

This Leafy Green Packs a Punch – Is It Safe for Pets?

The benefits of leafy greens on human health have been studied extensively. However, you may be wondering if these translate to your pet as well. As it turns out, feeding this veggie to your furry pal every now and then may be great for their well-being.

Reviewed by [Dr. Becker](#)



STORY AT-A-GLANCE

- Brussels sprouts possess sulforaphane, a phytochemical unique to cruciferous vegetables. It activates a protein called Nrf2 in animals' bodies, which then stimulates over 200 genes, causing hundreds of beneficial reactions to occur
- Brussels sprouts also contain assorted nutrients that may benefit your pet's health, such as antioxidants like vitamin C, lutein and zeaxanthin, as well as beta-carotene and potassium
- Brussels sprouts don't grow on trees or on the ground — they grow on stalks, with each stalk having as many as 20 sprouts
- You can feed Brussels sprouts raw or cooked to your pet, but be sure to cut up the sprouts according to your pet's size, and never add sauces
- Isothiocyanates cause the intestinal bacteria to produce excess gas upon digestion, which can lead to diarrhea and other digestive issues, so feed Brussels sprouts in small amounts so the benefits will outweigh the potential negatives

Editor's Note: This article is a reprint. It was originally published April 11, 2021.

Brussels sprouts are quickly becoming one of the most popular vegetables in America today.¹ Plenty of studies have been published regarding its benefits for human health, such as fighting oxidative stress,² lowering the risk of cancer³ and managing inflammation.⁴ With all these amazing things being said about this vegetable, can your pet munch on this healthy food as well?

The answer is, yes — Brussels sprouts are a great treat for pets! Healthy "extras" like Brussels sprouts can be part of your pet's healthy homemade diet or given as a treat. A single sprout, which weighs around 19 grams, contains an assortment of nutrients that may support your pet's health.⁵ In fact, it's one of the safe veggies that's highly recommend for dogs and cats (if they'll eat them).



Did You Know?

Brussels sprouts don't grow on trees or on the ground — they grow on stalks, with each stalk having as many as 20 sprouts!



Three Incredible Facts About Brussels Sprouts

What do Brussels sprouts have that make them great for your pet's wellness? More importantly, are they safe for animals at all? The image below provides a good overview on what makes Brussels sprouts healthy.



Are Brussels Sprouts SAFE FOR YOUR PETS?

Yes, they're safe!

Your pet can get nutrients from them such as **vitamins C, K and A, as well as lutein and zeaxanthin**, which may help:

- Boost immune response
- Lower their risk of excessive bleeding
- Maintain good eyesight

NOTE: It's okay to feed your pet **raw or cooked** Brussels sprouts, just make sure to **chop** them up according to your **pet's size**. Also, **never add sauces!**

bark & whiskers

Furthermore, a study published in the Proceedings of the National Academy of Sciences (PNAS) highlights the health advantages of consuming cruciferous vegetables like Brussels sprouts, cauliflower and broccoli. The study notes that:

"Since consumption of large quantities of fruit and vegetables is associated with a striking reduction in the risk of developing a variety of malignancies, it is of interest that a number of edible plants contain substantial quantities of compounds that regulate mammalian enzymes of xenobiotic metabolism."⁶

With the benefits mentioned above, it can be tempting to include large quantities of Brussels sprouts into your pet's diet, but you'll be pleased to know that only a small amount is actually needed to reap the benefits — we'll discuss this more in detail later.

Where Can You Find Brussels Sprouts?



