AMYL=1030 BUN=10.2 (L) Ca=8.61 CHOL=120.7 CREA=0.73 (L) GLU=127.2 PHOS=4.04 TBIL<0.10 TP=5.89 GLOB=3.87 <u>Blood Test</u> HCT=36.6 (L) HGB=12.3 MCHC=33.6 WBC=17.8 (H) GRANS=15.2 (H) % GRANS=85% L/M=2.6 %L/M=15% PLT=204 Retics=1.3% <u>Urinalysis</u> Leukocytes=Neg	<u>Ref. Range</u> 2.60–3.90 14–111 12–130 500–1500 16.0–36.0 7.80–11.30 110.0–320 0.80–240 76.0–145.0 3.10–7.50 0.00–0.90 5.70–8.90 2.80–5.10 <u>Ref. Range</u> 37.0–55.0 12.0–18.0 30.0–36.9 6.0–16.9 3.3–12.0 1.1–6.3 175–500

Date	Vet	Description of Examination and Treatment	Test Results	Reference Range
			Creatinine=200 Ketone=Neg Blood pH=8.5 Glucose=Neg Bilirubin= + Protein=100 Specific Gravity=1.043 Clear Yellow w/Normal Odor	
12/17/01	RG	Exam & Board Day Only Bile Acid Pre&Post Study	Weight: 31.70 Bile Acids Test Pre Meal=81.8 (H) Post Meal=152.6 (H)	<u>Normal</u> <13 <25
12/20/01	AV	<p><u>Radiographic/Sonographic Findings:</u> An abdominal ultrasound was performed. The liver was extremely small and difficult to image. The liver was diffusely hypoechoic and coarse in echogenicity. Hepatic mass lesions were not seen. The gall bladder was small. The left medial liver lobe measured approximately 5.8cm dorsoventrally by 2.3cm cranial to caudal. There was a large volume of anechoic fluid present throughout the abdominal cavity. Abnormalities were not seen in the spleen. There was slight decreased corticomedullary differentiation in both the right and left kidneys. Adrenal glands were not visualized. The urinary bladder appeared normal. Gastrointestinal lesions were not identified. Intra-abdominal lymphadenopathy was not seen. There was uniformly relatively hyperechoic mass noted in the cutaneous tissues associated with the left corsal abdomen: this mass was external to the peritoneum. The peritoneum was slightly convex into the abdominal cavity around this mass. This was felt to represent a cutaneous lipoma.</p> <p><u>Radiographic/Sonographic Conclusions:</u> Small diffusely hypoechoic hepatic parenchyma. The possibility of hepatic fibrosis and vacuolar or degenerative hepatopathy should be considered. Moderate volume abdominal effusion. Mild chronic renal changes.</p> <p><u>Recommendations:</u> Symptomatic management for liver failure is suggested. If the patient is non-responsive to medical management or histopathology is desired, an ultrasound guided biopsy could be obtained under heavy sedation/anesthesia. A coagulation profile would be suggested prior to biopsy.</p>		
12/20/01	MH	<p>Phone Consultation Owner called to say that patient had ultrasound and ultrasonographer found a lot of fluid in the abdomen. Owner was concerned that patient would be in immediate distress because of the large amount of fluid. Told owner that we do not usually drain that fluid unless patient is in immediate distress.</p>		

Date	Vet	Description of Examination and Treatment	Test Results	Reference Range
		Draining fluid decreases blood protein levels.		
12/22/01	RG	Office Visit, Follow-Up Amoxicillin 250 mg caps 1 tablet 2x/day for 20 days Adequin 0.6 cc 2x/week for 3 weeks, then 0.6 cc 1x/month for arthritis Silymarin 150mg 1 tablet 1x/day to support liver function		
1/05/02	MH	Check-up, follow up blood work Patient doing much better. Eating 1/d well. Abdomen not bloated. Patient on Milk Thistle. Liver enzymes good. Albumin increased. Continue 1/d diet Continue Milk Thistle Start Antioxidants (Vitamin E and selenium) Consider Ursodeoxycolic acid	Weight: 26.80 Temp: 102.00 <u>Blood Test</u> ALKP=79 GGT=4 ALB=2.43 (L) ALT=113 (normal)	<u>Ref. Range</u> 14-111 1-12 2.60-3.90 12-130
1/12/02	RG	Check-up, follow up blood work Owner complained that Norman is still vomiting, having diarrhea, is still bloated and has a ravenous appetite. Norman really seems to be doing well as possible. It seems now the real dx is Cirrhosis of the liver and there is very little else we can really do. A liver transplant only "real" solution. Prognosis is poor, only a few weeks to a month. Increase amount of (1/d) food to 1 ½ can / day Amoxicillin 250 mg caps 1 tablet 2x/day for 20 days Start Ursodiol Tabs 250mg ½ tablet 1x/day for liver disease	Weight: 27 <u>Blood Test</u> ALKP=90 GGT=4 ALB=2.22 (L) ALT=91 BUN=4.4 (L) CREAT=0.65 (L) GLU=108.3 TP=6.17	<u>Ref. Range</u> 14-111 1-12 2.60-3.90 12-130 16.0-36.0 0.80-2.40 77.0-125.0 5.70-8.90
1/14/02	O	START DIET - Sunny's Miracle Diet + Ester C, Teeter Creek Liver Tonic STOP Amoxicillin		
2/11/02	RG	Ursodiol Tabs 250mg ½ tablet 1x/day		

