



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



#### NATUREGG™ OMEGA PLUS™ LIQUID EGG PRODUCT

- Source of omega-3 polyunsaturates.
- 125 mg of DHA and 125 mg of EPA omega-3 fatty acids per 63 g serving.
- 0.500 mg of lutein per 63 g serving.
- Excellent source of Vitamin D.



#### NATUREGG™ OMEGA PLUS™ EGGS

- Source of omega-3 polyunsaturates.
- 125 mg of DHA omega-3 polyunsaturates per 53 g large egg.
- 0.500 mg of lutein per 53 g large egg.
- Dark golden yolk.
- Excellent source of Vitamin D.

LUTEIN PLAYS  
A SPECIFIC  
ROLE IN  
MAINTAINING  
EYE HEALTH.

#### WHERE IS LUTEIN FOUND IN YOUR BODY?

Lutein is found in the macula of your eye, an area of the retina responsible for central vision. It is found in much higher concentrations in the retina and lens of your eyes than in your blood.<sup>3,4</sup> Lutein is also present in smaller amounts in your skin, breast and other tissues.<sup>3,5</sup>

#### WHAT IS THE FUNCTION OF LUTEIN?

Experts believe that lutein plays a specific role in maintaining eye health.<sup>3,6,7</sup> Lutein forms a very efficient filter for damaging high-energy blue-light that reaches the back of your eyes. It may also act directly as an antioxidant to reduce damage to the retina and other tissues.

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FOOD FOR  
THOUGHT

the  
IMPORTANCE  
of  
LUTEIN  
IN YOUR DIET

Wise Food & Lifestyle Choices  
For Better Overall Health

#### WHAT IS LUTEIN?

Lutein is a natural compound found in foods such as vegetables, fruits and eggs. It belongs to the carotenoid family, a group of compounds responsible for many of the colours we see in nature, such as the red in tomatoes, the orange in carrots and the yellow in egg yolks. Your body cannot make lutein, so you must obtain it from your diet.<sup>1-3</sup>



## SAVE YOUR SIGHT: SIX STEPS TO PROTECT YOUR VISION

- 1. Have your eyes examined regularly by an eye care professional.** Serious conditions can be present in your eye without symptoms. Others progress rapidly if left untreated. In general, you should get an eye exam at least every two years.
- 2. Quit for your eyes.** People who smoke are nearly seven times more likely to develop AMD, the number one cause of significant vision loss in Canadians over 50. Quitting now can reduce the risk.
- 3. Get healthy.** Choose foods rich in vitamins C and E, beta carotene, zinc, and lutein (up to 10 mg of lutein per day is a healthy choice). Keep active: excess weight, a sedentary lifestyle, and high blood pressure are risk factors for several eye conditions.
- 4. Protect your eyes from sunlight.** Wear a hat with a brim and choose sunglasses that provide at least 98 per cent protection from UV rays.
- 5. Wear eye protection.** When playing sports or working with power tools, use Canadian Standards Association-approved safety glasses or goggles. Most hardware and sporting goods stores carry a good selection.
- 6. Consider vitamin supplements.** If you are diagnosed with AMD, talk to your eye care professional about using a special formula of high-dosage antioxidant supplements.

CNIB is Canada's primary provider of vision loss support programs and services. To help CNIB fund research for the prevention of eye disease, call 1-800-563-2642 or visit [www.cnib.ca](http://www.cnib.ca).

Lutein is found in high concentrations in dark green and starchy vegetables, fruits and eggs.

and fruits was associated with a 4% lower risk of heart disease.<sup>25</sup> Green, leafy vegetables rich in lutein had the most protective effect. Another study found that men with higher lutein intakes had a lower risk of stroke.<sup>7</sup>

Consumption of one egg a day has been shown to significantly increase blood lutein levels without elevating blood cholesterol or triglyceride levels in older adults.<sup>26</sup>

### WHAT SOURCE OF LUTEIN IS THE BEST?

The bioavailability of lutein (the amount absorbed by your body) depends on a variety of factors including the makeup of the food itself, the interaction of lutein with fat, fibre, and other carotenoids, your nutritional status and age.<sup>27</sup> The lipids in egg yolks allow your body to absorb the lutein from eggs about three times more efficiently than the lutein in plant sources. One study found that eating an average of 1.3 regular eggs daily (providing 0.38 mg of lutein) increased blood lutein levels by almost 30% over the course of a month.<sup>28</sup>

