

# NUTRITION AND LONGEVITY



There are many factors that influence longevity and cancer risk, and nutrition is one of the most important. The food a pet eats also affects injury risk, organ function, the brain and the immune system.

Nutrition is a complicated topic. Oversimplification and deceptive marketing of pet products has created misconceptions about what makes a pet food good or bad, which we would like to help dispel. We would like to give you some simple guidelines on what to look for and what to avoid when it comes to nutritional ingredients and supplements.

## Why We Are Picky About Pet Food

- Pet food companies lie! Almost 1/3 of 52 products tested by The Pet Food Institute in a recent study contained meat protein not listed on the label, especially pork. Four foods that listed beef on the label, in fact contained no beef. Blue Buffalo, a company that touts its diets for not containing grains or by-products has been found to contain both. Half of "Lite" pet foods exceed government regulations for calories per cup. We could go on and on.
- Who is formulating the food? Do the ingredients make sense? Flax contains Omega 3 fatty acids but dogs and cats are unable to digest it, so it is useless to them. Seeing flax seed on a pet food ingredient list is a big red flag that tells us the company that made it has no veterinary nutritionist on staff.
- We recommend food that is manufactured by a company that
  - 1) Does nutritional research, including feeding trials
  - 2) Tests both the ingredients that go into the food and the end product
  - 3) Manufactures its diets in its own plant

One of the most important things to remember is that cancer takes years to develop. What you are feeding now, if you have a young dog or cat, is already influencing what diseases your pet will develop many years from now. Avoiding cancer is a key to successful aging because cancer is the leading cause of death in older pets and nutrition has a lot to do with cancer development.

Sugar and simple carbohydrates increase cancer risk and decrease lifespan. Cancer loves carbs!

Stay away from any diet or treat that contains flour, cornmeal, corn syrup or other processed carbohydrates. Sugar is metabolized in the body to molecules that cause cell damage. It also stimulates insulin production and excess insulin has damaging effects as well. The spike in blood glucose level that occurs after eating a high carbohydrate meal or snack promotes cancer development and progression.

Grains are not at all unhealthy, despite what you hear in pet food ads. It's

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what we do to the grains that make them dangerous. Whole grain, containing fiber and complex carbohydrates, is healthy for both humans and dogs. Flour, sugar and processed grains are not. We would actually rather you feed a diet with whole grains than potato as the carbohydrate ingredient.

A big factor in the development of cancer, as well as allergies, arthritis, cardiovascular disease and many other disorders, is inflammation. When cells are damaged, a repair process occurs, which brings increased blood flow to the injured area, as well as white blood cells, antibodies and other substances to stimulate healing. This is fine if the inflammation is short lived, say after a small wound or minor injury. Chronic inflammation, however, causes further damage. Heart valves, joint cartilage and kidney cells are among the tissues that are damaged by it. Long term inflammation also leads to cancer.

A specific sugar called Neu5Gc, which is found in the fat of red meat, promotes antibodies, inflammation and cancer. Humans make an enzyme that breaks down Neu5Gc but in dogs it becomes incorporated into cell DNA. This foreign sugar then generates an immune system response and results in the formation of antibodies. Antibodies are part of the inflammatory process. It is better to have chicken or turkey as the meat source than beef because of this Neu5Gc sugar.

Anti-inflammatory substances, including Omega 3 fatty acids, non-steroidal anti-inflammatory drugs such as Rimadyl or Deramaxx, and many nutrients that act as antioxidants all increase life expectancy by reducing inflammation. OM3s and NSAIDs augment each other when used together, with greater effect plus reduced risk for side effects from the NSAIDs.

Fatty acids come in two types, Omega 3 and Omega 6. Omega 6 fatty acids, found in most plant oils, promote and sustain inflammation, though they do give the skin and coat a nice shine. Omega 3 fatty acids, the good kind, can be found in algae and in the bodies of fish that eat algae. Farm raised fish that eat pelleted diets instead of natural foods such as algae do not contain Omega 3 fatty acids. Many times when you buy fish oil you are getting oil from farm raised fish that don't contain Omega 3 fatty acids, so you would actually be getting the harmful Omega 6 type of oil. Look for the amounts of DHA and EPA, the Omega 3's, in any fish oil supplement you buy. Those are the ones you want.

