

## Antioxidants and Their Use in Dog Foods

Antioxidants are an important consideration when selecting food for a healthy canine diet. Their impact on pet health is so significant that much veterinary research has been undertaken in recent years, and many antioxidant-enhanced dog foods and supplemental products are now available.

What are free radicals and antioxidants?

To understand the purpose behind antioxidant supplementation, it first helps to understand the process by which antioxidants interact with free radicals. Free radicals are formed from bodily processes, as well as from x-rays, pesticides, preservatives and pollutants, such as tobacco smoke. Free radical molecules are missing an electron, and bind to molecules in cells - causing damage that results in disease and aging. This process of oxidation, however, can be stopped by antioxidants.

Antioxidants are chemical compounds such as vitamins, enzymes and minerals that interfere with oxidation by giving up one of their electrons to the free radical. Vitamins A, C and E, as well as selenium, coenzyme Q10, carotenoids and alpha lipoic acid (ALA), are all powerful antioxidants that break the oxidation cycle and can improve and maintain a dog's health.

Antioxidants in commercial dog food

Antioxidants in commercial dog food serve two purposes. They preserve the food, allowing it to stay fresh on store shelves for longer, and they boost nutrition, providing support against free-radicals. All antioxidants are not created equally however. Veterinarians warn to [avoid pet foods that are preserved with synthetic antioxidants](#), including ethoxyquin, and synthetic preservatives like, BHA and BHT. These preservatives have been known to cause seizures in dogs. Instead, look for natural antioxidants such as vitamin E (tocopherol) and vitamin C (ascorbic acid). These are powerful antioxidants that not only preserve the food, but provide benefits to a dog's immune system, heart and skin, and even help combat allergies.

When selecting a commercially-prepared dog food, it's important to look not only for the antioxidant content, but also for the overall quality of nutrition. This will ensure the selected food meets the [dog's complete nutritional needs](#). Understanding how to read [pet food labels](#) is crucial to ensuring a dog's nutritional health.

Supplementing antioxidants

While some high-quality commercial dog foods formulated with natural antioxidants may provide adequate supplies of these important compounds, many veterinarians recommend additional supplementation for enhanced health. This can be as easy as mixing the recommended dosage of a commercial supplement in with the dog's regular food. Look for a high quality supplement that contains the following ingredients:

- Vitamins A, C and E
- Selenium
- Wheatgrass, alfalfa and barley grass
- Green tea powder
- Grape seed extract
- Alpha lipoic acid
- Carotenoids
- Coenzyme Q10

To provide a powerful blast of antioxidants, supplement the dog's diet with "real" foods straight from the farmer's market. Some of the best sources of antioxidants are leafy greens and berries, such as blueberries, blackberries and raspberries. These foods contain lutein, a carotenoid that is vital to eye health, and may even boost the immune system. Lycopene, another carotenoid, found in red-colored fruits and vegetables including red bell peppers and tomatoes, is also a powerful antioxidant. It is currently being studied for effectiveness as a dog chemotherapy drug.

Liver, organ meats, sunflower, wheat germ and almond oil are all excellent sources of vitamin E, which has an antioxidant effect on the immune system, and strengthens circulatory functions. Carrots, green leafy vegetables and egg yolks help supplement vitamin A, which is helpful for eye, skin and respiratory problems in dogs. And, green peppers, cauliflower and tomatoes provide Vitamin C, to help promote the immune system and aid in wound healing.

And don't forget to offer other nutritious, antioxidant-rich foods that many dogs love, including broccoli, green beans, spinach and apples. Treating dogs to this wide assortment of antioxidant-rich table "scraps", in addition to a high quality commercial food, enhances health, slows aging, fight disease and promotes vigor - a recipe for a long and healthy life.