

# OMEGA-3 ENRICHED EGGS

Consumers are finding variety in the egg section of their grocery store. Sold under a number of different names, Omega-3 enriched eggs are on the market in various parts of the country. These eggs are the same as the classic egg we all know, except they contain higher levels of the polyunsaturated fatty acid called omega-3. Omega-3 fatty acids are commonly found in fish and fish oils as well as canola oil, soybean and flaxseed.

## Why is there interest in Omega-3 Fatty Acids?

For many years, it has been known that polyunsaturated fatty acids play a role in reducing the risk of heart disease. Current research findings suggest that omega-3 fatty acids help lower blood triglyceride levels. Omega-3 fatty acids are also required for normal growth and development and good vision.

However, before you focus on the different types of fatty acids in your diet, your total fat intake should be reviewed. Cutting back on fat is the single most important dietary change you can make. Start by reducing added fats and oils in your diet. Then focus on saturated fats found in fried foods and baked goods and *trans* fats found in shortening, margarines and products containing hydrogenated oils. Trans fat is a by-product of hydrogenation, the process used to change liquid oils into a spread or solid form. Choosing polyunsaturated and mono-unsaturated fatty acids over these fats helps reduce the risk of heart disease.



### ***Which came first....the chicken or the egg?***

In this case it was the chicken! Omega-3 enriched eggs are produced by altering the diet of laying hens. Hens are fed a special diet which contains 10-20% ground flaxseed. Flaxseed is higher in omega-3 fatty acids and lower in saturated fatty acids than other grains. As a result, the eggs produced from hens on this feed formula are higher in omega-3 fatty acids. The total fat content and cholesterol level of the egg remain very similar.

### **Comparison of Fat Profile\***

	<b>Omega-3 Enriched**</b>	<b>Classic Egg**</b>
Total Fatty Acids	4.9 g	5.0 g
Omega-6	0.7 g	0.7 g
Omega-3	0.4 g	0.04 g
Monounsaturated	1.6 g	2.0 g
Saturated	1.2 g	1.5 g
Cholesterol	185 mg	190 mg

\*\*based on 1 whole large egg

\*Values are based on 10% flax in the diet. Nutrient values vary depending on the composition of the feed.

Note: Changes to the fatty acid profile do not affect the functional properties of the egg.

## Reduce dietary fat intake.

Health Canada's *Nutrition Recommendations for Canadians* encourages Canadians to reduce the level of fat in their diet to 30% of total energy intake. They also suggest a minimum intake for omega-3 fatty acids of at least 0.5% of energy. Examples are provided for men and women below.

*Suggested proportions of dietary fat based on daily caloric consumption:*

Gender	Energy (kcal)	Fat (g)	Omega-3 (g)
Male	2700	90	1.5
Female	1900	65	1.1

The omega-3 egg can provide approximately 1/4 to 1/3 of the recommended intake of omega-3 fatty acids. Omega-3 enriched eggs provide a dietary alternative to fish for these essential fatty acids. They offer the consumer greater choice. Just as some consumers prefer brown eggs over white eggs, some will select omega-3 over the classic egg.

## What are omega-3 fatty acids?

Omega-3 fatty acids are one type of polyunsaturated fatty acid. A second type is called omega-6. Monounsaturated fatty acids are from the omega-9 family of fatty acids. Only omega-9 fatty acids can be synthesized by our bodies. We must obtain omega-3 and omega-6 fatty acids from the foods we eat. The table on types of unsaturated fatty acids shows different families of fatty acids and their food sources.

For more information contact:  
 Canadian Egg Marketing Agency  
 112 Kent Street, Suite 1501  
 Ottawa, Ontario K1P 5P2  
 Tel: (613) 238-2514, ext. 264  
 Fax: (613) 238-1967  
 info@canadaegg.ca



## The Classic Egg is still a winner.

By no means does the new omega-3 egg detract from the nutritional merits of the classic egg. Recent scientific evidence reinforces the importance of eggs as a healthy food choice. Eggs are an excellent source of high quality protein plus they provide many vitamins and minerals, including vitamin B<sub>12</sub>, riboflavin, vitamin D, folacin and iron. Eggs are one of nature's most nutrient dense foods. *Canada's Food Guide to Healthy Eating* identifies a serving of one to two eggs as part of a healthy eating pattern.

**But what about cholesterol?** It is well known that eggs contain cholesterol. However, dietary cholesterol has very little impact on blood cholesterol levels in healthy individuals. Recent research clearly indicates that when eggs are consumed as part of a low-fat eating pattern, they are unlikely to alter blood lipid levels. Of greater significance is the risk posed by a family history of heart disease and a high saturated and *trans* fat diet. Eliminating cholesterol-rich foods from the diet could limit the availability of other important nutrients.

When it comes to convenience, ease of preparation and good nutrient value for the food dollar, few foods can compete with the unbeatable egg!

### Types of Unsaturated Fatty Acids

Family Name	Common Name	Source
Omega-9	Oleic acid	canola, olive and peanut oils, animal products, avocado
Omega-6	Linoleic acid	corn, safflower, soybean, cottonseed, and sunflower oils
	Arachadonic acid	animal products
Omega-3	Alpha-linolenic acid	canola and soybean oils, some nuts, flaxseed
	Eicosapentaenoic acid	fish
	Docosahexainoic acid	fish