

#### **Food Facts**

# Are You Overlooking This Tiny Superfood for Your Pet?

One study found that these antioxidant-rich berries helped protect sled dogs against exercise-induced oxidative damage. Have you tried adding them to your pet's food bowl?

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

## **STORY AT-A-GLANCE**

- Blueberries are safe for dogs to consume. National organizations, including the American Kennel Club, recognize the benefits as well as the safety of feeding blueberries to dogs
- Blueberries contain nutrients such as vitamins A and C, as well as calcium, phosphorus, potassium and magnesium
- One research team found that when sled dogs were fed blueberries they exhibited significantly higher levels of antioxidants in their blood, suggesting that these berries may help protect against exercise-induced oxidative damage
- Cats are less likely to eat fruits, as felines lack sweet taste receptors, but it's completely safe if your cat wants to eat them
- Healthy treats, including blueberries, can constitute up to 10% of your pet's daily calories

#### Editor's Note: This article is a reprint. It was originally published October 2, 2018.

Blueberries are one of the most popular fresh food snacks in America. They can be enjoyed raw or used in various culinary creations, and are a healthy superfood for you. Research has shown that these berries are high in antioxidants that may help fight disease.<sup>1,2,3</sup>

No doubt you enjoy a handful of blueberries every now and then, but have you ever wondered if your pet might enjoy them as well? As it turns out, blueberries are an incredible treat to offer. They can be given as safe and healthy treats for dogs, and even cats, or can be part of their nutritionally adequate, species-appropriate diet.

# What Makes Blueberries Great? Their Antioxidant Strength

Research on the benefits of blueberries for animals is in its infancy, but the few published findings posit promising results. In a study published in the journal Comparative Biochemistry and Physiology, researchers examined the effects of blueberries in sled dogs after exercise. They noted that when supplemented with the berries, the dogs exhibited significantly higher levels of antioxidants, suggesting that blueberries may help protect against exercise-induced oxidative damage.<sup>4</sup>

In another animal study, blueberries exhibited anti-inflammatory properties in rats affected with post-traumatic stress disorder (PTSD). Researchers noted that biological inflammatory markers were lower once blueberries were consumed, with results suggesting that blueberries may help restore neurotransmitter imbalances.<sup>5</sup>

Interestingly, one study noted that a mixture of grape and blueberry extracts may yield positive outcomes. Aged beagles that were given a polyphenol-rich mixture were found to have higher superoxide dismutase mRNA expression, as well as cognitive improvements, compared to dogs that didn't receive supplementation.<sup>6</sup>

While the study highlights the effectiveness of a blueberry-grape extract, real grapes should not be fed to pets. There's plenty of research indicating that dogs and cats that consume grapes may experience renal failure.<sup>7,8</sup> Thankfully blueberries are entirely safe for consumption.



#### **Did You Know?**

Blueberries are native to North America and were an important food source for Native Americans for thousands of years. Despite being a staple, the first cultivated crop was only achieved in 1912.<sup>9</sup>



## Other Nutrients in Blueberries Contribute to Their Benefits

According to the U.S. Department of Agriculture (USDA), blueberries contain other nutrients such as vitamins A and C, as well as calcium, phosphorus, potassium and magnesium.<sup>10</sup> Here's an overview of how each nutrient may help your pet:

- **Beta-carotene** According to a study published in the British Journal of Nutrition, vitamin A precursors are crucial for functions such as vision, bone growth, reproduction and immune response in dogs.<sup>11</sup>
- **Vitamin C** Aside from acting as an antioxidant, vitamin C supports the biosynthesis of collagen, carnitine and norepinephrine. <sup>12</sup> Collagen is needed for healthy skin elasticity in your dog, <sup>13</sup> while carnitine helps transfer fatty acids to the cells for mitochondrial purposes. <sup>14</sup> Meanwhile, norepinephrine may help your pet regulate stress better due to its role as a neurotransmitter. <sup>15</sup>
- Calcium Calcium may help support optimal bone and teeth health, as well as blood coagulation and nerve
  impulse transmission.<sup>16</sup>
- Phosphorus This mineral plays a role in energy metabolism, being a component of adenosine triphosphate.<sup>17</sup>
- Potassium Adequate intake of this mineral is essential for normal function of nervous, cardiac and muscle
  tissues, as well as the renal, gastrointestinal and endocrine systems.<sup>18</sup>
- **Magnesium** This plays a role in movement, particularly muscle contraction and relaxation, as well as bone mineralization.<sup>19</sup>



#### Fun Fact About Blueberries

There's actually a month dedicated to celebrating blueberries — July! This coincides with the peak of blueberry harvest in North America.<sup>20</sup>



## **Tips for Feeding Blueberries to Your Pets**

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, as is the case with blueberries and all fruits) as risks or "toxicities," which isn't true but has managed to confuse millions of pet lovers, nonetheless.

In the case of blueberries, major kennel groups such as the American Kennel Club recognize the benefits as well as the safety of feeding this fruit to your dogs.<sup>21</sup> The studies cited earlier do not indicate any side effects from dogs consuming blueberries.<sup>22</sup> However, it's still important to feed fruits in moderation, as too much fruit can cause GI upset.

Cats are less likely to eat fruits, compared to dogs, as felines lack sweet taste receptors.<sup>23</sup> However, if your cat happens to like this fruit, go ahead and let them enjoy it.

If your pet has never consumed any fruit, start by offering a few blueberries a day, increasing to a few blueberries for every 10 pounds of body weight, used as rewards spread throughout the day. All treats, including blueberries, should comprise less than 10% of your pet's daily calorie intake. The rest of your pet's nutrition should come from a nutritionally complete, species-appropriate diet.

Lastly, try to find organic blueberries whenever you can. The Environmental Working Group (EWG) places blueberries in 16th place on their 2021 Shopper's Guide to Pesticides in Produce.<sup>24</sup> If fresh organic blueberries are out of the question, you may opt for the frozen variety.

#### Which States Produce the Most Blueberries?



Oregon is America's leading producer of blueberries, with a total yield of 11,700 pounds per acre. California comes in a close second, with 10,100 pounds per acre. The third spot is taken by Washington, which comes in at 9,760 pounds per acre.<sup>25</sup>



## **Make Your Own Blueberry Pet Treats**

The best way to feed blueberries to your pet is raw so they can get all the nutrients. However, even finicky dogs love these Antioxidant Cookies. You can spice things up by incorporating these fruits into other homemade healthy dog treat recipes as well.<sup>26</sup>

## **Antioxidant Cookies**

### **Ingredients:**

- ⁴ 1/2 cup organic blueberries, chopped
- 1 cup ground bison or turkey
- 1 teaspoon turmeric
- 2 tablespoons basil
- 1 tablespoon coconut flour

#### **Directions:**

- 1. Mix all ingredients together, and then roll into 1-inch balls. Press flat with a fork.
- 2. Bake on a greased cookie sheet at 400 degrees Fahrenheit for 20 minutes. Let cool before giving to your pets.

**Note:** Store extra cookies in the freezer or refrigerator and consume within one week. If stored in the freezer, the cookies can stay fresh for up to three months.

Another delicious variation is this recipe for Frozen Coconut Oil and Berry Pet Treats. Aside from blueberries, it also uses raspberries and blackberries to make a cooling treat that's perfect for hot days.

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