

FEEDING SIGHTHOUNDS by Laurie Soutar

Some books and articles would have you believe that in order to feed your dog a natural, or home based diet, you need a degree in nutrition. They will have you calculating caloric density, dry matter equivalents, calorie requirements per pound, etc. They will tell you that you will need a veterinary nutrition reference, a scale calibrated to the gram, a calculator, and university level algebra. You can formulate your diet that way, if you're the sort of person who enjoys doing your taxes, but it really isn't necessary. All you really need is a little basic knowledge and some common sense.

The nutritional needs of coursing dogs vary considerably from those of sled dogs or sporting dogs. Those breeds expend energy at a moderate level for a long period of time (all day), and should be fed to provide maximum energy reserves for endurance. Sighthounds, on the other hand, expend tremendous amounts of energy for only a minute or two, and should be fed to maximize peak performance, provide short term endurance, and also allow the dog to recover quickly. Anyone who has been out on the field helping me catch Barbie after she laps the field for the tenth time, and then watched her run again immediately after and still win her course will understand what I mean.

Let's look at the coursing sighthound's nutritional needs, we'll see what foods provide these needs, then we'll formulate our diet. All dogs need six things to perform to their potential best. These six requirements are (pay attention - there will be a quiz later) water, protein, fat, carbohydrates, vitamins and minerals.

Water is the most neglected part of most diets. Many coursing enthusiasts will restrict water prior to the course, concerned that the dog will be water-logged and will run slower. In fact, water is a necessary part of the chemical reaction that releases energy to the dog during performance, and also helps a dog to recover more quickly. A dog that has had water restricted for an hour or two prior to coursing will show fatigue and a lack of endurance on the field and will be more prone to dehydration afterward. Hard running causes the production of waste products in the dog's system, and the faster the dog can process and eliminate these waste products, the quicker he will recover. The dog that pees as it's walking off the field or immediately afterward will be the quickest to recover, and shows adequate water consumption prior to running. A dog should be offered a small amount of water immediately after running, then walked until he's cool (stops panting), and then allowed free access to water. The water and walking assists the dog to process the lactic acid (muscle milk), a waste product produced by the muscles during exertion. If the dog does not consume adequate amounts of water, or is not walked out sufficiently, the build up of lactic acid can cause muscle stiffness, soreness or cramps. The only time a dog's water should be restricted is immediately after running, until he's cooled off. The rest of the time he should have free access to water. The easiest way to provide this is to keep a bucket in his crate or ex-pen. In order to maximize consumption, the water should be cool in hot weather, and slightly warm if you're crazy enough to course when there's snow on the ground. At home, water (or other liquids) should be added to the food, and dogs must always have fresh clean water available. Never underestimate the value of water in your feeding and conditioning programs.

Proteins are the building blocks of the body. It is protein that provides for growth, the formation and repair of muscle, new tissue growth, and the repair and replacement of tissue from normal wear and tear. The level of protein in the diet will determine the dog's potential, or capacity on the field, up to his maximum genetic potential. Inadequate protein will result in a lower top speed, weaker cornering ability and longer recovery time.

Protein is composed of amino acids, 23 in all, that are either provided in the diet or synthesized in the body. Amino acids are present in different levels and combinations in different protein sources, so to ensure a balanced diet, a feeding program should include either more than one protein source, or should rotate protein sources. Primary sources of protein are meat, fish, poultry, eggs and milk.

Fats provide the energy that power the dog's body. Even for maintenance, sighthounds have higher fat requirements than most other breeds, and for coursing dogs, the fat requirements are higher yet. Each dog's metabolism will determine the rate at which it converts fat to energy, so fat needs will vary with each individual dog. High strung, edgy or fidgety dogs will require more fat than their laid back buddies. Fat is also essential for the maintenance of skin and coat, so dandruff or a dull or brittle coat indicates a lack of adequate fat in the diet. On the field, inadequate fat will cause a lack of stamina, or endurance - the dog will 'fade' on a long straightaway or towards the end of the course. Excess fat will be deposited as fat, both on the body and around the internal organs. Excess internal fat interferes with the normal function of the organs, and for this reason you should never course a fat dog - the stress on the body is too extreme. If you cannot see or feel the dog's ribs, keep him off the coursing field until he is in better weight and condition. Sources of fat include vegetable oils (corn, sunflower, safflower, etc.) and animal fats (beef fat, tallow, bacon grease, etc.)