Fish oil isn't a very concentrated source of DHA so you have to give a fairly large amount of it. That's why those capsules are so large. Fish oil is often

#### **What if my pet already is older or already has cancer?**

- Limit carbohydrates – fruits, vegetables & whole grains are fine but try not to give bread, crackers, cookies, or other foods containing flour or sugar. Dog treats are often loaded with carbs and salt. "Grain-free" and "Low Carb" are not the same thing! If it has no grain but contains potato instead a diet can still be high in carbohydrates.
- Start fatty acid supplementation now. Even though it may be too late to prevent cancer you will still be treating arthritis and other inflammatory diseases. Fatty acids enhance the effects of chemotherapy and radiation. Using fish oil along with cancer treatment can increase survival time considerable – 30% in some studies!
- Don't overdo it! Protein and supplements are great at recommended dosages but a moderate amount of high quality protein is better than a large amount. Eggs, chicken meat, and turkey meat are best but tofu and dairy products can be good sources, too.

contaminated with organophosphates and heavy metals. One of the brands we carry, Nordic Naturals, is one of the few brands that test the oil for contaminants on a regular basis.

Don't stock up on fish oil. It degrades quickly, especially in liquid forms. If it gets old it won't be effective. Liquid fatty acid supplements should be kept refrigerated.

It's actually safer and easier to take oil derived directly from algae instead of fish. Protectacell, made by Animal Health Options, is a brand we recommend. Right now you have to search to find Omega 3 supplements derived from algae but in the future algae farms will probably be a more efficient and less expensive way to obtain these nutrients.

Another important factor in the development of cancer is the amount of food you feed. Keeping pets lean increases lifespan by two years and increases the quality of that life as well. This is because fat cells produce toxins that damage other cells. Damaged cells, especially if the DNA is damaged, can turn cancerous.

Our goal with weight management is not just to increase "lifespan" but to increase "healthspan" – the number of years your pet is healthy and feels good. Lean pets develop arthritis two years later than overweight pets, so both healthspan and lifespan increase by two years if pets are not allowed to overeat.

Oxidation is a process that breaks down chemical bonds between molecules, another way that cells in the body become damaged over time. Many vitamins and other nutritional substances have antioxidant properties – they protect cells from oxidative damage. Vitamins A and E, selenium, fatty acids and Beta-carotene all have antioxidant effects. However, overdoses of any of these actually increase cancer risk. It is very important to give supplements at the proper dosage; otherwise you will shorten lifespan instead of lengthening it!

This is another reason why you should not purchase a pet food that was developed without the help from a veterinary nutritionist. It is very easy to create a pet food that meets minimal government standards but it's much more difficult to formulate one that provides the precise amounts of vitamins a dog needs for the greatest possible healthspan.

#### In summary:

- Limit carbohydrates but don't overcompensate with protein.
- Supplement with fatty acids, either fish oil or from an algae source – not from flax!
- Don't over-supplement!!
- Avoid beef as a protein source. If you do choose a food with beef try for *beef meat meal* instead of beef meat.
- Ingredients that are vilified in advertisements are not necessarily bad, including grain, corn, soy, and by-products.
- Just because it's on the label doesn't make it true! Choose a diet from a company we recommend for its research and quality control.



