Nutrition Primer for Discerning Pet Owners

Most people have not had much education about nutrition, and what they have had tends to center around human nutrition. Pets have many of the same nutritional requirements as people but also many differences. The basics of nutrition as they apply to dogs and cats are outlined here. Nutrition is a complicated subject, and research and development in the field are coming along at a fast pace. We can't possibly give you an entire nutrition course here, but hopefully we can give you enough information to help you to choose the best food and snacks for your pets.

First, a few nutritional terms your need to know. ***Palatability*** is a measure of how well an animal likes a food. This involves not only taste and smell but also the shape, texture, consistency or "mouth feel" of a food, the temperature at which it is served, and habit. Pets, especially cats, become used to the way a food feels in their mouth, and may be reluctant to change to a different shape or texture of food, even if the smell and taste are the same. Cat food manufacturers each have their own particular size and shape of nugget, so a cat will get used to that shape and not want to eat a new one. The cat has become accustomed to the mouth feel of the nugget and prefers it out of habit. Cats also may vomit canned food that is too cold (just out of the refrigerator), and then associate that food with not feeling well. Any food a pet has eaten when it was sick may be refused later on.

Increasing the protein or fat content of a food make it more palatable. Conversely, reducing fat, as with a low calorie diet food, makes a diet less palatable to the pet – just as it does in people! Other things that make a food taste better to a pet are salt, which is commonly added to pet foods as a flavoring and a preservative; and an acid pH, so pet food companies spray "acid digest" on the food nuggets.

Digest is made by controlled enzymatic degradation of animal tissues. In other words, poultry organs, fish, liver or beef lungs are allowed to rot until they reach a certain level of decay. Then phosphoric acid is mixed in to kill the bacteria and stop the decay process. The resulting liquid is prayed onto the exterior of a dry food to make it taste better. Different digests are used to impart a "chicken" or "fish" flavor to the diet. A "chicken flavor" food may be a corn based diet with chicken digest sprayed on it, and the same brand of "fish" flavor may have fish digest instead. This allows a company to sell a "variety" of foods and occupy more shelf space at the store.

The availability of a food to the body is called ***digestibility***. This is a very important concept in nutrition. It doesn't matter how high the level of protein or fat is in the diet if it cannot be digested by the body. For instance, a diet consisting of shoe leather, motor oil, vitamins and minerals will analyze to meet National Research Council recommendations, but since shoe leather and motor oil are not digestible, the amount of protein or fat contained in those ingredients is meaningless. *The presence of a nutrient in the food does not mean that it can be absorbed or utilized.* When you read a pet food label you will see a chart listing the maximum and minimum amounts of certain nutrients contained in the food. Without knowing how well each of those is digested, however, it is impossible to evaluate the quality of the food. This is one of the major concerns regarding generic foods.

Although rawhides aren't very digestible and thus don't add too many calories to a pet's diet, one greasy pig ear contains as much as 800 calories of fat!

You will also see the label claim "balanced, complete, adequate, or guaranteed to meet or exceed all Nutritional Research Council nutrient recommendations" but that, too,

has little meaning. The best way to analyze a food is to substantiate the label claims with feeding trials according to established protocols.

> Older dogs and cats often have decreased senses of taste and smell, as well as hearing and sight. They also digest their food less efficiently. Consequently, diets for older pets should be highly digestible and palatable. Dividing food into mare frequent but smaller meals can aid digestion.

In feeding trials, dogs or cats are fed a particular diet and are monitored throughout their lives for weight; coat quality; liver, kidney and heart function; growth rates; cancer rates; longevity and other parameters, to ensure that pets on that diet remains healthy. As you can imagine, it's expensive for a company to do this, so many manufacturers don't do it. They just assume that their formula works. Companies can quickly ascertain if a diet is grossly deficient in nutrients – inadequate calcium, protein or phosphorus causes disease to occur rapidly. Diseases caused by nutrient excesses, however, take years to develop and are often more subtle. Without food trials a manufacturer will never know if pets fed a particular diet are more prone to heart disease, kidney disease or cancer.

There are just 6 *nutrients* that make up all foods, and are contained in the body. These nutrients are Water, Carbohydrates, Proteins, Fats, Vitamins, and Minerals. All are essential to life. Super-Premium dog foods such as Science Diet and Eukanuba have optimal amounts of nutrients, not too much or to little. These nutrients are readily absorbed by the body, producing less waste products and less stool volume. They are easily digested and appropriate for the age and energy requirements of the pet.

