

#### **Food Facts**

# Curb Inflammation with This Fruit's Powerful Phytochemicals

Known for its juicy, sweet taste, this fruit's popularity shouldn't come as a surprise. But did you know that it's loaded with bioactive compounds that may help boost your pet's immunity?

### Reviewed by <u>Dr. Becker</u>

# SAFE

# **STORY AT-A-GLANCE**

- Oranges are OK as dog treats, as they may provide nutrients like vitamin C, flavonoids and other bioactive compounds
- The vitamin C in oranges may help boost immunity in pets and support collagen production, which is important for joint, skin and coat health
- Oranges' phytochemical content, like saponins and tannins, may help curb inflammation

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Oranges are one of the most popular fruits in the U.S., ranking in 6th place behind bananas, strawberries, grapes, apples and watermelon. While this popularity may be all thanks to their taste and flavor, oranges are also well known for the nutrients they offer. These fruits contain a surplus of bioactive compounds and metabolites crucial for biological processes, such as immune function and collagen production.

Most people enjoy eating fresh orange slices because of their sweet and refreshing flavor. However, if you suddenly notice your dog eyeing a piece or two, you may be curious if your pet can tolerate this fruit or not.

With its surplus of bioactive components, as well as the health benefits this fruit has to offer, small amounts of fresh oranges can be shared. Oranges can be given to pets as healthy treats (make sure all treats make up less than 10% of their daily caloric intake) or added to their nutritionally adequate, species-appropriate diet.

#### Where Do Oranges Grow?



Every year, about 50 million tons of oranges are harvested all around the world. While this fruit is cultivated in different regions, three countries lead the pack in orange production:<sup>3</sup>

- 1. Brazil 15.9 million tons
- 2. China 7.5 million tons
- 3. U.S. 4.2 million tons



# **Protect Pets Against Pathogens with Oranges' Phytochemicals**

Researchers from the University of Benin and Kentucky recently published a study analyzing the phytochemical components of oranges. They found plentiful bioactive compounds, such as flavonoids, tannins, saponins and alkaloids, which lend oranges their antibacterial, antioxidant and anti-inflammatory properties.

Optimizing your pet's diet to include these compounds may help protect them from infections and chronic diseases triggered by constant inflammation.<sup>4</sup>



#### Did You Know?

Oranges aren't found in the wild naturally, since they're a cross between two citrus fruits: pomelo and mandarin. Oranges got the best of their parent fruits, inheriting the sweetness of the mandarin and the fibrous flesh of the pomelo.<sup>5</sup>



# **Boost Your Pet's Immune System with Vitamin C**

"Vitamin C is often regarded as the most important vitamin found in citrus fruits. This antioxidant is linked to the immune system and iron absorption."

For its function in immunity, vitamin C works by boosting both the adaptive and innate immune systems. It is especially important in supporting the epithelial barrier function and skin health — the body's first line of defense against pathogens.

Vitamin C also figures in collagen production, a component that is not only vital for wound healing and skin health, but is also responsible for decreasing gut permeability and improving microbiota health.<sup>6,7</sup> Two tablespoons of orange slices can offer your pet up to 12 milligrams of vitamin C.<sup>8</sup>



# Fun Fact About Oranges

Only 20% of all fruits, including oranges, produced worldwide are sold as fresh fruits. The remaining 80% are typically processed into juice, preserves and extracts.<sup>9</sup>



# **How to Feed Oranges to Pets**

Remember that misinformation about many healthy fruits, vegetables, nuts and seeds abounds on the internet. This is because websites have labeled all risks (such as the risk of overconsumption causing gastrointestinal issues, or choking on too large of pieces or pits) as "toxicities," which isn't true but has managed to confuse millions of pet lovers, nonetheless.

As for oranges, you can safely feed your dogs a few fresh slices, obviously peeled with the seeds removed. Just make sure you don't give them the peel, since it may cause stomach discomfort due to the essential oils it contains. Too many orange slices can cause loose stools if fed in excess. Cats generally have an aversion to all citrus, but a bite of orange is safe for cats (without the peel).

Orange-flavored food or drinks, such as orange juice and canned oranges, shouldn't be given to pets, since they're often loaded with added sugars and high-fructose corn syrups, and excessive sugar consumption can be problematic for pets, just as it can be for humans.<sup>10</sup>

Remember that while oranges and other fresh fruits are healthy, all "extras," including oranges, should be limited to only about 10% of your pet's daily diet, together with other types of treats. Your pet should be getting the bulk of their nutrients from complete meals, with treats serving as an addition or bonus to nutritionally optimal diets.

# **Sources and References**

- <sup>1</sup> Produce Processing, August 4, 2022
- <sup>2</sup> Stat Pearls, May 1, 2023
- <sup>3</sup> USDA, 2021
- <sup>4</sup> Clinical Phytoscience, July 9, 2020
- <sup>5</sup> <u>TasteMade, 8 Things You Didn't Know About Oranges</u>
- <sup>6</sup> Nutrients 2017 Nov 3;9(11):1211
- <sup>7</sup> Nutrients. 2017 Aug; 9(8): 866
- <sup>8</sup> USDA NAL, Oranges, raw, all commercial varieties
- <sup>9</sup> Serious Facts, 40 Interesting Orange Facts (Archived)
- <sup>10</sup> Rover, Can My Dog Drink Orange Juice?