

Flackers-Flax seed crackers



Health Claims

- “The seeds are sprouted making them easier to chew, digest and absorb. Flackers are dehydrated at low temperatures to ensure that all of the nutrients (including the omega-3’s and important enzymes) remain vitalized and stable”
- “Flax seeds are nature’s perfect health food and should be part of every optimal health and longevity diet. They are one of the best plant sources of alpha linolenic acid, a heart healthy omega-3 fatty acid.”
- “Flax seeds are high in fiber which helps to maintain normal cholesterol levels and to promote optimal digestion.”
- “They are also low on the glycemic index, making them beneficial for diabetes.”

Where to locate?

- Grocery store (snack aisle)
- Online



Functional components of Flaxseed

- Omega-3 Fatty Acid
- Fiber
 - Soluble (Mucilage)
 - Insoluble
- Lignans

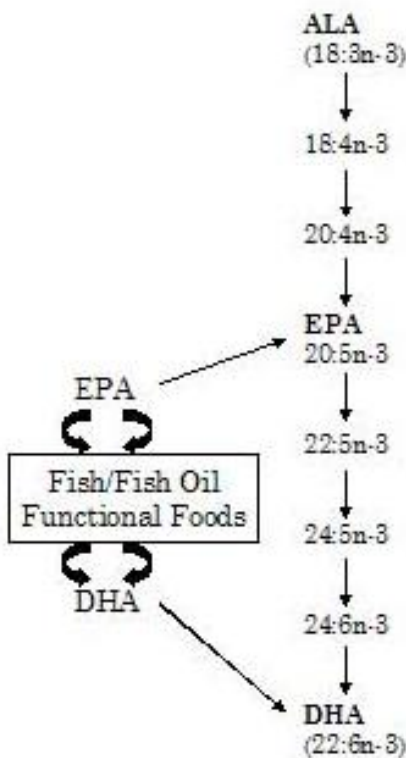


Table. 1 Recommended Daily Allowances of Functional Food Components

Functional Food Component	Recommended Daily Allowance
Omega-3	Adults ≥ 19 years ¹ Omega-3 1.1-1.6 gm/day EPA +DHA 0.3-0.5 gm/day ALA 0.8-1.1 gm/day
Fiber*	Adults ≥ 19 years (Males) (Females) ² Total Fiber 38 gm/day, 25 gm/day Soluble 9.5 gm/day, 6.25 gm/day Insoluble 28.5 gm/day, 18.75 gm/day

¹ American Heart Association

² Institute of Medicine

* Each ¼ cup of flaxseed (whole/ground) contains ~7.6 grams of dietary fiber; 2.5 grams soluble, 5.1 grams insoluble

Table 2. Evidence Based Research by Functional Food Component

Functional Food Component	Evidenced-based research
Omega-3	1 gm/day of omega-3 FAs for individuals with CHD reduced primary end point (death, nonfatal MI, and stroke) by 15% ^{1,2} 4.3 gm/day (2.4-6 gm/day) to lower elevated triglycerides by an average of 32% across 20 crossover trials ³
Fiber	26.3 g/day of fiber (compared to 12.5 g/day of fiber) adjusted for CVD risk factors (reduced relative risk from 1 to 0.79 for total CVD and from 1 to 0.68 for MI ^{4,5} 2-10 g/day soluble fiber associated with small but significant decreases in total cholesterol [-0.045 mmol L ⁻¹ g soluble fiber] ⁶

¹Roth, Eli. Fish Oil for Primary and Secondary Prevention of Heart Disease. Am J Clin Nutr. 1999 Jan ;69(1):30-42.

²GISSI-Prevention Trial. Dietary Supplementation with n-3 polyunsaturated fatty acids and vitamin E after myocardial infarction: results of the GISSI-Prevenzione trial. The Lancet, 1999; 354: 447-455.

³Harris WS: n-3 Fatty acids and serum lipoproteins: human studies. Am J Clin Nutr 1997, 65(suppl):1645S-1654S.

⁴Lu, Simin, Burning JE, Sesso HD, et al. A prospective study of dietary fiber intake and risk of cardiovascular disease among women. Journal of American College of Cardiology, 2002; 39: 49-56.

⁵The Women's Health Study is a randomized, double-blind, placebo-controlled trial

⁶Brown, Lisa. Cholesterol-lowering effects of dietary fiber: a meta-analysis. Am J Clin Nutr 1999; 69: 30-42.

Table 3. Cost /Nutritional Value Comparison

Product	Cost/Product Cost/serving	Functional Component <i>Fiber (Soluble, Insoluble), Omega-3 (ALA, EPA+DHA)</i>
Flackers (Dr. in the kitchen) Entire Box 25 gm (6 crackers)	\$5.99 \$0.99	42 gm (INP), 27 gm (INP) 7 gm (INP), 4.5 gm (INP)
Whole Flaxseed (Spectrum Essentials, Organic) Entire Bag (425 gm) 1 ½ tbsp (14 gm) 3 tbsp (28 gm)	\$6.50 \$0.22 \$0.43	120 gm (INP), 81 gm (81gm, INP) 4 gm (INP), 2.7 gm (2.7 gm, INP) 8 gm (INP), 5.4 gm (5.4 gm, INP)
Ground Flaxseed (Spectrum Essentials, Organic) Entire Bag (396 gm) 2 tbsp (14 gm) 4 tbsp (28 gm)	\$7.00 \$0.25 \$0.50	112 gm (INP), 75.6 gm (75.6 gm, INP) 4 gm (INP), 2.7 gm (2.7 gm, INP) 8 gm (INP), 5.4 gm (5.4 gm, INP)
Flaxseed oil (Nature Made)* Entire Bottle (180 tablets) 2 tablets 3 tablets	\$15.00 \$0.17 \$0.25	DNC (DNC), 102.6 gm (90 gm, INP) DNC (DNC), 1.14 gm (1 gm, INP) DNC (DNC), 1.71 gm (1.5 gm, INP)
Fish oil Supplement Entire Bottle (180 softgels) 2 softgels	\$14.00 \$0.16	DNC (DNC), 64.8 gm (INP, 54 gm) DNC (DNC), 720 mg (INP, 0.6 gm)

DNC=Does not contain

INP=Information not provided