Date	Vet	Description of Examination and Treatment	Test Results	Reference Range
3/9/02	MH	Re-Check Blood Work	Weight: 28	
3/25/02	MH	<p>Patient vomited all his food last night. Patient was having diarrhea, seems listless and not wanting to eat now.</p> <p>General Appearance: Quiet Integumentary: Normal Musculoskeletal: Normal Circulatory: No problem noted Respiratory: Normal Digestive: Normal Teeth: WNL Gentourinary: Normal Eyes: WNL Ears: WNL Neurosystems: Good Lymphnodes: Normal Mucous Membranes: Normal Reproductive system: WNL</p> <p>Rule-outs: -- final liver failure -- gastroenteritis</p> <p>IV fluid therapy with B-complex added for the night, if not improved, will do bloodwork.</p> <p>Patient ate breakfast brought by owner, seemed brighter, will send home.</p>	<p>Weight: 26 Temp: 101.70</p>	
4/22/02	MH	Ursodiol Tabs 250mg ½ tablet 1x/day		
4/24/02	DF	<p>Second Opinion</p> <p>Consultation, exam, and review of history</p> <p>Taurine 500mg 2x/day for liver and cognitive L-Carnitine 500mg 2x/day for liver and cognitive Alpha-Lipoic acid (ala) 100mg 1x/day for cognitive Lower Vitamin E from 400 to 200 IU - d alpha form Double dose of Milk Thistle from 150mg 1x/day to 150mg 2x/day Add Turmeric 1 tsp daily to his food Switch from human vitamin to Canine Plus Multi-Vitamin with antioxidants Switch from human digestive enzymes to Prozyme digestive enzymes</p>		

Date	Vet	Description of Examination and Treatment	Test Results	Reference Range
7/2/02	DF	Patient vomiting and severe diarrhea 1.0 PENICILLIN INJ 1.0 CENTRINE INJ CHEM6 + CBC	<u>General Health Profile</u> ALKP=113 ALT=30 BUN=11.4 CREA=0.70 GGT=1 GLU=106.1 K=4.58 Cl=116.2 <u>Blood Test</u> HCT=46.3 HGB=15.1 MCHC=32.6 WBC=20.9 (H) GRANS=18.7 (H) % GRANS=89% L/M=2.2 %L/M=11% PLT=287 Retics=0.6%	<u>Ref. Range</u> 23-212 10-100 7.0-27.0 0.50-1.80 0-7 77.0-125.0 3.50-5.80 109-122 <u>Ref. Range</u> 37.0-55.0 12.0-18.0 30.0-36.9 6.0-16.9 3.3-12.0 1.1-6.3 175-500
8/27/02	DF	Comprehensive Exam	Weight: 24.3	
9/10/02	DF	Patient in Pain Re-Check Exam Torbutrol Tabs 5mg one every 8 hours for arthritis pain	Weight: 25.5	
9/11/02	DF	Patient crying, acting painful, limping on the back left leg, abdomen is swollen. Gave 1 torbutrol last pm - caused sedation for several hours then pain seemed to return after meds worn off. Increased anxiety. Keep for Rads of spine / left leg / pelvis. Rads - Severe proliferation osteoarthritis of both coxofemoral joints. . Luxation (7x?) of right femoral head. Irregular joint surface of femoral intercondylan area (L) - ACL? Severe calcified discs, but do not see evidence of IVD rupture / herniation. Increased gas in stomach / intestinal loops. Returned Torbutrol tabs.	Temp: 101.6	
10/7/02	DF	Re-Check Exam	Weight: 24	

