Causes Seizures, Bloat and More — Don't Feed It to Your Pet

Although its use in pet food is declining, an alarming 20% of cat foods and 13% of dog foods still contain this cheap ingredient that food manufacturers just love to use. Check your labels now. Be forewarned, when fed to cheetahs, they suffered fatal liver disease.

Analysis by Dr. Karen Shaw Becker

STORY AT-A-GLANCE

- Soy in pet food, which was all the rage just a few years ago, has experienced a significant decline in popularity due to concerns about its appropriateness for dogs and cats
- Most U.S. varieties of soy are genetically modified, and the plants are also high in antinutrients (natural toxins) and phytoestrogens
- Raw, mature soybeans also contain phytates that prevent mineral absorption and substances that block the enzymes needed to digest protein
- Captive cheetahs fed soy suffered fatal liver disease and infertility; parrots fed soya beans suffered early puberty, infertility, and premature aging and death
- In dogs and cats, soy has been linked to gas and bloat, bladder stones, blood sugar fluctuations, thyroid damage and seizures

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Recently I came across an article in a pet food industry journal lamenting the fading popularity of soybean meal in pet food. The author called it "A quality ingredient with a lot of critics."[1] Once a principal component in many pet foods, these days soy is found in less than 13% of dog foods and 20% of cat foods. Unlike the author of the article, I find this an encouraging trend.

Soy is a boon for processed pet food manufacturers because it's inexpensive and abundant. In fact, according to the article, the "… constant supply is due in part to decades of intensive genetic selection and even genetic engineering to improve yields of soybeans."

In addition, soy is higher in protein than many other plants used in commercial pet foods, and even though it's a biologically inappropriate type of protein for dogs and cats, pet food manufacturers include it in their crude protein percentages on the guaranteed analysis printed on pet food labels.

The Problems With US Varieties of Soy

Plant estrogens, also called phytoestrogens, produce biological effects in humans. In soy protein, the most common of these compounds are isoflavones. The way soy is processed affects the level of phytoestrogens. Traditional fermentation reduces the levels of isoflavones dramatically, however, factory processing does not.

U.S. varieties of soy are manipulated to be pest-resistant (soybeans have some of the highest concentrations of pesticides of any crop), with the result that they contain higher levels of isoflavones than soy grown in Japan or China. Raw, mature soybeans contain not only phytoestrogens, but also phytates that prevent mineral absorption and substances that block the enzymes needed to digest protein. Soy also contains other antinutrients, including:

- Antigens in the form of non-denatured proteins that can create serious allergic reactions in both animals and people
- Trypsin inhibitors that hinder the action of proteolytic enzymes in the GI tract, reducing the digestibility of proteins
- Oligosaccharides — indigestible sugars that cause gassiness and diarrhea
- Phytic acid, which can interfere with the body's use of vital minerals like calcium, magnesium, iron and zinc

The soy in traditional oriental diets has been fermented for long periods (18 months on average) using molds, cultures or other substances that radically alter its biochemistry. This transformation through fermentation lessens the impact of antinutrients while making the amino acids in soybeans available for use by the body.

In contrast to fermented soy, factory processed soy starts with defatted soy protein meal rather than the whole bean. The meal is produced in a crushing process. Raw beans are crushed into thin flakes. The flakes are mixed with a petroleum-based hexane solvent to extract the soy oil. Flake waste is toasted and ground down to soy meal or soy flour, both of which wind up in animal feed. The soy oil is then cleaned, bleached, degummed and deodorized.

"Naturally brewed" soy sauce means the processed soy protein meal has been mixed with mold spores and "aged" at high temperatures for three to six months. Regular, non-brewed soy sauce takes only two days to produce. Soy flour is blended with hydrochloric acid at high temps, under pressure and the result is hydrolyzed vegetable protein.

Various preservatives and additives are used to improve color and taste. This method employs the use of the enzyme glutamase, which in turn produces large quantities of the "g" (glutamate) in MSG.

