

There's More to Flax

Flax seed is a major oil crop and one of the richest sources of omega-3 alpha linolenic acid (ALA) known to man. It is also rich in dietary fiber and is an excellent source of lignans and other antioxidants. In fact, a nutritional analysis of flax indicates that 57% of the polyunsaturated fatty acids found in the seed are omega-3 (ALA), and 16% are linoleic (omega-6). A number of studies, conducted over a period extending three decades, confirm the heart-healthy benefits of ALA in the diet. Incorporating flax and flaxseed oil also has other benefits. Not only does it have a positive effect on cholesterol, it also has anti-inflammatory actions that further reduce risk from heart disease. In fact, the FDA acknowledges these findings as follows: "Alpha linolenic acid is the only essential omega-3 fatty acid and is found in vegetable oil, e.g., flaxseed. EPA and DHA omega-3 fatty acids are synthesized in the body and are not essential, even though there is supportive, but not conclusive, research to show that these fatty acids are beneficial in reducing the risk of coronary heart disease."

However, in the presentation entitled "Flax Formulations for Satiety," given during an Applications Lab at *Prepared Foods' 2007 R&D Applications Seminar-Chicago*, Kelley Fitzpatrick, director of health and nutrition at Flax Canada 2015, explained, "Flax seed is more than just omega-3s; it contains lignans such as secoisolariciresinol diglucoside (SDG), phenolic compounds, phytic acid, flavanoids and tocopherols—all of which are antioxidants. Flax also contains 21% protein, plus has an amino acid composition that is similar to that found in soybeans and canola. Lastly, flax is also an excellent source of dietary fiber and contains low levels of digestible carbohydrates, resulting in a low glycemic index."

Kelley further explained that all of these compounds give flax seed and flaxseed oil products numerous health benefits. As may be seen in the chart "Health Benefits of Flax Seed Components," flax seed components can help enhance cardiovascular health, be beneficial to dia-

Flax is more than just omega-3 fatty acids. It contains other healthy components that have wide-ranging benefits in multiple systems of the body.

betic control, improve immune system performance, fight hormone-related cancers, reduce bone loss and aid in prostate health. In response to these findings and others, products containing flax seed have increased significantly in the last five years. In fact, new product releases containing flax seed have tripled since 2003, according to Datamonitor's ProductsScan Online. The majority of the new products are baked goods—specifically, breads, snack bars and cereals. The fact that the FDA allows structure/function and nutrient content claims for alpha linolenic acid has helped drive the use of flax.

Flax seed is an excellent source of many compounds that contribute to a healthy diet and lifestyle. Consumer conscientiousness of the benefits of healthy eating has resulted in increased awareness of and use of flax products, especially over the last five years—a demand which will continue to grow. **PF**

—Richard F. Stier, Contributing Editor

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Health Benefits of Flax Seed Components

	Omega-3	Lignans	Soluble Fiber	Other Phytonutrients
Cardiovascular health	X	X	X	X
Diabetes	X	X	X	X
Renal disease	X	X		
Immune system	X	X		X
Antioxidant		X		X
Anti-cancer	X	X	X	X
Bone health	X	X		
Women's health	X	X		X
Prostate health		X		
Glycemic Index		X	X	

Source: Pizzey's Milling