



NATUREGG™ HAS AN OMEGA-3 EGG FOR YOU



Naturegg™ Omega 3

- Source of omega-3 fatty acids
- 75 mg of DHA omega-3 per 53 g egg



Naturegg™ Omega Pro™

- Source of omega-3 fatty acids
- 125 mg of DHA omega-3 per 53 g egg
- 1 mg of lutein per 53 g egg

OMEGA-3 FATS ABBREVIATION

- Alpha linolenic acid (ALA)
- Eicosapentaenoic acid (EPA)
- Docosahexaenoic acid (DHA)

ARE WE GETTING ENOUGH OMEGA-3?

The 2004 Canadian Community Health Survey on Nutrition found that most Canadians have adequate intakes of the short-chain omega-3 fatty acid, ALA.⁶ Although ALA can be converted in our bodies to EPA and DHA, experts recently concluded that the conversion to the end product, DHA, is extremely limited (about 1% in infants and lower in adults).⁷

Leading health authorities consider higher intakes of EPA and DHA an important part of a healthy diet, recognizing that these physiologically vital omega-3 fatty acids may contribute to the prevention of coronary heart disease and possibly other degenerative diseases of aging.⁸⁻¹¹

REFERENCES:

1. Anderson BM and Ma DWL. Are all n-3 polyunsaturated fatty acids created equal? *Lipids Health Dis*, 2009; 8:33.
2. Connor W. Importance of n-3 fatty acids in health and disease. *Am J Clin Nutr*, 2000; 71(Suppl):1715-1755.
3. Kris-Etherton PM et al. Dietary reference intakes for DHA and EPA. *Prostaglandins Leukot Essent Fatty Acids*, 2009; 81:99-104.
4. Harris WS et al. Towards Establishing Dietary Reference Intakes for Eicosapentaenoic and Docosahexaenoic Acids. *J Nutr*, 2009; 139(4):804S-819S.
5. Calder PC and Yaqoob P. Omega-3 polyunsaturated fatty acids and human health outcomes. *Biofactors*, 2009; 35(3):266-272.
6. Health Canada. Do Canadian adults meet their nutrient requirements through food alone? *Cat. H164-112/3-2009E-PDF*.
7. Brenna JT et al. Alpha-linolenic acid supplementation and conversion to n-3 long-chain polyunsaturated fatty acids in humans. *Prostaglandins Leukot Essent Fatty Acids*, 2009; 80(2-3):85-91.
8. World Health Organization. Interim Summary of Conclusions and Dietary Recommendations on Total Fat & Fatty Acids. From the Joint FAO/WHO Expert Consultation on Fats and Fatty Acids. WHO Geneva, 2010.
9. Health Canada. Eating Well with Canada's Food Guide – A resource for educators and communicators, 2007.
10. Kris-Etherton PM and Innis S. Position of the American Dietetic Association and Dietitians of Canada: Dietary Fatty Acids. *JADA*, 2007; 107(9):1599-1611.
11. Kris-Etherton PM et al. AHA Scientific Statement - Fish Consumption, Fish Oil, Omega-3 Fatty Acids, and Cardiovascular Disease. *Arterioscler Thromb Vasc Biol*, 2003; 23:e20-e31.
12. Cummine SC et al. Breast-fed infants achieve a higher rate of brain and whole body docosahexaenoate accumulation than formula-fed infants not consuming dietary docosahexaenoate. *Lipids*, 2000; 35(1):105-111.
13. Smuts CM et al. High-DHA eggs: feasibility as a means to enhance circulating DHA in mother and infant. *Lipids*, 2003; 38(4):407-414.
14. Helland IB et al. Maternal supplementation with very-long chain n-3 fatty acids during pregnancy and lactation augments children's IQ at 4 years of age. *Pediatrics*, 2003; 111: e39-e44.
15. Birch EE et al. A randomized controlled trial of early dietary supply of long-chain polyunsaturated fatty acids and mental development in term infants. *Dev Med Child Neurol*, 2000; 42(3):174-181.
16. Decsi T et al. N-3 fatty acids and pregnancy outcomes. *Curr Opin Clin Nutr Metab Care*, 2005; 8:161-166.
17. Holub BJ. Docosahexaenoic acid (DHA) and cardiovascular disease risk factors. *Prostaglandins Leukot Essent Fatty Acids*, 2009; 81(2-3):199-204.
18. Dolecek T. Epidemiological evidence of relationships between dietary polyunsaturated fatty acids and mortality in the Multiple Risk Factor Intervention Trial. *PSEBM*, 1992; 200:177-182.
19. Holub BJ. The Effect of an Emulsified Egg Product Containing Fish Oil on Selected Cardiovascular Risk Factors. 92nd AOCs Annual Meeting & Expo, May 13-15, 2001, Special Supplement.
20. Bourre JM. Dietary omega-3 fatty acids and psychiatry: mood, behaviour, stress, depression, dementia and aging. *J Nutr Health and Aging*, 2005; 9:31-38.
21. Logan AC. Omega-3 fatty acids and major depression: A primer for the mental health professional. *Lipids Health Dis*, 2004; 3:35.
22. Ravindran AV et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) Clinical guidelines for the management of major depressive disorder in adults. V. Complementary and alternative medicine treatments. *J Affect Disord*, 2009; 117(Suppl1):545-645.
23. Gustafsson PA et al. EPA supplementation improves teacher-rated behaviour and oppositional symptoms in children with ADHD. *Acta Paediatr*, 2010; 99(10):1540-1549.
24. Bélanger SA. Omega-3 fatty acid treatment of children with attention-deficit hyperactivity disorder: A randomized, double-blind, placebo-controlled study. *Paediatr Child Health*, 2009; 14(2):89-98.
25. Yaqoob P. Fatty acids and the immune system: from basic science to clinical applications. *Proc Nutr Soc*, 2004; 63:89-104.
26. Simopoulos AP. Omega-3 fatty acids in inflammation and autoimmune diseases. *J Am Coll Nutr*, 2002; 21: 495-505.
27. Wall R et al. Fatty acids from fish: the anti-inflammatory potential of long chain omega-3 fatty acids. *Nutr Rev*, 2010; 68(5):280-289.