Soy in Pet Food

Soybeans and soybean-related products can be found in a variety of processed pet food formulas, dry, semi-moist and wet, as well as veterinary formulas and prescription diets. Because plant proteins are less expensive than meat proteins, pet food manufacturers use them to increase profit margins.

The ingredient label might not even say soy, as it is commonly listed as vegetable broth, textured vegetable protein or TVP and perhaps other aliases. Pet nutrition experts agree soy isn't good nutrition for cats or dogs. It’s considered a low-quality, incomplete protein well known to create food allergies and potentially much worse in pets. According to Sally Fallon and Mary G. Enig, Ph.D., authors of “Cinderella's Dark Side:”

> "*The soybean contains large quantities of natural toxins or ‘antinutrients.’ First among them are potent enzyme inhibitors that block the action of trypsin and other enzymes needed for protein digestion. These inhibitors are large, tightly folded proteins that are not completely deactivated during ordinary cooking. They can produce serious gastric distress, reduced protein digestion and chronic deficiencies in amino acid uptake.*

In test animals, diets high in trypsin inhibitors cause enlargement and pathological conditions of the pancreas, including cancer. Soybeans also contain haemagglutinin, a clot-promoting substance that causes red blood cells to clump together. Trypsin inhibitors and haemagglutinin are growth inhibitors."

Soy's Disastrous Effects on Other Species

Approximately 35 years ago, captive breeding of North American cheetahs was undertaken to reverse a population crisis within the species. But in 1985, 29 cheetahs in American zoos died, many from liver disease. Only 18 were born, and seven of those died before reaching adulthood.

As few as 10% of adult female cheetahs living in captivity in North America produced live cubs in the mid-1980s. Yet in other countries, 60% to 70% was the norm. The difference? Cheetahs living and breeding successfully in other parts of the world were fed whole animal carcasses. North American cheetahs were fed a commercial feline diet of horsemeat and soy.

Researchers in Ohio studied the food the North American cheetahs were eating. They found the soy portion of the diet contained plant estrogens similar to the hormones found in female mammals.[2] Four cheetahs in a U.S. zoo were switched to a diet of chicken meat and no soy. Liver function improved, however, whether the cats would ever be able to breed successfully remained a question mark.

The researchers theorized the cheetahs were probably extra-sensitive to the effects of plant estrogens due to inbreeding (the result of a previous population crisis). However, the amount of soy in their diets was relatively small, leading the scientists to conclude all felines probably have difficulty ridding their bodies of excess estrogens.

In the early 1990s, a couple in New Zealand was raising parrots and decided to feed them a new "wonder food," soya feed. Parrots in the wild don't eat soya beans, but the couple assumed they were feeding their exotic birds the best diet available. Sadly, the experiment was a disaster. Some of the birds became infertile. Many died. Young males hit puberty years early and aged prematurely.

Soy Is Also Linked to Health Problems in Dogs and Cats

A 2004 study at the University of Pennsylvania looked at the amount of phytoestrogens in 24 commercial dog foods. Results revealed all the foods containing soy ingredients had concentrations of phytoestrogens in large enough quantities to have a biological effect on the pet.[3] Soy has been linked to gas and deadly bloat in dogs. It's high in purines, making it a completely inappropriate protein source for urate-forming dogs. It's also high in silicates and promotes the formation of silica stones.

The carbohydrate action of soy can cause a rise in blood sugar in cats. Soy is also linked to thyroid damage, and since hyperthyroidism is common in kitties, this is yet another reason it should not be part of a feline's diet. The ingestion of soybean products is also linked to seizures in both dogs and cats.

All this and more is why I recommend avoiding pet foods containing soy products. The potential risks associated with feeding soy are unacceptably high, especially when you consider your carnivorous cat or dog receives a much higher level of nutrition from animal protein sources.

Sources and References

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