Energy in the form of calories can be derived from carbohydrates, proteins or fats. A dog's appetite is driven by the need for energy – in a healthy weight pet the amount of food consumed equals the energy requirements of the pet. If a dog needs to consume 300 calories of energy per day, it will feel hungry until it has consumed 300 calories. (Although many pets, like people, will continue to eat even after they aren't hungry any more!) Thus food consumption and hunger are based on calorie requirements, not the need for individual components like protein, fat, vitamins or minerals.

Cats are a little different. Cats stop feeling hungry when they've eaten their daily protein requirement. There are some new weight-loss diets that are capitalizing on this by increased protein content. Thus the cat feels full sooner and eats less.

Diets eaten by animals must be balanced in regard to energy. ***Balance*** in nutritional terms means the diet will supply all necessary nutrients when it is consumed based on energy needs alone. Contrary to popular belief, animals do not eat their food based on instincts which regulate protein, vitamin or mineral needs. *The only nutrients consumed according to need are energy, water and salt in dogs, and protein, water, and salt in cats*. Pets do not have a desire or hunger for nutrients that are deficient in the diet, nor will they eat less of a food that has excessive nutrients. The diet must contain adequate protein, for example, by the time the pet has eaten that 300 calories worth of food, or the pet will become deficient in protein.

> If a sled dog is running 100 miles a day in subzero weather his intestinal tract will need to process an incredible 8 times his maintenance requirements in food each day.

Young growing pets and animals that get lots of exercise burn more calories for energy and thus need to consume more calories in their food. Active pets do *not* need additional protein and in fact it is more efficient to feed more fat and carbohydrates to active pets, not more protein. In a study comparing Purina Hi Pro, which is high in protein, to Science Diet Performance, which is high in energy density but has normal protein levels, the high energy diet produced 25% greater stamina in working dogs. Dogs fed Purina Hi Pro

reached exhaustion after 15 miles and dogs fed Science Diet Performance not until 20 miles.

Energy needs also increase when the ambient temperature is high or low. Guard dogs in tropical climates actually need more than twice as many calories to keep cool and maintain normal body weight. An outdoor dog in Wisconsin winters will need 3 times as much food as an indoor dog. Racing sled dogs are fed pure whale blubber when competing, to get enough calories for extreme exercise and weather.

Racing, hunting, showing, agility training and disease can also increase calorie needs. Pets that have been very ill may need extra nutrition for as long as 45 days after they seem to have recovered. If your pet has special nutritional needs requiring increased energy in the diet a high fat and high carbohydrate diet is recommended. On the other hand, 60% of pets in the U.S. are overweight, many extremely so. People are so used to seeing overweight pets that they believe normal weight pets are too thin. A pet at his or her ideal weight should have a waist. You should see the belly tuck up behind the ribs or narrow like an hourglass when looked at from above. The ribs and backbone should be easy to feel under the skin but not stick out. Obesity shortens the life expectancy of pets just as it does people, and increases the risks for arthritis, back problems, heart disease and diabetes. Overweight pets die about two years earlier and develop arthritis two years earlier as well.

> The average hunting dog is asked to participate in a very stressful form of exercise. This is seasonal, intermittent endurance activity for which they are often under conditioned and underfed. Many of these dogs are pets or kept in kennels and are hunted for only a few weeks a year. It is best to feed these dogs' maintenance diets for most of the year and start training and a performance diet at least three weeks before the hunting season begins.

The easiest way to get a pet to lose weight is to feed a diet specially formulated for weight loss. Just cutting back on a pet's regular food enough to cause weight loss usually causes the pet to feel hungry and cranky. Cutting back too far, especially when a poor quality food is being fed, can lead to protein, vitamin, or mineral deficiencies.

Diets with high quality nutrients and high levels of digestibility and energy will be eaten by a pet in smaller portions. These smaller portions satisfy the needs of the pet more effectively than larger portions of poor quality diets. Because poor quality diets may be eaten by the pet in much larger amounts to supply the same energy need, the perception by the pet owner is that the poor quality diet is better liked by the pet. This is not true! The pet simply consumes more because it cannot obtain the calories it needs from a smaller portion.