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FOOD FOR THOUGHT

the IMPORTANCE of OMEGA-3 IN YOUR DIET

Wise Food & Lifestyle Choices For Better Overall Health

WHAT ARE OMEGA-3 FATS?

Omega-3 fatty acids are polyunsaturated fats that are considered vital for good health. Many of their benefits are now well recognized thanks to recent scientific research. Numerous studies have found that omega-3 fatty acids promote optimal health and may help prevent heart disease and other chronic illnesses.^{1,2}

Omega-3 fatty acids are found in 3 main forms, the short-chain alpha-linolenic acid (ALA) and the long-chain eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Research indicates that higher intakes of the long-chain omega-3 fatty acids, EPA and DHA, are especially important for promoting good health.¹⁻⁵



CURRENT RECOMMENDATIONS FOR EPA AND DHA OMEGA-3:

The World Health Organization (WHO) recommends a daily intake of 250 mg to 2000 mg of the long-chain omega-3 fatty acids, EPA and DHA combined for adult men and women.⁸ For women who are pregnant or breastfeeding, the WHO recommends a minimum daily intake of 300 mg of EPA and DHA, including at least 200 mg DHA, to promote optimal health for mother and baby.

Canada's Food Guide, Dietitians of Canada and the American Heart Association recommend two servings of fatty fish per week, which corresponds to a daily intake of about 500 mg of EPA and DHA for healthy adults.⁹⁻¹¹ The American Heart Association recommends higher intakes of EPA and DHA for adults with coronary heart disease or high blood triglycerides.¹¹



WHAT FOODS CONTAIN EPA AND DHA OMEGA-3?

EPA and DHA are primarily found in fatty fish such as salmon, tuna, swordfish, mackerel, sardines and herring, fish oil supplements, Omega Pro™ liquid eggs, omega-3 enhanced eggs and some other foods enhanced with EPA and DHA. Common plant sources of omega-3 fatty acids such as flax, walnuts and canola and soybean oils provide no EPA or DHA, only the short-chain omega-3, ALA.

