Keeps Your Pet From Absorbing Nutrients — And You Won't Believe How Trendy It Is

It's one of the trendiest ingredients in pet foods today, per industry insiders. But you won't believe its hidden history, before it even gets to the food factory. It's a pretty safe bet you wouldn't eat it, nor should you want your precious pet to. And it's a potent antinutrient.

Analysis by Dr. Karen Shaw Becker

STORY AT-A-GLANCE

- Three popular ingredients to watch for (and avoid) in processed pet food are powdered cellulose, dried peas and alfalfa
- Powdered cellulose has a tremendous amount of insoluble fiber, which can inhibit your digestion and absorption of important nutrients like protein and minerals
- Dried peas are a pulse crop high in plant-based protein, which isn't the type of protein your meat-eating dog or cat requires to be healthy
- Alfalfa is a forage crop used by processed pet food manufacturers to inflate the total protein in their formulas

Editor's Note: This article is a reprint. It was originally published July 15, 2017.

As regular readers of my newsletter know, I'm always on the lookout for "innovations" in processed pet food so I can give a heads-up to well-intentioned but thoroughly confused pet parents who are genuinely trying to feed their animal companions a healthy diet. As we all know, there are a mind-boggling number of pet foods available on store shelves these days, and unfortunately, some of the poorest quality formulas are marketed with some of the highest quality advertising.

That's why I consider it my duty to point out up-and-coming (typically biologically inappropriate) pet food ingredients to watch for, as well as the expert way pet food companies manipulate words and images to appeal to pet parents. Recently I was doing my routine reconnaissance on what the pet food industry is up to, and I ran across a list of ingredients that represent "popular trends in pet food formulation."[1] The following three ingredients caught my eye (and not in a good way).

No. 1: Cellulose

There are several types of inexpensive plant fibers that are added to processed dry and canned pet foods. These include beet pulp, buckwheat and other grain hulls, flaxseed, fruit pectin, guar gum, oat and other brans, peanut shells, psyllium, tomato pomace and powdered cellulose.

You'll often find high levels of cellulose in pet food formulas marketed for specific issues such as weight control, diabetes and hairballs. Powdered cellulose is actually wood pulp (sawdust), believe it or not. According to Greg Aldrich, Ph.D., writing for PetfoodIndustry.com:

> "*There are various forms of powdered cellulose available from trees like pine and beech to bamboo and cotton. By and large, the cellulose used in pet food applications is derived from pine trees. The ingredient starts its journey in the pulping mills, the same mills used to produce paper.*
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> *The pulp is made into long continuous sheets and rolled just like paper stock going to the local newspaper. However, cellulose intended for food and feed is ground through specially designed hammer mills, then sized to certain particle lengths in giant 'ball-mills.'*"[2]

Powdered cellulose has a tremendous amount of insoluble fiber, and too much of it can interfere with your pet's ability to digest and assimilate important nutrients like protein and minerals.

> *High levels of cellulose may also, according to Aldrich, "... be detrimental to colonocyte morphology long term (Hallman et al., 1995) by robbing these cells [in the colon] of critical fuel, like butyrate, due to the reduced fermentation that other more fermentable fibers could provide.*"

Excessive powered cellulose in your pet's food will also cause him to produce a bigger volume of **poop**. When thinking about the need for fiber in your dog's or cat's diet, it's important to remember that wild canines and felines have no physiologic requirement for the plant fibers used in most processed pet food. The only fiber wild dogs and cats ingest is whatever is found in the already-digested stomach contents of their prey, plus fur, tendons and ligaments.

Although the amount of fiber in the diet of wild dogs and cats is small, it serves a very important role. Dogs and cats fed processed commercial diets very often benefit from the addition of a small amount of the right kind of fiber, which is fiber that closely mimics the GI contents of small prey animals.

When your dog or cat consumes unnecessary fillers, like wads of fiber, it inhibits digestion and absorption of many vital nutrients. A small amount of fiber is very important, but a diet loaded with fiber is very detrimental. If you're feeding your dog or cat a nutritionally balanced, species-appropriate diet with appropriate supplementation, including pet probiotics and digestive enzymes, and she's easily producing small, firm stools, she's getting the amount of fiber she needs.

No. 2: Peas

When it comes to peas in processed pet food, we're not talking about fresh green or even frozen peas, but dried peas (e.g., split peas or field peas), which are pulse crops. Pet food manufacturers like to use dried peas because they aren't grains (which presents a marketing opportunity), they're gluten-free (another marketing opportunity) and they're about 25% protein, which means they help bump up the stated protein level of the formula.

Plant-based protein is a poor substitute for animal protein in the diets of dogs and cats. It's very important to remember that the total protein percentage on most pet food labels does not reveal how much of that protein is from animals, which is the type of protein cats and dogs require. A large percentage of the total protein in most processed pet food is sourced from plants, not animals.

In addition to the protein issue, I don't recommend feeding pulse crops to pets because they contain phytates and lectins that are naturally found in legumes. Phytates are substances carnivores can't break down because they lack phytase, the enzyme necessary to process phytic acid. Phytates also bind minerals (including zinc, iron, calcium and magnesium), leeching them out of your pet's body. Lectins are sticky proteins that when consumed in large quantities may contribute to GI disturbances and leaky gut.

No. 3: Alfalfa

Alfalfa is a forage crop belonging to the pea family. Air-dried alfalfa contains between 14% and 22% protein, 10% ash, less than 5% crude fat and 15% to 30% crude fiber. Most of the fiber is insoluble.

Alfalfa is a source of calcium, potassium and other trace minerals, as well as beta-carotene, vitamin K and various B vitamins. The plant also contains chlorophyll, and its leaves contain a number of other bioactive compounds including saponins and phytoestrogens. There are several reasons I don't recommend feeding alfalfa as a meat replacement protein to dogs or cats, including:

- Like dried peas, alfalfa is high in protein, but again, proteins derived from plants don't contain all the amino acids your dog or cat requires. That's why pets require meat-based nutrition — the protein in animal tissue provides a complete amino acid profile.
- Like soy, alfalfa contains phytoestrogens, which are plant estrogens that are well-documented endocrine disruptors.
- Alfalfa contains several saponins, which are glycosides with a foaming characteristic. Saponins are antinutrients, meaning they interfere with absorption of essential nutrients.

My recommendation is to provide your pet with the protein she needs by offering optimally nutritious, species-appropriate meats rather than plant-based forage more suitable for livestock.

With that said, there are a few situations in which it's safe to feed alfalfa, for example, when it's used in small quantities for its whole food nutrients in high-quality raw and dehydrated pet diets, and certain supplements. A small amount of alfalfa isn't a concern as long as it doesn't appear in the top half of the ingredient list, and isn't being used as a replacement for meat protein.

Sources and References

[1,2] PetfoodIndustry.com, September 12, 2016