The next essential nutritional need after energy is ***protein***. Proteins are chains of amino acids linked together like cars on a long train. There are 13 different essential amino acids, which link together to form chains. By linking together different combinations of these 13 amino acids thousands of different proteins are made, each having a specific structure and function. These different proteins make up the hair, eyes, skin, muscle, hormones, blood cells and all the other components of the body. All 13 essential amino acids must be present in the diet for the body to be able to make all its thousands of proteins. If one amino acid is lacking, whatever proteins are made using that amino acid cannot be produced and health problems will result.

When a pet eats food containing protein, the protein is broken down in the body into its individual amino acid components. These are then transported throughout the body and then reassembled within the tissue of the animal that digests them. It is important that the balance of amino acids that are eaten matches what is actually needed by the pet. A

diet can have plenty of protein but can be lacking one or more individual amino acids. Excesses of protein or amino acid are burned by the body as fuel. Interestingly, there are differences in amino acid requirements between breeds. Labrador retrievers need twice as much methionine as beagles, for example. In the future we may see different pet foods designed specifically for different breeds.

Using protein for energy produces waste products that must be metabolized and excreted by the liver and kidneys. Excesses of protein, especially poor quality protein, lead to an increased work load by the kidneys. A high protein diet in a pet with kidney disease can make kidney failure much worse. This is very common in older pets.

Dogs are omnivores, requiring a mix of plant and animal protein, and not carnivores or true meat eaters. They scavenge, and will readily eat vegetable, bread and other non-meat foods. They do not require high levels of protein in the diet. Cats are true carnivores and need higher protein levels than dogs.

Most pet foods are not deficient in protein; they in fact contain *excessive* amounts which can damage health. Proteins are the building blocks of the body and are among the most expensive components of a pet food. Having excess levels of protein in the diet is wasteful, like burning furniture to heat a house. The ideal pet food has adequate amounts of protein, and adequate amounts of each component amino acid, but without excesses that would stress the liver and kidneys. Increased protein levels make a diet more palatable but they aren't necessarily better for the pet. Pet food manufacturers spray protein suspensions, as well as acid digests, on the top of foods to make them taste better.

Nutritionists measure the effectiveness of protein and rate it according to its ***biologic value***. The higher the biologic value, the more perfect the mix of amino acids in the protein and more closely it meets the actual amino acid requirements of the body. The food ingredient with the highest biologic value is the egg – which makes sense since it needs to have all the components to build a bird out of. Fish meal and milk are next, with biologic values of 92. Liver rates a 79, beef 78, soybeans 67. The higher the biologic value of a particular protein, the smaller the amount needed in a diet.

Cereal grains have protein, too. Corn, rice, and wheat don't have the amount of protein that meat does but they are still 10 – 20% protein. Wheat has a biologic value of 48 and corn 45, so these are much less desirable protein sources than meat, milk, egg or soy. Cereal grains are usually limited in a particular amino acid, methionine. (One of the things that crop breeders try to do is improve the mix of amino acids in these grains to make them a better source of nutrition. Advances in botanical science have greatly improved nutrition in third world countries, where rice and corn are the major components of people's diet, by breeding crop varieties that have better amino acid balance.)

Carbohydrates like corn and wheat are primarily energy providers. Simple, short chains of carbon and hydrogen form monosaccharides or "simple sugars" like glucose (blood sugar) and fructose. These short chains can combine into disaccharides, which are two molecules long. Disaccharides include maltose, which make fruit taste sweet; sucrose, which is table sugar; and lactose, which is milk sugar.

Long chains of sugar molecules form starches, found in vegetable like potatoes and rice. Another long chain carbohydrate is glycogen, which is the body's way of storing carbohydrate in liver and muscle tissue for use whenever energy is needed. Like proteins, the intestinal tract breaks down carbohydrates down into simple sugars, the blood transports them throughout the body and they are reassembled into glycogen or fat for long term storage.

Fiber is also a form of carbohydrate, and is found in the tough parts of plants. Fiber is formed by many sugar molecules linked together by bonds between the chains.

Mammals can't digest fiber by themselves. "Good" bacteria in the intestines digest fiber and break it down into smaller sugar chains that mammals can absorb. The rumen stomach compartment of cows, sheep, and goats is basically a big vat of bacteria that breaks down the fiber in the plants they eat.