Carbohydrates are found primarily in grains and grain products. They provide starches and sugars that assist the dog's body in utilizing proteins and fats efficiently. A lack of carbohydrates in the diet will cause the dog to use protein for energy rather than tissue growth and repair. The most important thing to remember about carbohydrates is that the dog's digestive system is unable to break down the cellulose in carbohydrates effectively when fed raw. In the wild, dogs will obtain their grains by eating the stomach of their prey, and the cellulose will already be broken down by the digestive process of that animal. At home, we can provide the same effect by cooking. Primary sources of carbohydrates include rice, bread, pasta, potatoes and cereals.

Vitamins are necessary for the maintenance of health and performance. While they do very little on their own, they act as 'activators' to various chemical reactions within the body. Each vitamin tends to have a specific action on some part of the dog's body or metabolism. A discussion of each vitamin would be a lengthy article on its own, but there are a few things you should remember. Each vitamin is classified either as water soluble or fat soluble. This describes both its physical property and its action within the body. Water soluble vitamins, if fed in excess, will be flushed from the body in the urine, while an excess of fat soluble vitamins will be stored in the fat or

internal organs and can lead to toxicity. With two exceptions, a dog will receive adequate vitamins in a balanced diet, and supplementation is neither advised nor recommended. The first exception is vitamin D. This vitamin is synthesized in the body from sunlight. In the winter months, during prolonged extreme cold or cloudy weather, or if the owner works all day, growing dogs will see inadequate sunshine and can suffer a vitamin D deficiency. Adult dogs are usually not affected, but puppies suffering from a vitamin D deficiency will go down in pastern or will get very narrow in front with the feet pointing out. Dogs which display these symptoms should be supplemented with vitamin D in the form of Cod Liver Oil. Half a teaspoon for puppies or 1 teaspoon for puppies over 40 lbs should be added to the food two or three times a week until improvement is seen or adequate sunshine is available. Vitamin D is fat soluble, so great care should be taken not to overdose.

The only other vitamin that should be considered for supplementation is vitamin E. Vitamin E has two main effects in the body, performance and reproduction. As a performance enhancer, vitamin E has several actions within the body. It acts as a vasodilator, increasing the diameter of blood vessels, improving blood flow to the tissues. It decreases the oxygen requirement of muscle tissue, which has the same effect as the oxygen boost that human athletes use. It also promotes urine excretion, as well as increasing the power and efficiency of both the body muscles and the heart muscle. With these actions it will improve speed, stamina and recovery time for coursing dogs. For its role in reproduction vitamin E supplementation should be considered for a bitch that fails to come in season, and if fed to both dog and bitch for four months prior to breeding will result in larger litter size and increased vitality in the puppies.

Vitamin E is naturally occurring in wheat germ and in lesser amounts in lettuce, tomatoes, carrots, egg yolk and nuts. For supplementation, the dose for reproduction or performance is 100 iu daily for Greyhound size, 200 iu for Borzoi size. Vitamin E is most commonly found in drug stores in gel caps, but in some areas may be ordered through your vet either as an oil or a powder. The natural source vitamin E is more effective than the synthetic. If you read the label, natural vitamin E is "d'alpha...", while the synthetic is "dl'alpha...". For coursing dogs, supplementation should start 4 to 6 weeks before the coursing season for maximum benefit. Vitamin E is very safe even in large doses, and its beneficial effects continue long after supplementation ends.

Minerals are required by the body in minute amounts and are generally readily available in a balanced diet. The only two we really need to be concerned about are calcium and phosphorus, which must not only be available in sufficient amounts, the ratio between them must be correct, especially for growing puppies and lactating bitches. For this reason, any diet containing fresh meat must also contain dairy products to ensure adequate amounts of calcium and phosphorus for bone growth and development.

Now that we have taken a look at the dietary requirements of coursing dogs, let's discuss the different foods we will use to formulate our diet.

Meat

The most common meat used in natural diets is beef, although other Meats can be used as well. The easiest beef to use is ground beef, and if you can find a supplier in your area, it is worth a little extra money to buy it already ground. I buy my beef from Broadway Meats in Orangeville (Ontario) - it is human grade beef, inspected, and is a combination of muscle meat, tripe, organ meats, fat and trimmings, all ground up like hamburger and frozen into 1 1/2 pound blocks, for 35 cents a pound. It is fairly high in fat, so I don't add extra fat as a rule. To find a supplier in your area, check your local butchers, pet food suppliers, and dead stock removal services.

There are a few general rules about feeding beef. Generally it is healthier to feed it raw, but if your supply is not inspected (just ask), or it is from salvage animals, it is probably safer to cook it. If you buy your meat frozen, or you cook it, you will need to add vitamin E, as both freezing and cooking will destroy the vitamin E in the meat. If the meat does not already contain organ meats (liver, kidney, tripe) you should add them periodically as they are very high in protein and are a good source of vitamins and minerals. If your primary source of meat is organ meats (including tripe) then relatively large amounts of fat must be added, as organ meats are virtually fat-free.