Brussels sprouts are widely grown in Europe and North America.⁷ They were said to have originated from Rome, but it's in Belgium where they became popular as a vegetable crop during the 16th century.⁸



Sulforaphane Is the Powerful Secret of Brussels Sprouts

A unique property of cruciferous vegetables, which includes Brussels sprouts, is the presence of sulforaphane. It is a compound that has been shown to possess chemopreventive properties, according to one animal study.⁹ Further studies show the following benefits of Brussels sprouts:

1. They may protect memory aptitude as well, as shown in one research conducted with diabetic rats.¹⁰
2. One animal-model study showed that sulforaphane helped manage conditions such as hepatic encephalopathy, epilepsy and spinal cord injury, as well as protection from toxins.¹¹
3. Sulforaphane activates a protein called Nrf2 in animals' bodies. When this happens, it stimulates over 200 genes and hundreds of beneficial reactions occur — from controlling inflammation to encouraging detoxification, and even stimulating the body's natural antioxidant production.¹²

The Nutrients of Brussels Sprouts Are Varied and Beneficial

Brussels sprouts may help support your pet's health in various ways. Vitamin C is important for maintaining a healthy immune response by boosting neutrophil functions, as well as functioning as an antioxidant. Furthermore, vitamin C is a crucial cofactor for enzymes that synthesize collagen.¹³ A single sprout can give your pet 16.2 milligrams of this antioxidant.¹⁴

Vitamin K has been shown to help lower the risk of excess bleeding, according to the Cornell University College of Veterinary Medicine,¹⁵ while magnesium is considered to be an important contributor to animal functions, such as bone mineralization and muscle contraction.¹⁶ There are 33.6 micrograms of vitamin K and 4.37 milligrams of magnesium in one Brussels sprout.^{17,18}



Brussels Sprouts May Also Reduce Cancer Risk

According to research published in the journal *Carcinogenesis*, consuming Brussels sprouts helped reduce DNA damage by 28% in study participants compared to those who didn't eat them.



The isothiocyanates found in cruciferous vegetables, which include sulforaphane, may help protect against chemical carcinogens by inducing phase 2 detoxification enzymes in the body. In addition, the authors noted that even small quantities of cruciferous sprouts have similar cancer-protecting effects when compared to mature counterparts of the same variety.¹⁹

Lastly, Brussels sprouts contain generous amounts of dietary fiber, which is important in maintaining a healthy digestive system for humans and animals alike. One specific benefit of fiber is helping reduce the risk of constipation.²⁰

Brussels Sprouts Can Be Good for Your Pet's Eyesight

Brussels sprouts contain lutein and zeaxanthin, which are antioxidants crucial for healthy eyesight among humans,²¹ and these two can be a boon for your pet as well. Your pet can get 302 micrograms of these antioxidants in every Brussels sprout.²² In a study that tested the effects of lutein and zeaxanthin on healthy dogs, researchers noted that the two nutrients had a positive effect on the eyesight of the test subjects.²³

Your Pet Also Gets Beta-Carotene from This Vegetable

One Brussels sprout can give your pet 85.5 milligrams of beta-carotene,²⁴ which is the precursor to vitamin A, an important nutrient with a wide range of roles for both animals and humans, such as for reproduction, eyesight and immune response.²⁵ However, note that carotenoids are fat-soluble compounds.²⁶ If you want to get the most out of Brussels sprouts' beta-carotene, you can chop this vegetable and use it as food toppers to your pet's meal containing healthy dietary fats.

Too Many Brussels Sprouts May Lead to These Side Effects

While the beneficial nutrients of Brussels sprouts are noteworthy, there's a reason why they should only be fed in small quantities. The isothiocyanates cause the intestinal bacteria to produce excess gas upon digestion, which can lead to diarrhea and other digestive issues. And as it turns out, Brussels sprouts contain plenty of these said isothiocyanates.²⁷

However, don't let these side effects keep you from giving Brussels sprouts to your dog. The key word to remember is "overfeeding." As long as Brussels sprouts are given in small amounts, the benefits your pet will receive outweigh the potential negatives.²⁸

This Myth About Brussels Sprouts Has Been Disproved

You may have heard that Brussels sprouts should be avoided if you have a thyroid disorder because it's believed that the cruciferous vegetable family interferes with how the thyroid uses iodine in your body. But in truth, it's perfectly safe to eat these vegetables, and should be part of a healthy diet.²⁹