WHAT ARE THE BENEFITS OF EPA AND DHA OMEGA-3?

Higher intakes of EPA and DHA have been linked to improved overall health.¹⁵ These omega-3 fatty acids have been shown to improve the development of the brain and retina (the central area of the eye). Thus, EPA and DHA are important for women during pregnancy and breastfeeding.⁸ EPA and DHA have also been found to be beneficial for managing various chronic illnesses including heart disease, inflammatory disorders and neurological conditions. Some studies suggest EPA and DHA may play a protective role in certain cancers, such as prostate and breast cancer.¹



PREGNANCY

It is widely accepted that omega-3 fatty acids, specifically DHA, are vital for the early development of the brain, nerves and visual acuity. Research indicates that it is important for pregnant women to receive sufficient DHA before and during pregnancy and while breastfeeding to promote optimal fetal and infant development.^{8, 10, 12} Consumption of DHA-enriched eggs during pregnancy has been shown to significantly increase DHA intakes and higher intakes were positively correlated with birth weight.¹³ Researchers found that women who consumed plenty of DHA while breastfeeding also had higher levels of DHA in their breast milk.¹⁴ Studies with infants given formula lacking DHA compared to infants given formula with DHA showed that providing infants with DHA early in their lives was a major factor in improving their performance on the mental development index.¹⁴⁻¹⁶

HEART DISEASE

Extensive research indicates that higher EPA and DHA intakes offer considerable protection against heart disease

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and reduce the risk of death from a heart attack.^{8, 10, 11, 17} The Multiple Risk Factor Intervention Trial found that increasing intakes of EPA plus DHA to about 650-700 mg per day over several years was associated with a lower risk of death from heart disease as well as from all causes.¹⁸ The American Heart Association recommends 1000 mg of EPA and DHA daily to people with heart disease.¹¹

University of Guelph researchers demonstrated that daily consumption of a liquid egg product enriched with 125 mg of EPA and 125 mg of DHA (levels comparable to those in Naturegg™ Omega Pro™ liquid eggs) lowered blood triglyceride levels by up to 32% over a 3-week period.¹⁹ It also lowered blood pressure without negatively affecting blood cholesterol. High blood triglyceride levels and high blood pressure are both considered risk factors for heart disease and stroke.

MENTAL HEALTH

DHA is the most abundant fatty acid in the grey matter of the brain, hence its importance in brain development and function. Research suggests that higher omega-3 intakes, specifically DHA, may help protect against Alzheimer's disease and other forms of dementia, cognitive decline and mental disorders.⁴⁻²⁰ Studies have found that Alzheimer's sufferers, as well as elderly people with other forms of dementia, all had lower levels of DHA in their blood compared to elderly people with normal mental functioning. Studies also suggest that higher omega-3, EPA and DHA intakes may be helpful for reducing symptoms of depression in adults and Attention Deficit Hyperactivity Disorder (ADHD) in children.²⁰⁻²⁴

INFLAMMATORY DISORDERS

Many studies have found that increasing EPA and DHA intakes improved symptoms in patients with inflammatory conditions like arthritis, psoriasis, asthma, gingivitis, ulcerative colitis and Crohn's disease.²⁴⁻²⁶ In some cases, omega-3 supplements have been used to lower dosages of anti-inflammatory drugs. In general, large omega-3 intakes have resulted in relatively small improvements. Researchers continue to explore the potential for omega-3 to lower dosages of anti-inflammatory drugs.



NATUREGG™ HAS AN EGG THAT'S RIGHT FOR YOU!



NATUREGG™ OMEGA PRO™

- Source of omega-3 fatty acids
- 125 mg of DHA and 125 mg of EPA omega-3 per 63 g serving
- 1 mg of lutein per 63 g serving



IT'S NOT JUST ANY EGG. IT'S NATUREGG.™

A HEALTHY DIET LOW IN SATURATED AND TRANS FATS MAY REDUCE THE RISK OF HEART DISEASE. OMEGA PRO™ LIQUID EGGS IS LOW IN SATURATED AND TRANS FATS.