Horsemeat, if it is available in your area is a good source of protein. All the above information about beef applies to horsemeat as well. Horsemeat is slightly less digestible than beef, so if your primary source of meat is horsemeat, increase the amount by 15 - 20% to compensate.

Pork is fine for dogs when it is available, as today's pork is far leaner than in the past. Pork must always be cooked before feeding because of the risk of trichinosis.

Lamb or mutton is a good source of protein when it is available economically. Lamb tends to be very lean, so should be supplemented by extra fat, while mutton tends to be higher in fat and no extra fat should be added. Lamb is the most delicate and easily digested meat, and would be the best choice for highly stressed, ill or recovering dogs, or dogs that have a sensitive digestive system.

Chicken is good meat except that it tends to be too lean for our purposes, so be sure to include the skin and all the fat from the bird, or add another source of fat.

Dairy

The ideal diet contains protein from both meat and dairy sources. I use and recommend goat's milk, but other sources are also available. Goat's milk does not contain lactose, so it does not upset the dog's digestive system. It is naturally homogenized (the cream doesn't rise), so it is a higher fat content than cow's milk. Goat's milk is used to raise orphaned animals of all species, and can be used for that purpose for dogs as well. Because Greyhounds have such large litters, I start my pregnant bitches on goat's milk when they are seven or eight weeks along, up to one quart a day, and continue until I wean the puppies. A

bitch fed goat's milk during lactation will not suffer eclampsia or a calcium imbalance, will provide adequate milk even for the largest litter, and will not lose weight or condition herself. If you don't know a goat breeder in your area, call the Canadian Goat Society at (613) 731-9894. A goat breeder is a dog breeder's best friend.

Cottage cheese is a good source of calcium and protein, but can be quite expensive. If you are going to use this regularly, try to find a restaurant supply, dairy wholesaler or cheese plant. Many grocery stores will sell you just-expired product very cheaply.

Yogurt or sour cream may be the best choice for a dog that is a 'poor doer' or chronically thin. These products contain a live enzyme that can help him digest his food more efficiently. Read the label to make sure it is live cultured (will read 'bacterial culture' or 'bacterial enzyme') and is not set with gelatin. Look for it at the same sources as cottage cheese, above.

Hard cheese, such as cheddar, are excellent sources of protein, but are too expensive to use regularly. The only hard cheese that my dogs get tend to be the dried up ends from the fridge.

Cow's milk can be used if it is the only thing available to you - whole milk or homogenized is best. Dogs should be introduced gradually, starting with a small amount and increasing it over a period of two to three weeks to allow the dog's digestive system to adjust to the lactose. Some dogs never seem to be able to tolerate cow's milk.

Powdered cow's milk is available from your local feed store as 'calf milk replacer' and is an economical source of calcium and dairy protein.

Eggs

Eggs are an integral part of any natural diet - they are nature's most nearly perfect food and contain vitamins and minerals that are not easily available elsewhere. They are high in both protein and fat and are easily digested by the dog. For many years common practice has been to cook eggs, because there is an enzyme in the egg white which binds with biotin and makes it unavailable to the dog. Recent research has indicated that this is a problem only if the dog is fed more than two eggs per day, every day. Less than this amount is safe to feed raw. If you feel you must cook them, cook only the whites, and feed the yolks raw. In order to inactivate the enzyme in the whites, it only needs to be cooked until it is milky - it does not need to be thoroughly cooked. The easiest way to do this is to put the eggs in a dish and pour boiling water over them. Let it sit for a minute or two and then mix it into the food (along with the water).

Carbohydrates

This is the most readily available ingredient in a natural diet, and also the most economical. Rice, pasta, cereals, bread and potatoes are the most common sources, and if you're only feeding one or two dogs, the leftovers from your own cooking are probably sufficient. All of these sources are just slightly different, so I tend to rotate them regularly.

Fruits and Vegetables

Fruits and vegetables can be fed raw or cooked if you include the cooking water. I tend to include a wide variety in my dog's diet, subject to price and availability. Dog's preferences for vegetables will vary with the individual dog. If your dogs like vegetables, raw carrot or celery chunks make good dog cookies, or just cut the veggies into chunks and mix into the food. If they refuse to eat any vegetable they can recognize, you can shred or grate them in a food processor, or throw them in the blender with some water or beef broth. If you have a garden, that giant zucchini you found hiding under the leaves is perfect for the dogs, as well as broccoli or grate your excess veggies and freeze them raw, so you'll have fresh veggies for the dogs all winter.