Date	Vet	Description of Examination and Treatment	Test Results	Reference Range
11/11/02	DF	Re-Check Exam Urinalysis and sediment Chemistry (6 panel)	Weight: 25.4 <u>General Health Profile</u> ALKP=78 ALT=30 BUN=14.4 CREA=1.08 GGT=1 GLU=101.0 Na=153.8 K=5.01 Cl=117.8 <u>Urinalysis</u> Urobilinogen=normal Glucose=neg Nitrite=neg Leukocytes=net Ketone=Neg Blood=Neg pH=6 Bilirubin ++ Protein=+/30 Specific Gravity=1.025 Color=Yellow Appearance=Hazy	<u>Ref. Range</u> 23-212 10-100 7.0-27.0 0.50-1.80 0-7 77.0-125.0 144-160 3.50-5.80 109-122
2/11/03	DF	Re-Check Exam	Weight: 24.6	
4/24/03		Grooming	Weight: 24	
5/22/03	DF	Re-Check Exam CBC + CHEM25	<u>CBC</u> HCT=34.7 (L) HGB=12.2 MCHC=35.2 WBC=8.4 GRANS=6.6 % GRANS=76% Neut=5.3 EOS=1.1 L/M=2.0 %L/M=24% PLT=201 <u>CHEM25</u> ALK Phosphatease=58 ALT (SGPT)=59 AST (SGOT)=36 CK=82 GGT=6 Albumin=2.9 Total Protein=7.2 Globulin=4.3 Total Bilirubin=0.2	<u>Ref. Range</u> 37.0-55.0 12.0-18.0 30.0-36.9 6.0-16.9 3.3-12.0 2.8-10.5 0.5-1.5 1.1-6.3 175-500 <u>Ref. Range</u> 10-150 5-60 5-55 10-200 0-14 2.5-3.6 5.1-7.8 2.8-4.5 0.0-0.4

Date	Vet	Description of Examination and Treatment	Test Results	Reference Range
			Direct Bilirubin=0.0 BUN=17 Creatinine=0.9 Cholesterol=155 Glucose=82 Calcium=10.7 Phosphorus=3.8 TCO2 (Bicarbonate)=18 Chlorine=120 (L) Potassium=4.6 Sodium=152 A/G ratio=0.7 B/C ratio=18.9 Indirect Bilirubin=0.2 NA/K ratio=33 Anion Gap=19 Ammonia=38	0.0-0.1 7-27 0.4-1.8 112-328 60-125 8.2-12.4 2.1-6.3 17-24 105-115 4.0-5.6 141-156 0.6-1.1 0.0-0.3 27-40 12-24 0-169

"We have many effective and potent drugs available in our armamentarium. As the activity and potency of drugs increased, so has the risk of serious adverse effects. Rational use of drugs includes a consideration for the potential adverse effects, especially serious toxicity, and the ability to recognize adverse effects.

Do not dismiss an unexplained disorder in a patient until a drug-induced cause has been ruled out.

The Greek physician Hippocrates (440 - 375 BC) provided an ethical basis for the practice of therapeutics. He recognized that a physician sometimes does more harm than good. (This applies to veterinarians as well.)

The advice of Hippocrates, "primum non nocere" (translated: above all, do no harm) reminds us that it is better to administer no therapy at all than to administer therapy that might be harmful."

- Papich, Mark G. DACVCP - (Diplomate, American College of Veterinary Clinical Pharmacology)
 Adverse Drug Reactions of Clinical Significance.
 The Central Veterinary Conference August 23-26, 2003.

APPENDIX A: HOMEMADE DOG FOOD RECIPES

SUNNY'S MIRACLE DIET

By: Kennalea Pratt

This recipe gave me hope. This includes the supplements and a Healthy Powder used in the diet. It includes brown rice, which is hard to digest, and oatmeal, which can ferment easily. This shows you where I started and what inspired me. Many "liver dogs" have done very well on this diet.

- 3 Pounds of ground turkey**
- 4 Cups brown rice**
- ¼ Teaspoon garlic powder**
- 11 Cups (or more) water**
- 1 Bag frozen mixed vegetables**
- 1 Bag frozen chopped broccoli**
- 1 Cup regular oatmeal**

Meat substitutes:

You can substitute the highest-grade ground beef for the ground turkey.

