

Flaxseed: Omega-3's & More

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Flaxseed is a nutritious oilseed that is often called a functional food or a superfood because of the important health benefits that it offers. The flax plant (*Linum usitatissimum*) may actually have been the first plant to be domesticated (over 30,000 years ago).¹ Like other oilseeds, such as sunflower seeds, flaxseed is not a grain, but is the seed of the fruit of the flax plant. Flaxseed has a nutty flavor and the seeds range in color from yellow to dark brown with an oval shape. Allergies to flax in humans are considered exceptionally rare, and flax does not contain gluten, so there is no risk if there is a known or suspected gluten allergy or sensitivity.^{2,3} While it is a good source of B vitamins, Vitamin E, and several minerals including potassium, calcium, phosphorus, iron, magnesium, and zinc,⁴ the major health benefits of flaxseed come from the healthy fatty acids, dietary fiber, and lignans that it supplies.

At The Fremont Innovation Center, Natura Pet's state of the art manufacturing facility in Fremont, Nebraska, we receive our flaxseed as intact whole seed. We grind the flaxseed freshly in our own mill to help ensure that we can deliver all of the healthful benefits of flaxseed to the dogs and cats eating our foods.

Fat sources differ greatly in terms of specific fatty acid types and levels. This is important in terms of meeting requirements, but also in offering additional nutritional support to improve and maintain health in all stages of life. Flaxseed is the most concentrated natural source of the essential omega-3 fatty acid alpha-linolenic acid (ALA, 18:3n-3). ALA is an essential fatty acid for all mammals, including dogs and cats. In dogs and cats, skin and coat health is always at top of mind, and nutritional supplementation with flaxseed has been shown to improve the appearance and feel of skin and coat in dogs—with and without allergic skin conditions.⁵ In humans, flaxseed has been shown to assist in the nutritional prevention and/or management of numerous health conditions including certain types of cancer, heart disease, kidney disease, diabetes mellitus, osteoarthritis, obesity, and degenerative aging diseases.⁶⁻⁸

ALA is also the “parent fatty acid” or precursor to the longer-chain omega-3 fatty acids eicosapentaenoic acid (EPA; 20:5n-3) and docosahexaenoic acid (DHA; 22:6n-3). Studies have shown that dogs can convert ALA into EPA and DHA,⁹ but because of their true carnivore nature, cats have low levels of enzymes required for fatty acid conversions. Therefore, cats are best provided with pre-formed EPA and DHA in their diet, which can be supplied with algal oil or marine fish and fish oils.¹⁰

Natura Pet's expert nutritionists choose fat sources carefully to ensure balance and guaranteed levels of essential and beneficial dietary fatty acids. Healthy fats including flaxseed, fish oil (e.g. Menhaden, Herring), sunflower oil, and chicken fat are used to supply a healthy complement of fatty acids in the diet. The species-specific animal protein sources in foods from Natura Pet will also supply the corresponding animal fat to deliver essential and beneficial fatty acids and energy to our pets.

Flaxseed is an excellent source of fermentable and non-fermentable fiber. Fermentable fibers (a source of prebiotics) can help to improve and maintain gastrointestinal health, especially of the colon or large intestine. Non-fermentable fibers help to maintain regularity of bowel movements and can aid in the management of both constipation and/or diarrhea. Dietary fiber has also been shown to help in the nutritional management of blood glucose control in dogs with diabetes mellitus.¹¹

Lignans are a type of phytochemical. In plants, phytochemicals have functions such as pigmentation and attracting insects for pollination, but when ingested by animals, we often refer to phytochemicals as phytonutrients due to their important health benefits such as antioxidant activity.¹² Antioxidants are compounds that help to prevent oxidative damage due to free radical activity in the body and have a wide range of health benefits. The antioxidant activity of the lignans from flaxseed is actually higher than that of Vitamin E.¹² In humans, flaxseed lignans have been shown to provide benefits in the nutritional management of certain types of cancer, heart disease, kidney disease, reproductive disorders, and toxicities.¹³ Recently, flaxseed lignans have also been used to aid in the management of the endocrine disorder atypical Cushing's disease (hyperadrenocorticism) in dogs.¹⁴



If you have questions about flaxseed as an ingredient in Innova, Innova Prime, California Natural, California Natural Grain Free, HealthWise, Karma, or Mother Nature foods and treats from Natura Pet, please speak to your veterinarian, your local independent retailer, or a Natura Pet Product Advisor at 1-800-532-7261 or custserv@naturapet.com. For detailed product information please visit our website at www.naturapet.com and for ingredient sourcing information at your fingertips visit us at www.seebeyonthebag.com.

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