Why Your Pet Absolutely Needs Fresh Vegetables

It was once thought that feeding vegetables to your pet could be harmful, but now we know they are essential for not only a healthy body, but also to encourage detoxification, stimulate natural antioxidant protection and suppress tumors. Here are nine of the best veggies to feed your cat or dog.

Reviewed by Dr. Becker

STORY AT-A-GLANCE

- Small amounts of fresh, low glycemic vegetables are crucial to the health of cats and dogs
- Vegetables are a rich source of critical phytochemicals not found in meat, and may have such positive effects on our pets' health due to a process called xenohormesis
- Veggies also provide minerals and vitamins E, K, C, beta-carotene and the B vitamins; bright-colored and leafy green veggies tend to be the most nutritious
- Fermented vegetables are optimally digestible for dogs and cats, and are nutritional powerhouses, even in very small quantities
- Adding veggies to pet diets promotes gut health and leaving them out results in a less robust microbiome; veterinary researchers are beginning to study the critical role of a healthy microbiome in maintaining pets' immunologic and physiologic well-being

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Vegetables are crucially important to the health of dogs and cats, with one stipulation: they should represent only a small percentage of your pet's nutritionally optimal, species-specific diet.

In the wild, wolves and coyotes consume grasses, berries and wild fruits and vegetables as sources of these crucial nutrients, which not only provide roughage (fiber), but also a variety of nutritive substances not found in meats, bones and organs.

Wild cats, as strict carnivores, consume the predigested vegetable matter contained in the gastrointestinal (GI) tracts of their prey and occasionally nibble on grasses. To mimic their ancestral diet, only very small amounts of pureed veggies are added to commercial and homemade cat food. Without their inclusion, cats are prone to constipation and GI motility issues, and the **diversity of the microbiome is negatively impacted**.

Although the volume of roughage (veggies) in biologically appropriate diets is relatively small for dogs and even smaller for cats, their inclusion plays a critical role in maintaining digestive and microbiome health. Not only do veggies provide prebiotic fibers for short chain fatty acid production in the colon, they provide the soluble and insoluble fiber necessary to maintain healthy elimination and immune-boosting phytonutrients.

What Doesn't Kill You Makes You Stronger

Researchers are still discovering the extensive health benefits of the flavonoids, flavonols, anthocyanins, lignans, stilbenes and other polyphenols naturally found in fresh vegetables, but how these substances support good health might surprise you: hormesis.

Hormesis is based on the concept of healthy stress, aka "what doesn't kill you makes you stronger." Substances considered unhealthy in large amounts may, in small quantities, do the opposite and promote health.

For example, most people assume that phytochemicals have direct antioxidant actions that scavenge reactive oxygen species in the body. However, Dr. Mark Mattson of the National Institutes of Health (NIH), who studies how plant chemicals (phytonutrients) affect the body, thinks these substances work more indirectly (similar to exercise), by stressing the body in a way that leaves it stronger. As shared in Nautilus, Mattson explains that:

> *"Plants live a stationary life. They cannot respond to pathogens, parasites, and grazers as we might — by moving. To manage the many threats posed by mobile life, as well as heat, drought, and other environmental stresses, they've evolved a remarkable number of defensive chemicals.*
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> *We're familiar with many components of their arsenal. The nicotine that we so prize in tobacco slows grazing insects. Beans contain lectins, which defend against insects. Garlic's umami-like flavor comes from allicin, a powerful antifungal. These 'antifeedants' have evolved in part to dissuade would-be grazers, like us (and other animals).*
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> *These plant 'biopesticides' work on our bodies like hormetic stressors. Our bodies recognize them as slightly toxic, and we respond with an ancient detoxification process aimed at breaking them down and flushing them out.*
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> *Consider fresh broccoli sprouts. Like other cruciferous vegetables, they contain an antifeedant called sulforaphane. Because sulforaphane is a mild oxidant, we should, according to old ideas about the dangers of oxidants, avoid its consumption. Yet studies have shown that eating vegetables with sulforaphane reduces oxidative stress.*
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> *When sulforaphane enters your blood stream, it triggers your cells to activate a protein called Nrf2. This protein, called by some the 'master regulator' of aging, then activates over 200 genes."*[1]