Meal variations:

Add 1 chopped boiled egg to meal.
Mix ¼ cup of non-fat cottage cheese with the meal.

Reheat:

Put serving in microwave safe bowl and heat for 1 minute or just long enough to reach room temperature.

1. Combine water, turkey and rice in a large stew pot and bring to a boil, cover and reduce heat to low and cook for 45 min.
2. Add 1 bag of mixed vegetables.
3. Add 1 bag of chopped broccoli.
4. Stir in thoroughly, cover and cook for about 5 minutes.
5. Stir in 1 cup (¼ cup at a time) of regular oatmeal until all water is absorbed.
6. Put one lukewarm serving in food bowl.
7. Add ½ tablespoon of Modified Healthy Powder, 5 drops of Teeter Creeks LVR-TONE, 5 drops of Milk Thistle Extract and ½ digestive enzyme capsule into meal and serve.

Store the unused food in containers and refrigerate enough for 3 days. Freeze the rest.

Yield: About 22 cups.

Serving suggestions (in cups): small dog – ¾ to 1¾; medium – 1¾ to 2½+; large - 2½ to 3¼+.
(Feed twice a day)

Dr. Pitcairn's Complete Guide to Natural Health for Dogs & Cats gives a recipe for a 'Healthy Powder' which contains several important food supplements that should be added to each meal. The Healthy Powder recipe has been modified for the Sunnys Miracle Diet based on experience and use. Both the original version and the modified version are listed below.

Original Healthy Powder

Amount	Ingredient	Comment
2 cups	Nutritional (torula or brewers) yeast	Rich in B vitamins, iron and other nutrients. (Optional)
1 cup	Lecithin granules	Linoleic acid, choline and inositol, which help your dog emulsify and absorb fats, improving the condition of his coat and digestion.
1/4 cup	Kelp powder	Iodine and trace minerals.
1/4 cup	Human grade Bonemeal	Enough calcium to balance the high phosphorus levels in yeast and lecithin.
1,000 mg	Vitamin C (ground)	Not required by dogs because they synthesize their own, but personal experiences suggest its value.

Mix all ingredients together in a 1-quart container and refrigerate. Add to each recipe as instructed, usually about 1 tablespoon per meal.

Modified Healthy Powder

Amount	Ingredient	Comment
2 cups	Nutritional (torula or brewers) yeast	Optional
1 cup	Lecithin granules	
None	Kelp powder	Omit kelp to reduce sodium.
1/2 cup	Human grade Bonemeal	Enough calcium to balance the high phosphorus levels in lecithin.
5,000 mg or 2 tsp	Ester-C (powder)	Ester-C functions as an antioxidant and free radical scavenger, used to repair tissues and protect against cancer, infections, and enhances immunity.

Mix all ingredients together in a 1-quart container and refrigerate. Add to each recipe as instructed (usually about 1/4 tablespoon per meal).

BASIC HOMEMADE MEAL FOR LIVER DISEASE

- 1/4 Cup non-fat cottage cheese
- 1/4 Cup hard or medium tofu
- 1/2 Tablespoon extra virgin olive oil
- 1/4 Cup cooked macaroni
- 1/4 Cup raw or steamed mixed vegetables (alfalfa sprouts, carrots, celery, artichoke heart)
- 1/4 Cup distilled water

Substitutes:

Substitute 1/4 cup of soy granules for tofu.

Substitute non-fat plain yogurt for the cottage cheese.

Substitute 1/2 cup cooked (boiled) liver for the cottage cheese and tofu.

Substitute 1/4 cup of microwaved potatoes or yams (with the skin) for the macaroni.

Substitute 1 tablespoon of chopped raw almond slices for oil.

Vegetable preparation:

Wash and chop enough sprouts, celery and artichoke heart for 1 day (about 1/2 cup total) into bite-size pieces.

Steam or boil about 1/2 cup of peas and chopped carrots as directed. Combine all vegetables in container.

Enticers:

Add 4 tablespoons of chicken or beef broth.

1. Cook 1 cup of macaroni as directed on package. Allow to cool before serving.
2. Chop and prepare mixed vegetables.
3. Warm water in the microwave for 30 sec.
4. Combine cottage cheese, tofu, macaroni, vegetables, water and oil in food bowl.
5. Add digestive aid and medication as directed into meal and serve.

Store the unused vegetables and macaroni in separate containers and refrigerate.

Yield: 1 meal for medium size dog.