Since dogs, cats and humans don't have these stomach adaptations they can't digest fiber very efficiently. Carbohydrates in the form of fiber in the food that we eat provide bulk that helps the intestine to function normally. It isn't very usable for energy. Grains like wheat are readily broken down for use by the body. There should be a carbohydrate source in the food to provide energy and a fiber source to add bulk. The protein in these ingredients is not high quality.

We don't recommend that you feed your pet a food that has cereal grains as both of the first two nutrients on the ingredient list. Either the first or second ingredient listed should be high quality protein source. Be careful when you read labels, however. A company may put several grains in the food in smaller amounts, which moves the protein source higher up the list, but if you add he rice and barley and oats together you may have a lot more carbohydrates than meat. Cereal grains should be the carbohydrate source in a food, not a main protein source. Feeding poor quality protein increases the scrap left over for the kidneys to burn. On the other hand, feeding high quality proteins like egg or milk is like using pre-cut lumber to build with – there are no scraps left to burn and no harmful by-products.

When pet food manufacturers produce a diet containing low quality protein they have to use a greater amount of protein to compensate for the poor quality and to provide enough essential amino acids. This is very bad from a medical standpoint, as this will eventually worsen kidney disease, the second leading cause of death in older cats and dogs. However, the public perceives "high protein" as being a good thing and the pet food company will actually market the food boasting about its high protein content. This process of adding extra nutrients to compensate for the poor quality of those nutrients has long been the standard operating procedure of the pet food industry.

The original goal of pet food manufacturers in the late 1800's and early 20th century was to find a market for by-products that are not suitable for human compensation. The purpose of most of the pet food industry has never been to provide optimum nutrition for pets. Only recently, as the industry became so competitive, did the large national firms such as Purina, Alpo, and Gaines start paying attention to the nutritional adequacy of their diets.

The next essential pet food ingredient after protein is ***fat***. Fats such as corn oil or butter are great sources of energy, make a food taste better to the pet (just like we prefer high fat ice cream to low fat in taste tests), and are also essential for the health of the skin and coat. Diets with higher fat content are more desirable because the pet has to consume less in volume of food. Fat is 90% digestible and yields 2.25 times the amount of energy to the body as the same amount of a protein or carbohydrate. This makes it easier to provide for the energy needs of a growing puppy or active dog or cat. Pets eating foods too low in fat will have dull, dry hair coat.

Fats are made up of glycerol and ***fatty acids***. Certain fatty acids are essential to good health, just as certain amino acids are. These are called essential fatty acids. These fatty acids must be contained in the diet, because they cannot be manufactured by the animal and are essential for good health. Fats are also necessary for absorption of the fat soluble vitamins. Hot spots, poor bone density, increased susceptibility to respiratory infections and many skin diseases can result from inadequate amounts of fat and fatty acids. Fatty acids reduce cell damage over time, thus decreasing cancer risk, too.

Fats are difficult to maintain within a dry pet food because of their tendency to spoil and become rancid. Pet food manufacturers that use high amounts of fats in their food have the expense of adding anti-oxidants and preservatives to their diets as well as having to use plastic liner in their bags. "All natural" diets must be formulated without anti-oxidants. This may mean these diets contain marginal levels of fat. This is a marketing gimmick like "high protein" that makes the consumer think "natural" means better. Although we are accustom-ed to avoiding fats in our own diets, because we tend to eat too much of it, fat in animal foods is necessary and desirable. The care a company takes in processing its food is also important. Overcooking can destroy key ingredients such as fatty acids, so that even if the ingredients were good, the nutrients that should be there aren't available to the pet.

Minerals are the next diet component. Only 0.7% of the body is made up of minerals but they are extremely important none the less. Essential minerals include calcium, phosphorous, potassium, sodium and magnesium. These are called macrominerals. A matrix of these makes up the bones, and these elements also circulate constantly in the blood and are used by the body for muscle contraction and nerve function. There are also microminerals - minerals needed in extremely small quantities. These include iron, copper, zinc, manganese, iodine and selenium.

Most commercial brands of food have excesses of protein and minerals to compensate for variations in nutrients used in the food, both from batch to batch and for different requirements of the animals that are eating the food. Puppies and nursing mothers, for example, need extra calcium. Too much calcium in a diet, especially when not in proper balance with the amount of phosphorus, is not healthy and can lead to bone disease, especially in growing puppies. More is not better! Grocery store foods have excess amounts of protein, sodium, phosphorus and calcium. The primary problem with some grocery store foods is not that they are deficient in nutrients but that they have *excesses* of nutrients that are very harmful and sometimes even fatal.

