

## Grain free, antinutrients and the health of your best friend.

We have been told for years that we should be feeding our pets grain-free foods. We assumed that grain free meant the food was lower in carbohydrates and therefore healthier for our pets. In order to make these grain-free foods, companies typically replaced grains with legumes. Legumes include peas, beans lentils, soybeans and peanuts. But, being grain free does not necessarily mean less carbohydrates. Two foods with the same level of protein and fat, one made with grain and the other made with legumes, will both have the same level of carbohydrates. The main difference between a grain-based food and a legume-based food is grains, specifically corn, are relatively low in antinutrients while legumes are relatively high in antinutrients.

**What exactly are antinutrients and why should I be concerned?**

### antinutrient

*Noun*  
(plural antinutrients)

- (biochemistry) Any substance that interferes with the [absorption](#) or [metabolism](#) of a [nutrient](#)

*Origin*  
[anti-](#) + [nutrient](#)

Antinutrients are natural compounds produced by plants to protect their seeds from animal consumption. Antinutrients are vast and numerous, but they all have one thing in common; they interfere with the absorption of nutrients necessary to keep your pet healthy.

The vast majority of antinutrients are found in the outer hull of the seed: the skin of the potato or the brown skin found on rice. We've been told that brown rice is better for us than white rice because brown rice contains more magnesium. Brown rice does contain more magnesium, but it also contains more of the antinutrient that binds all that magnesium from absorbing into our bodies.

Few antinutrients are found in potato or corn-based food starches since the outer skin/hull, protein, fat and minerals have been removed. Food starches are basically a pure form of highly digestible carbohydrates needed by all omnivores. Fibers such as oat hulls, rice hulls and pea fiber tend to contain large amounts of antinutrients and should be avoided as a fiber source for your pets. Fruit fibers, like tomato pomace, may be a better choice for a dietary source of fiber over pea or rice hulls.

Generally, proteins and fats derived from animal sources do not contain antinutritional properties and are a good choice for our cats and dogs.

**Examples of antinutrients include:**

**Protease inhibitors** can prevent the absorption of proteins and amino acids and may be responsible for the sudden epidemic of taurine deficiencies in dogs which can lead to dilated cardiomyopathy heart disease (DCM). Veterinarians are theorizing that the legumes and sweet potatoes used to replace grains in many dog foods may be binding the taurine in your dog's food, causing DCM. Taurine is an essential amino acid that your pet needs to remain healthy.

**Certain types of proteins** can prevent the absorption of other proteins and be classified as antinutrient. Examples of these types of proteins would be Lectins, trypsin inhibitors and enzyme inhibitors. Enzyme inhibitors found in legumes like peas and beans can interfere with digestion and may be responsible for taurine and other amino acid deficiencies in our pets. These deficiencies can also lead to DCM heart disease in both dogs and cats.

**Lipase inhibitors** interfere with the production of fat enzymes produced by the pancreas and veterinarians are seeing more pets with pancreatic issues in recent years.

**Phytic acid** has a very strong ability to bind minerals in the digestive tract making them unavailable to your pet. The most common minerals affected are calcium, iron, zinc, copper and magnesium. Deficiencies in magnesium are a contributing factor in heart disease. Most Americans are deficient in magnesium and should be taking magnesium supplements daily. In the US, the push to consume whole grains high in antinutrients may be contributing to our magnesium deficiency along with our pets.

**Phytoestrogen** is a plant hormone that is similar (at a molecular level) to estrogen and is found in many plants. Soybean products are high in phytoestrogen followed by legumes (peas and beans), whole grain cereals and oil seeds like flax. Many dog breeders suspect that phytoestrogen may be the reason their females are going into heat more than two times a year. Breeders are also seeing poor fertility in male dogs. It is not natural for our pets to be consuming high levels of plant materials that contain high levels of antinutrients.