# NUTRITION FUN FACTS

- Obesity is the most common nutritional disease, and half of America's pets are overweight or obese. The heavier the pet, the shorter the lifespan.
- Pets don't have to be obese to damage their health. Being just 15% overweight shortens the life expectancy of a dog or cat by two years. (Two years!!!) That's about 9 lb. of excess weight for a 60 lb. Labrador retriever and only 1.5 lbs. for a 10 lb. poodle, an amount that many pet owners don't even notice or think is significant.
- As of January 1, 2016, all pet foods are required to print the calories per cup of their foods on the pet food label. For the first time ever, we can now easily compare calories from one diet to another.
- **The "grain-free" concept is a gimmick.** Many of the popular "grain-free" diets available now are very high in fat, protein and calories. This is not any better for pets than it is for humans. Lean meat, whole grain carbohydrates, and fruits and vegetables are a lot healthier than a lot of red meat and potatoes. Grain-free provides no nutritional advantage.
- "Grain-free" is not the same as "low carb." Grain-free diets usually just substitute starchy potato or peas for the grain.
- Allergy to grain is very rare, despite what you may have heard. Food allergy is usually to major protein ingredients in the food, such as beef or chicken.
- Food trials are the gold standard way of evaluating a diet. In a food trial, dogs or cats are fed a particular diet over a long stretch of time, while their health is monitored carefully for any adverse changes. Doing feeding trials to make sure the diet works as expected costs about \$100,000 per trial. This is why the majority of pet foods have never been tested in food trials.
- The formulation method of calculating the nutrient balance of a pet food based on its ingredients, without actually doing any testing of the end product, only costs a pet food company about \$1000. It's inexpensive but it doesn't ensure that the ingredients work well together, are not changed by processing of the food and are not contaminated. For example, calcium supplements can bind to iron supplements so that neither are absorbed from the food. Flax seed is not digestible at all by dogs and cats, so it provides no nutrient value. Just because an ingredient is present in the food doesn't mean it's available to the pet.
- Food trials protect pets. It's been over ten years now since the big pet food recall for melamine contamination in 2007. The problem was detected by a pet food company doing feeding trials. Thousands of dogs and cats suffered kidney damage from melamine-contaminated food but it would have been much, much worse if that company hadn't discovered there was a problem early on. Feeding trials are essential to detecting problems such as contaminated ingredients.



- Some treats are healthier than others. Most pet snacks are junk food, high in fat and salt, but some pet treats provide complete and balanced nutrition just like a regular pet food. Iams treats and some ProPlan biscuits are good. Look for the words "Complete and balanced" on the label.
- The phrase "Complete and balanced" on a pet food label doesn't mean a food is complete and balanced under all conditions. Calorie and nutrient needs are on a bell curve, with pet foods formulated to be adequate for the middle of the range - the average pet under average conditions. Pets with low metabolic rates, pets with health problems or those under environmental stress may have very different needs than the average.
- "Complete and balanced *for all life stages*" is an oxymoron - it doesn't make any sense. Puppies and kittens have different nutritional needs from adult pets, and seniors, and the overweight and the underweight pet have different needs as well. Foods like Canidae and Felidae that have the label claim of "Complete and balanced for all life stages" are formulated for puppies and kittens and are not appropriate for other life stages.
- "Human Grade" by FDA definition means a food is *meant for human use and made in a plant intended for human consumption*. No pet food can be human grade and it is actually illegal to have it printed on a pet food label. This means Rachel Ray's pet food is breaking the law by claiming their ingredients are "human grade." (They also have no nutritionist on staff.)
- Is meat better than meat meal? The word "meat" on a pet food ingredient list means the meat is wet and unchanged. "Meat meal" has been cooked to strain the fat off and then dried. Meat meal contains the protein part and not all the fat. It is often a healthier ingredient than actual meat.
- Poultry by-products, contrary to the understanding of most consumers, does not consist of feathers, beaks and feet. Those are not legal to include in pet food. Instead, by-products consist mainly of the internal organs, including the liver, heart and spleen. These organs are a rich source of nutrients, including taurine, iron and the vitamins A, D, E and K. This is why wild predators eat these parts first! It makes no sense to throw all these organs away while simultaneously having to add artificial vitamins back into the food.
- The rule-of-thumb for how much to feed is to start at the bottom end of the range listed on the pet food bag and go up only if necessary. If your pet becomes or stays overweight eating that amount of food, he or she needs a weight-loss diet because **to go below that low end amount means the pet will not be getting sufficient nutrients to meet its needs.**
- Base the food amount on the weight your pet should be, not its current weight.
- Canned pumpkin has long been used as a fiber supplement to help with constipation and diarrhea. Unfortunately, it's been found to work no better than a placebo, even in large quantities.
- Visit our website for handouts on nutritional topics. We have videos on nutrition on our YouTube channel, BfVCTV.