Meat products as an ingredient for pet foods is a marketing ploy that is over-touted. It is actually harmful to feed our pets large quantities of meat products. For example, a 45 lb. dog fed a steak diet might receive the correct amount of calories but he would get 600% the amount of protein, 4% of the amount of calcium, 80% of the amount of phosphorous, 40% of the amount of sodium and 175% of the amount of potassium needed! The diet would also be deficient in vitamins and other minerals.

Most commercial pet diets contain 118% more calcium and 60% more phosphorus than is recommended by the NRC. Meat also contains large amounts of magnesium. Excess magnesium in a cat's diet can lead to bladder problems. Salt is also often present in large quantities - remember it's both a flavoring agent and a preservative. Reducing the sodium content to just 5% of what is present in most dog foods would provide all the sodium necessary for an adult, healthy dog. As with kidney disease and excessive protein, this amount of salt, and thus sodium, can kill a dog with heart disease. Nutritional supplements worsen the effects of excess protein, phosphorus and sodium contained in most commercial foods.

Vitamins are co-enzymes for metabolic processes. They are necessary links in the processes of the body. For example, vitamin D is necessary for calcium to be absorbed through the intestine and into the blood. It is not a good idea to purchase a poor quality pet food and the add vitamins and minerals with the hope of compensating for what is missing. What is most likely missing is high quality protein, fat and a correct balance with regard to energy.

Many pet foods available nowadays, especially "premium" diets found in pet stores, contain various **non-essential ingredients** that are touted as being more healthy for pets. Some pet food brochures contain outrageous claims that have little or no scientific evidence to back them up. Because there is little government oversight of pet foods, companies can generally get away with just about anything in their advertising. Many of these ingredients have had little or no testing in animals and certainly have not been proven to have any effect at all when fed at the low levels found in pet food.

Here are a few examples of this tactic. One manufacturer adds cranberry meal to its dog food, claiming that it "prevents the spread of bacterial infections in kidneys and the urinary tract. Helps prevent cystitis." In humans, who have alkaline (high pH) urine, cranberry juice helps produce a more acidic urine. This discourages bacterial growth and helps patients with cystitis to recover faster. Cats and dogs already have acidic (low pH) urine. There is also a compound in cranberry juice that inhibits certain types of bacteria but large amounts of concentrated cranberry extract are needed to achieve the effect – a much larger amount than is found in any pet food.

The same manufacturer lists amaranth as an additive, calling it a "Vitamin packed herb, calms the stomach, reduces tissue swelling, removes worms and parasites from the digestive tract." Again, there is no research or documentation to show that this is true, and in fact it probably isn't. Other claims of health benefits that nutritionists find very dubious include the effects of probiotics such as *Lactobacillus,* digestive enzymes, sage, rosemary and aspergillus. We cannot stress enough that just because a company claims that an ingredient has wonderful properties doesn't make it true.

Some companies also claim that the preservatives and anti-oxidants other companies use are dangerous and cause all kinds of diseases. There is no proof of this either, and in fact the "natural" vitamin E anti-oxidants can also be toxic when given to excess. Some manufacturers list ingredients they *don't* contain, claiming that not including these "bad" ingredients makes their food better. This is a scare tactic. There is nothing at all wrong with feeding rice, wheat, corn or soy. There are also no ingredients that are "hypoallergenic." Food allergy is a genetic disease. Pets with a susceptibility to food allergy will develop an allergy to something, no matter what you feed them. In fact, the more foods or ingredients you feed those pets the more ingredients they are likely to become allergic to.

Some companies even claim that there are no differences in nutritional needs between young and adult animals, though this is easily researched and has been extremely well documented. Feeding a diet appropriate for a particular size and age of the pet is a very important consideration when choosing a diet.

As we've touched on so far, the nutritional requirements of pets vary a lot with age, overall health and activity levels. The right diet can slow or prevent development of disease, as well as eliminate or decrease signs of disease. The wrong diet can worsen or precipitate illness. For instance, the incidence of stomach cancer in humans has dropped tremendously in the last 100 years. This is because people now eat less smoked, salted and preserved meat. Smoked chews and sausage-type snacks are very popular for pets now days. Guess what cancer veterinarians expect to be seeing more of in the near future?