Serving suggestions (in cups): small – 3/4 to 1 3/4; medium – 1 3/4 to 2 1/2+; large - 2 1/2 to 3 1/4+. (Feed 3-4 times a day)

Reheat:

Place serving of macaroni and vegetables in microwave-safe bowl and warm for 30 seconds or just long enough to reach room temperature. Then combine with the rest of the ingredients to prepare one meal.

Vegetable substitutes:

Feel free to substitute any of the vegetables with other vegetables on the list of healthy foods. Always use at least 3 different kinds for a total of 1 cup. Serve only 1/4 cup in each meal.

HEALTHY CHICKEN, VEGETABLE, PASTA STEW

- 1 Whole chicken or 5 lbs. of chicken pieces
- 1 Chopped yellow squash
- 1 Chopped zucchini
- 1 Chopped carrot
- 1 Cup chopped celery
- 2 Cups frozen green beans
- 1 Cup frozen baby green peas
- 1 Cup uncooked curly (Ritoni) pasta
- 1 Gallon of water
- 2 Tablespoons dried kelp (optional)
- 2 Teaspoons minced garlic (about 2 cloves)
- 2 Tablespoons dried basil or chopped fresh basil

Vegetable preparation:

Wash and chop fresh vegetables into bite-size pieces.

Vegetable substitutes:

Feel free to substitute any of the vegetables with other vegetables on the list of healthy foods. Always use at least 3 different kinds for a total of 4 cups.

Meat substitutes:

You can add ½ pound of chicken liver for added taurine and vitamins.

Meal variations:

Add ¼ cup of microwaved potatoes (with skin).

Reheat:

Put serving in microwave safe bowl and warm for 30 seconds or just long enough to reach room temperature.

1. In a large saucepan over medium-high heat, bring ½ gallon of water and chicken to a boil. Boil for 5-10 minutes while removing fat from the water.

2. Once the fat is cooked off the chicken, add 1 tablespoon of garlic, basil, and kelp.

3. Simmer chicken on low for at least 1 hour or until completely cooked. Remove chicken from bones and chop into bite-size pieces. Discard most of the skin and fat.

4. While chicken is cooking - In a large

saucepan over medium-high heat, bring ½ gallon of water, pasta and vegetables to boil.

5. Add 1 tablespoon of garlic, basil and kelp to vegetables and pasta.

6. Simmer pasta and vegetables on low for 10 minutes. Remove from heat and keep covered until chicken is fully cooked.

7. Allow to cool before serving.

8. Mix one serving of vegetable pasta and chicken together with some broth.

9. Add digestive aid and medication before serving as directed.

Store the unused vegetables with pasta (together) and the chicken in broth separately in containers and refrigerate.

Yield: About 8 cups of vegetables/pasta and 2 cups of chicken.

Serving suggestions (in cups): small – ½ to ¾; medium – 1 to 1½+; large 1½ to 2+. (Feed 3-4 times a day.)

Ratio of vegetable pasta to chicken: 2:1
Example of 1 serving for a medium-size dog: ½ cup of vegetable pasta and ¼ cup of chicken (adjust as needed).

APPENDIX B: NORMAN'S ROUTINE AND NOTES

HERE'S AN EXAMPLE OF NORMAN'S ROUTINE AND THE NOTES DOCUMENTED:

		Wednesday
	Date	7/22/03
MORNING	Wake-Up Time	6:30am
	Morning Med Time	(usual) 7:00am
	Breakfast Time	7:15am
	Potty Patrol Check	Brown, Solid, Normal - 9:35am
NOON	Arthritis Med Time	(usual) 11:00am
	Lunch Time	11:15am
	Ursodiol	(Yes) 11:15am
	Potty Patrol Check	Brown, Solid, Normal - 11:35am
	Lunch Vitamins & Supplements	(usual) 11:15am with lunch
AFTERNOON	Arthritis Med Time	(usual) 3:00pm
	Dinner #1 Time	3:15pm
	Potty Patrol Check	None
EVENING	Arthritis Med Time	(usual) 7:00pm
	Dinner #2 Time	7:15pm
	Potty Patrol Check	Brown, Solid, Normal (7:30pm)
NIGHT	Night Vitamins & Supplements	(usual + cal) 9:00pm without food
	Bedtime Snack (optional)	10:00pm
BEFORE BED	Bedtime Med Time	9:45pm
	Potty Patrol Check	None
	Other Notes	
		Slept all night in bed No barking during the day No vomiting in the morning Ate Chicken, Veg., Pasta Stew Added Calcium to Night Vitamins