Researchers at Tufts University showed that the lutein in eggs was more readily absorbed than that in spinach, a rich source of lutein, and lutein supplements.<sup>29</sup> Eggs provide a highly bioavailable source of lutein, allowing your body to efficiently absorb and make use of it to help protect your health.

the lens of the eye. Lutein has been associated with a decreased risk of cataract formation in multiple observational studies.<sup>16-19</sup>

### CANCER

A number of studies have shown that high intakes of vegetables and fruits rich in carotenoids are associated with a lower risk of certain types of cancer, including lung, colon, breast and skin cancer.<sup>7</sup> One study that examined people's past food intake reported significantly lower rates of colon cancer in men and women who consumed more lutein.<sup>20</sup> The major sources of lutein included spinach, broccoli, lettuce, tomatoes, carrots and eggs. Another large study found that the risk of lung cancer was significantly reduced in people with higher lutein intakes.<sup>21</sup>



A lower risk of breast cancer has also been observed in women with higher lutein intakes.<sup>22, 23</sup>

### HEART DISEASE AND STROKE

Research indicates that higher levels of lutein circulating in the blood may be linked with less thickening of the artery walls, which may in turn help to lower the risk of heart disease and stroke.<sup>24</sup> Large population studies have also found that foods rich in carotenoids are associated with a lower risk of heart disease and stroke.<sup>1</sup> Harvard researchers found that each additional daily serving of vegetables



TABLE 1  
SOME KEY SOURCES OF LUTEIN

FOOD	LUTEIN CONTENT
Kale, cooked	20-33 mg**/1 cup
Turnip greens, cooked	18.1 mg/1 cup
Collard greens, cooked	10.2-17.2 mg*/1 cup
Spinach, cooked	12-15 mg**/1 cup
Spinach, raw	6.6 mg/1 cup
Broccoli, cooked	3.4 mg/1 cup
Brussel Sprouts, cooked	3.4 mg/1 cup
Green Peas	2.3 mg/1 cup
Corn, cooked	0.6 mg/1 cup
Persimmons	0.5 mg/1 cup
Naturegg™ Omega Plus™ eggs	0.500 mg*
Regular Eggs	0.1-0.3 mg*
Naturegg™ Omega Plus™ liquid eggs	0.500 mg of lutein***
Tangerines	0.3 mg/1 cup
Orange Juice	0.3 mg/1 cup

\*per 53 g egg / \*\*depending on variety / \*\*\*per 63 g serving Adapted from Alternative Medicine Review (2005) 10: 128-135

by AMD is expected to double to 2 million by the year 2031. Risk factors for AMD include age, gender, genetics, smoking, heart health and nutrition. A number of observational studies suggest that higher dietary intakes of lutein are associated with a lower risk of advanced AMD.<sup>7, 14, 15</sup>

### CATARACTS

Cataracts are one of the major causes of preventable blindness around the world. Cataracts are characterized by opaque areas on or within

### FOOD SOURCES THAT CONTAIN LUTEIN

Lutein is found in high concentrations in dark green vegetables (kale, collard greens, Brussels sprouts, spinach, broccoli, lettuce, beans and peas), starchy vegetables (corn and peas), fruits (kiwi fruit and oranges) and eggs.<sup>1,2,7,8</sup>

### BENEFITS OF LUTEIN

Higher intakes of lutein may have a positive effect on age-related macular degeneration (AMD), cataracts, certain types of cancer and heart disease. Lutein has been found in breast milk and the umbilical cord, suggesting that this beneficial antioxidant may also play a role in pregnancy and breastfeeding.<sup>9, 10</sup> In a survey reported in 2002, foods contributing the most lutein to the Canadian diet were lettuce, spinach, corn and broccoli.<sup>11</sup> On average, daily intake of lutein was 1.413 mg in adults and 0.574 mg in adolescents (13-17 years). Eating 5 to 10 servings of vegetables and fruits each day provides between 3 and 6 mg of lutein. Experts believe that a daily lutein intake of about 6 mg may benefit eye health.<sup>12</sup>

### AGE-RELATED MACULAR REGENERATION

AMD, a degradation of the centre of the retina including the macula, is the leading cause of vision loss and blindness in Western countries. As many as 15% of Canadians over 50 years and 30% of those over 75 years have some degree of AMD.<sup>13</sup> The burden of this disease is on the rise with our aging population. The number of Canadians affected

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