The key to lowering the risk of thyroid disorders due to consumption of cruciferous vegetables is moderation. According to Dr. Ayla Bakar, an endocrinologist at Northwestern Medicine, you would have to eat an "unrealistic amount" of cruciferous vegetables before they interfere with thyroid function.³⁰

How to Prepare Brussels Sprouts for Your Pet

The best place to buy Brussels sprouts is your local farmers market. Here are some things you should look for once you're there:³¹

- Fresh, organic sprouts are still attached to the stalk

- The heads of the sprouts should be heavy and firm, and the leaves packed closely
- Avoid produce that shows signs of damage, such as yellow leaves or black spots

According to licensed nutritionist Monica Reinagel, Brussels sprouts are not included in the "Clean Fifteen" and "Dirty Dozen" lists of the Environmental Working Group's 2024 Shoppers' Guide to Pesticides in Produce.³² Reinagel states that since broccoli (which has very low pesticide levels) is similarly grown to Brussels sprouts, conventionally grown varieties of this vegetable may be safe to eat.³³ But of course, organic or spray-free sprouts are still your top option.

Brussels sprouts can be served raw or cooked to pets. Just remember that sulforaphane action can be diminished when cruciferous vegetables are cooked before consumption, according to a study published in 2019.³⁴ When served cooked make sure to never add sauces to your Brussels sprouts. Take note of your pet's size as well. If you own a small dog or cat, it's best to cut up the sprouts so they can chew this food easier. All treats provided in a day should constitute less than 10% of your pet's overall calorie intake.

Sources and References

¹ [NPR, October 30, 2019](#)

² [Carcinogenesis. 1995 Apr;16\(4\):969-70](#)

³ [Carcinogenesis. 1995 Sep;16\(9\):2125-8](#)

⁴ [GeroScience. 2019 Apr 2;41\(5\):655-670, Abstract](#)

^{5,14,17,22,24} [USDA, Brussels Sprouts, Raw](#)

^{6,19} [Proc Natl Acad Sci U S A. 1997 Sep 16;94\(19\):10367-72, Abstract](#)

⁷ [Britannica, Brussels Sprouts](#)

⁸ [Food Print, Real Food Encyclopedia | Brussels Sprouts](#)

⁹ [Mol Nutr Food Res. Volume 57, Issue 12, December 2013, Pages 2128-2136, Abstract](#)

¹⁰ [Cell Physiol Biochem. 2016;39\(3\):901-7, Abstract](#)

¹¹ [Brain Circ. 2019 Jun 27;5\(2\):74-83](#)

¹² [American Journal of Pharmacology and Toxicology 3\(1\):152-159, March 2008](#)

¹³ [Can J Vet Res. 2006 Oct; 70\(4\): 305-307, Abstract](#)

¹⁵ [Cornell University, Vitamin K Deficiency](#)

¹⁶ [Tierarztl Prax Ausg K Kleintiere Heimtiere. 2018 Feb;46\(1\):21-32, Abstract](#)

¹⁸ [Carcinogenesis. 1995 Apr;16\(4\):969-70, Abstract](#)

²⁰ [PetPonder, Are Brussels Sprouts Safe for Dogs? \(Archived\)](#)

²¹ [Nutrients. 2017 Feb; 9\(2\): 120, Abstract](#)

²³ [J Nutr Sci. 2016; 5: e18, Discussion](#)

²⁵ [J Vet Intern Med. Nov-Dec 2003;17\(6\):835-42, Abstract](#)

²⁶ [ScientificWorldJournal. 2016; 2016: 7393620, Digestion and Absorption of Carotenoids](#)

²⁷ [Prev Nutr Food Sci. 2017 Dec; 22\(4\): 353-358](#)

²⁸ [NCRAOA, October 21, 2020](#)

^{29,30} [Northwestern Medicine, March 2023](#)

³¹ [Today, October 1, 2015](#)

³² [EWG, March 20, 2024](#)

³³ [QDT, January 13, 2011 \(Archived\)](#)

³⁴ [GeroScience. 2019 Apr 2;41\(5\):655-670, Biosynthesis and Other Products After Glucoraphanin](#)