There are so many pet food choices in stores today it's become more and more confusing as to what to buy. What should you look for? ***First***, choose a company that does food trials for its diets. Good companies know that their ingredients aren't contaminated with lead, insecticides or herbicides. They keep the ingredients consistent from batch to batch so pets don't get sick from a new bag of food that's different from the last one. In other words, they don't substitute turkey by-products for chicken by-products or corn for wheat from batch to batch, so the food consistently has the same amount of protein,

vitamins and amino acids. They formulate the food according to what's best for pets, not what's on sale at the feed mill. They don't add extra ingredients without knowing for sure that they are safe, effective and will not interact adversely with any of the other ingredients in the food. They also have stringent quality control during manufacturing so that errors in processing, such as overcooking, do not occur. Excellent companies that do feeding trials, and have good reputations among nutritionists include Purina, Hill's, Iams, Eukanuba and Nature's Recipe, which makes our IVD and Select Care prescription diets.

Second, choose a food appropriate for your pet's health status. If health problems exist, your veterinarian will tell you which food is appropriate to minimize or slow the disease problem. When more than one problem is present we will prioritize depending on which is the worst or which will respond better to a different diet. Some prescription diets, those for kidney and heart disease, for example, are so effective that they can extend life expectancy of affected pets by 1-2 years over feeding regular pet food.

> Older pets have increased requirements for vitamins A, B1, B6, B12 and E. They also need higher levels of fatty acids

Third, choose according to age and activity level. Senior Diets are best for older pets *unless* they are too thin. Most senior diets are low in fat, which may not be good for thinner dogs or cats. Young active pets need a higher fat diet and pudgy ones need low fat and high fiber. Other factors to consider include the amount of dental tarter, food allergies or sensitivities, breed or size of pet, dry skin and how fussy an eater a pet can be.

Fourth, feed a healthy amount of food. The ideal amount and frequency of meals varies immensely and needs to be to be tailored for an individual pet. Because energy is the key component here, the food should be fed in an amount sufficient to maintain a normal, healthy body weight. If you feed a super premium food like Science Diet, you should never have to worry about whether that amount of food will provide enough nutrients or too many. Your pet will do best if you pick one complete food that is appropriate for his or her age and activity level, and stick with it.

Animals do not need variety in their diets. In fact, studies show that pets actually prefer that their food stays consistent. Dogs are especially prone to digestive upsets on varied diets or table scraps. These problems usually appear in middle aged dogs, who may be difficult to accustom to a more healthy diet. Both dogs and cats are prone to becoming finicky eaters when fed a varied diet, causing problems for their owners later on.

Fifth, don't base your food choices on what you would like to eat, or on unfounded claims for health benefits to the pet. Dogs and cats are color blind, so they don't care whether their food is red or brown. They also don't care if it looks like beef stew or little pork chops! The fancier the food looks, the more you are paying for unnecessary artificial coloring, flavoring and preservatives. Expensive or "natural" foods aren't always better. Even the fanciest brochure or extravagant ingredient list doesn't guarantee a food is good. Use logic, research and science to analyze the choices and pick the right one.

A dry food is best for your pet's teeth and gums, so the majority of your dog or cat's nutritional needs should be met with a chow type food, unless health problems dicate otherwise. Canned foods are much more expensive to feed, as you are paying for a lot of water and extra packaging. Many people like to supplement their pet's diet with some canned food. This is fine as long as you pick a good one, and don't over do it. Canned foods are more likely to have excesses of protein, as well as being worse for your pet's teeth.

Think carefully about treats and table foods as well. These items should never amount to more than 10% of a pet's food intake. Whenever possible, they should be healthy—not loaded with fat, salt or artificial colors preservatives or dyes. Some dogs like vegetables such as carrots and green beans. These are great low-cal snacks. Bones may

cause fractured teeth or intestinal obstructions, so they should never be fed to dogs or cats. Small amounts of table foods such as bread or cookies are fine, but steer away from anything high in fat or salt, especially nuts, chicken skins or meat trimmings, or raw foods. Uncooked meat, eggs or spoiled food can give a pet food poisoning, Toxoplasmosis or Salmonella, just as they can make people sick.

Whenever you have a question about what to feed a pet, please give us a call. Good nutrition is extremely important for all of us, animals and people alike. It can be the difference between a long and healthy life or a shorter and not-so-healthy one.