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## **Why is Taurine so important to your pet's health?**

Taurine is an essential amino acid necessary for your pet's heart health. Taurine is commonly found in muscle tissue with marine sources containing the highest levels. When high protein legumes are used in pet food, less animal protein is necessary to meet the formula requirements. Essentially, plant proteins that do not contain taurine and actually block taurine absorption, are being substituted for animal proteins which are high in taurine. Prior to 1987, DCM was one of the most common cardiac diseases in cats. It was discovered that adding taurine to a cat's diet could reverse DCM. All pet food manufacturers began following the newly established taurine guidelines in their foods and DCM is now uncommon in cats. (A) But, veterinarians believe the explosion of dogs suffering from DCM in recent years, may be related to the feeding of BEG (boutique, exotic or grain free diets) foods. It's suspected that the legumes and sweet potatoes used to replace common grains like corn have created the taurine deficiencies.

## **What does this all mean?**

Prior to 1980, almost all kibble-based dog and cat foods were made from corn and chicken. Not surprisingly, some dogs and cats from that era would naturally develop allergies to these ingredients. In the early 1990's, the first lamb and rice diets came out and in order to get market share they promoted that corn was bad for your pets, even though only a small portion of pets were allergic to corn. Then rice fell out of favor and new ingredients like millet were used, but none were grain free. About 10 years ago, legumes like peas and beans came into popularity to replace the grains and the race was on for the next big marketing tagline "Grain Free". These alternate ingredients, legumes (peas and beans) contain higher levels of antinutrients when compared to corn and other cereal grains. Now, years after we've promoted grain free, considerable research is showing that higher levels of antinutrients are causing our pets harm.

## **I thought corn/food starch was bad for people and our pets?**

One of the top veterinarians with the University of Minnesota College of Veterinary Medicine recently stated (fall 2018) that grain-free diets should not be fed to our dogs. In other words, they have found grain-based dog foods superior to grain-free dog foods. This is the exact opposite of what the public has been told since the 2010's.

## **Sources and further reading:**

<https://avmajournals.avma.org/doi/10.2460/javma.253.11.1390>

<http://nrbreedersassociation.org/environmental-estrogens-affect-dogs-fertility-reproduction/>

Our dogs need a safe digestible source of carbohydrates and what better source than food starch. Food starch is mass produced for the human market and is the most cost effective for use in dog food. The antinutrients we are concerned about are concentrated in the yellow skin, the oil and protein portion of the corn and are generally not found in starch portion of the kernel. Food starch is a very pure product and easy to digest. The protein/gluten portion of the corn can cause allergies in some pets, allergies have always been the big concern when it comes to corn, however, all the corn gluten, protein and oil is removed from the food starch. Unfortunately, if you have a pet with allergies, they can become allergic to animal or plant proteins.

## **Is it possible to make a food without grains or legumes?**

There are four main components to every pet food: protein, fat, dietary fiber and carbohydrates. Young Again Dog Food uses chicken as its main source of animal protein and fat, tomato pomace and psyllium as its source of dietary fiber, and food starch as our purified source of necessary carbohydrates. These ingredients are very low in antinutrients and easy for your dog to digest. We believe eliminating plant-based antinutrients from your dog's food is crucial to his health so we've eliminated virtually all plant proteins from our Young Again foods.

To be clear, our Young Again diets are considered grain free. They do not contain grain, legumes or other high antinutrient ingredients. We are grain free because we are plant free, with the exception of our dietary fiber sources. We have been making our dog foods since 2010 and are proud that they are not only grain free, but legume free.

Young Again Dog Foods have a proper calcium to phosphorus balance for breeding animals, higher taurine levels for heart health and contain NO grains, NO legumes and NO antinutrient ingredients. Our 40/16 dog food is ideal for dogs under 30 pounds, contains potato starch, chicken protein, pork protein, chicken fat and tomato pomace as its core macro ingredients. Our 30/20 dog food is balanced nutrition for dogs over 30 pounds, macro ingredients are chicken protein, chicken fat, food starch, psyllium fiber and tomato pomace.

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