Harvard longevity scientist Dr. David Sinclair calls this phenomenon "xenohormesis," where we (and our pets) benefit from consuming the phytochemicals plants produce during stress. He found that when plants stimulate Nrf2 in animals' bodies, hundreds of beneficial reactions occur that control inflammation, encourage detoxification, stimulate the body's natural antioxidant production and even evoke a tumor suppression response.[2]

When fresh food advocates started feeding unprocessed pet food 30 years ago, it wasn't uncommon to hear some strange (and now-debunked) myths, including that dogs don't produce amylase, so feeding veggies can harm them.

Thankfully, continued research has corrected many of these fresh pet food fallacies, and Dr. Sinclair's animal research continues to back up what grandma told us, "Eat your vegetables, they're good for you." They're also critical, in small amounts, for our pets.

The goal is to provide a biologically appropriate amount of roughage via low glycemic veggies; the phytochemicals and vitamins that are naturally included in fresh produce are passed right up the food chain.

Veggies Are a Rich Source of Vitamins

Vegetables are also a great source of fiber, minerals and vitamins. Whole food sources of vitamins keep pets' skin and coat healthy, strengthen bones and teeth, and provide the necessary co-factors to fuel reactions for the body to make energy. In addition, vitamins contribute to disease resistance.

The vitamins found in ultraprocessed pet food are laboratory made (synthetic), "feed grade" (not tested for contaminants or impurities) and can be found in unnatural amounts, compared to real food sources. Fresh veggies provide whole food nutrients in the form your pet's body recognizes and resonates with.

- **Provitamin A,** or beta-carotene, is important for sight, cell division and the immune system; is required to generate cells; supports the immune system; and plays an important role in the growth of young animals. The carotenoids are found in bright-colored veggies like broccoli, spinach carrots, squash, sweet potatoes and tomatoes.
- **Vitamin E** is an important antioxidant that protects cells against the effects of free radicals and plays a role in the regulation of cellular metabolism, the generation of red blood cells, and the maintenance of muscle and other tissues. Vitamin E is found in broccoli, pumpkin, spinach and carrots.
- **Vitamin K** is essential for good blood clotting and is required for bone strength. Vitamin K is found in green leafy vegetables such as broccoli and spinach.
- **B Vitamins** are found in green vegetables like broccoli, spinach and pumpkin.
  - **Vitamin B1 (thiamine)** is necessary to convert carbohydrates into energy, and for the proper functioning of the heart muscle, the nervous system and the brain
  - **Vitamin B2 (riboflavin)** plays an important role in releasing energy from carbohydrates, protein and fat and is required for the generation of red blood cells and antibodies
  - **Vitamin B6** is involved in energy production and the metabolism of fats and proteins (building amino acids); it also regulates the functioning of certain hormones and is vital to growth, blood production and the proper functioning of the immune system and nervous system
  - **Vitamin B9 (folic acid)** contains folate and is necessary for the growth and functioning of the body, the generation of white and red blood cells and clearing of homocysteine, and also plays an important role in the early development of unborn puppies and kittens
- **Vitamin C** is an antioxidant necessary for immune system function, construction of connective tissue (collagen), and the absorption of iron. Broccoli and pumpkin are two sources pets usually love.

Vegetables You Can Safely Feed Your Dog or Cat

The following list highlights just a few examples of the veggies you may have in your refrigerator right now that can add valuable nutrition to your pet's diet, when fed as snacks. Try to buy organic or spray-free:

- **Broccoli —** Your pet can reap the benefits of broccoli (and sulforaphane) just like you can, which includes detoxification, anti-inflammatory properties and nutrients like potassium, calcium, protein and vitamin C. Your pet may prefer steamed broccoli
- **Brussels sprouts —** Similar to broccoli, Brussels sprouts provide anti-inflammatory, detoxification and even anticancer benefits, plus loads of nutrients and antioxidants
- **Carrots —** Another carotenoid-rich food many dogs and some cats enjoy
- **Celery —** Celery provides vitamin C, lots of microbiome-building fiber and may even freshen your pet's breath
- **Cucumbers —** Cucumbers are crunchy and low in calories, but rich in vitamins like K, C and B1
- **Green beans —** This dinnertime staple provides vitamins C and K, along with calcium, copper, fiber, folic acid, iron, niacin, manganese, potassium, riboflavin, thiamin and beta-carotene
- **Mushrooms (technically fungi but classified as vegetables) —** Obviously avoid poisonous mushrooms (and don't let your pet eat wild mushrooms for this reason), but the medicinal mushrooms you eat are also good for your dog or cat; they contain anticancer and immune-boosting properties
- **Peas —** Fresh or frozen peas make excellent training treats (to maximize nutrition and minimize sodium intake, avoid canned veggies)
- **Spinach —** This green leafy vegetable has anti-inflammatory properties and can help support heart health

Tips for Feeding Veggies to Your Pet

There are a few different ways to prepare vegetables to make them optimally digestible for dogs and cats, and one of the best and most nutritious methods is to ferment them. Fermentation imitates the digestion of plant foods in the GI tracts of the small prey animals that dogs and cats eat in the wild.

Fermented vegetables can also be beneficial in keeping pets healthy, thanks in large part to their probiotic effect. Beneficial gut bacteria play a critical role in managing digestive issues and a wide range of other health problems in dogs and cats. The fermenting of vegetables produces beneficial microbes (probiotics) that help balance gut bacteria. This in turn boosts your pet's overall immunity because a healthy gut means a healthy pet.

And fermented vegetables not only provide a wider variety of beneficial bacteria than probiotic supplements, they also provide far more of them. For example, one human serving size of fermented veggies provides the same benefit as an entire bottle of high-potency probiotics!

Fermented vegetables are also potent chelators and detoxifiers, so they help rid your pet's body of toxins, including pathogenic bacteria[3] and heavy metals. The fermentation process makes the nutrients inside the food more bioavailable as well. It produces vitamin C, B vitamins, vitamin K2 and enzymes (all of which support metabolic activity), choline (which balances and nourishes the blood), and acetylcholine for neurotransmitter production as well.

In addition, the lactic acid produced by fermentation is a chemical repressor that fights cancer cells without harming healthy cells.

Some dogs and even the occasional cat will dive right in when offered fermented veggies, while others refuse because the smell and taste is pungent, sort of like very tangy sauerkraut. If your dog tends to eat just about anything, try adding a half teaspoon or less of fermented vegetables to his regular food.

For pets who will eat them, it's important to introduce fermented veggies gradually and in small quantities to avoid digestive upset. You can work up to feeding a teaspoon for every 20 pounds of body weight a day.

For pets who won't eat fermented foods, start by mixing a bland veggie, such as a small amount of minced zucchini, in with their food. Using small pieces of fresh veggies as treats throughout the day is also a great way to increase whole food nutrient intake without adding lots of calories.

Veterinary researchers are just beginning to study the critical role of a healthy microbiome in maintaining pets' immunologic and physiologic well-being. The more nutritional variety you can offer your pet, the richer their gut microbial diversity will be, so serve up those pet-friendly veggies. You can safely replace 10% of your dog's (and 5% of your cat's) ultraprocessed food with fresh or gently steamed low glycemic veggies.

The more we learn about food, the more we discover the vast and intricate connections between the gut and the rest of our pets' bodies, including behavioral and epigenetic influences. Research shows adding even small amounts of veggies to a bowl of kibble can have significant anticancer benefits,[4] among a myriad of other health benefits.

Sources and References

PetfoodIndustry.com

[1] Nautilus, June 25, 2014

[2] Baur, J.A. and Sinclair, D.A. American Journal of Pharmacology and Toxicology 3(1):152-159, March 2008

[3] Yang Sun, H. et al. Animals 2019, 9(8), 581 (Archived)

[4] Raghavan, M. et al. Journal of the American Veterinary Medical Association, 2005 Jul 1;227(1):94-100