Bones

Large beef bones are readily available free or low cost from butchers or the meat department of your grocery store. Natural bones are wonderful for keeping your dog's teeth clean, and are certainly useful for keeping them amused. I like big knuckle or thigh bones - usually labelled as 'soup bones'. I feed them raw, but if you prefer to cook them the best way is to crack them (with a hammer) then roast at 350 degrees for 30 minutes.

Never feed steak, pork or chicken bones, or any kind of bone that could splinter and puncture a dog's stomach or intestines.

Water

We are going to add liquid to our diet anyway, so save and use cooking water from the kitchen. Vegetables, pasta, potatoes, and anything else you boil loses vitamins and minerals into the water, so save that water and include it in your dog food. I keep a dog bowl on the kitchen counter for cooking water and leftovers.

Leftovers

Almost everything that is left over from cooking people food is suitable for dogs, with the exception of highly spiced or sugary foods. Save whatever leftovers you have during the course of the day, then adjust your regular ingredients to allow for the leftovers and your natural diet will stay balanced.

Kibble

I mix my natural diet with small amounts of commercial kibble to help ensure my diet stays balanced and provide vitamins and minerals, as well as providing some texture and crunch. The amount of kibble you use will depend on the protein level of the kibble, and on the individual dog. I tend to keep my natural diet stable, and adjust the amount of kibble for each dog, so that the dog that needs a larger volume of food will get more kibble instead of the other ingredients.

Now that we have looked at all the ingredients that we can use, putting

them together is a simple matter by using the chart below which lists equivalent quantities and serving size. This diet is formulated for an active, coursing 75 lb Greyhound that would eat six to seven cups of good quality, dry kibble if that were all he was being fed. Consider this as suitable amounts for 75 pounds of dog, total up how many pounds of dog you are feeding, and then adjust the amounts accordingly.

All you need to do is choose one serving from each category, mix and serve. I feed my meal quite soupy, to ensure the dogs consume lots of liquids. Introduce your dogs gradually to a natural diet. You will find that once they have changed over, you can substitute within each category freely without upsetting their digestion, and they can eat just about anything without problem.

MEAT

1/2 lb high fat beef
1/2 - 3/4 lb low fat beef + 1 fat
3/4 lb horsemeat
1/2 lb pork
3/4 lb lamb +2 fat
1/2 lb mutton
3/4 lb chicken +2 fat

FAT (if necessary)

1 tbsp corn oil
2 tbsp beef fat
3 tbsp chicken fat/skin
2 tbsp suet
2 tbsp lard

DAIRY

1 cup goat's milk
1/2 cup cottage cheese
1/4-1/3 cup hard cheese
1/2 cup sour cream
1/2 cup yogurt
3/4 cup rice
1 1/2 cups cow's milk (whole or homo)
3 tbsp calf milk replacer (powder)

CARBOHYDRATE

1 cup pasta
3/4 cup hot cereal (oatmeal, red river, cream of wheat)
1 cup cold cereals (Cheerios, Corn Flakes)
2 slices bread (rolls, biscuits)
3/4 cup potatoes

FRUITS & VEGETABLES

1/2 cup any vegetable

3/4 cup any fruit

KIBBLE

1 cup 10 - 17% protein

3/4 cup 17 - 24% protein

1/2 cup 25% protein

OTHER

Eggs 2 or 3 times per week (or as needed)

Vitamin E 100 iu daily

Cod Liver Oil growing dogs if needed

Bones once a week

Special Needs

Weaning - I wean puppies onto goat's milk, then add meat. Carbohydrates are added at about six weeks old, and onto the full diet by eight weeks. Make sure to keep the same balance between meat and dairy.

Thin Dogs - If a dog is chronically thin, don't try to fatten him up with pasta. These dogs tend to have a harder time getting full value out of their food, and the carbohydrates are the hardest to digest. Instead, add more protein in the form of meat and eggs, especially organ meats, and make sure his dairy portion of dairy includes live bacterial culture (sour cream or yogurt). If the dog has just lost weight and needs to gain it back, then increasing the amount of carbohydrates is fine.

Pre-coursing - The night before a coursing or race meet, feed a normal meal. The morning of the meet, feed a small breakfast of carbohydrates and dairy only. I use a couple of slices of bread soaked in cream or goat's milk. This produces a readily available source of energy, without sitting heavy in the dog's stomach.

Post-coursing - For the first one or two meals after a meet, increase the amount of meat and add two eggs. This provides the quickest healing and repair of muscle tissue.

Further Reading

Feeding Racing Greyhounds, John R. Kohnke, BVSc, RDA, - Greyhound Review, 1992-93

All About the Greyhound, Anne Rollins, Rigby Publishers, 1982

Merck Veterinary Manual, Merck & Co, 9191

Collins Guide to Dog Nutrition, Donald R. Collins, DVM, McMillan Publishing, 1972

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