Upgrade your vision
Health benefit solutions

An eye for innovative eye health solutions

- Globally, consumers find eye health a top concern, and one they want to support with nutritional supplements
- Age-related eye conditions like cataracts and age-related macular degeneration are set to rise with aging populations
- Vitamins, minerals and carotenoids support eye health, in both the young and old
  - Vitamin A is essential for vision
  - Lutein and zeaxanthin help reduce the risk of age-related macular degeneration, and support good vision now
  - Antioxidant vitamins C and E play a role in preventing cataracts
  - Omega-3 long chain PUFAs and genistein are emerging as eye-health ingredients, and DHA is essential for developing infants’ vision

Eye-catching facts:

- In 2012, 285 million people in the world were visually impaired, of whom 39 million were blind
- Around 22 million people worldwide are severely affected by either age-related macular degeneration (AMD) or cataracts
- AMD is the leading cause of blindness in people over 55 years of age in the Western world
- In developing countries, cataract is the most common cause of blindness

Nutrients to maintain sharp vision

Carotenoids
FloraGlo® (Lutein) Optisharp® (Zeaxanthin)
Quali®-Carotene (β-Carotene)

Nutritional lipids
life’sDHA™ (Vegetarian, omega-3 DHA)
life’sOMEGA™ (Vegetarian, sustainable source of omega-3 LC EPA+DHA)
MEG*-3 (Fish source of EPA/DHA omega-3)
GeniVida® (genistein)

Vitamins
Quali®-A (Vitamin A) Quali® -C (Vitamin C)
Quali®-E (Vitamin E) Quali®-B (Vitamin B6, B9, B12, )

Minerals
Zinc Selenium

How can we Health you?

Good eye-sight helps us enjoy the beauty of life and participate in the activities we love, whatever our age. Quality nutrition is an integral part of the health of our eyes.

DSM’s broad portfolio of innovative, high-quality and safe nutrients, combined with our consumer insights, market knowledge and application expertise, can help your eye health positioned products attract more consumers.

We are the only integrated premix, vitamin and nutraceutical manufacturer capable of creating and delivering tailor-made formulations to you anywhere. Blend in our extensive scientific expertise, technical know-how, global presence and total quality assurance for your peace-of-mind.

Via our global network of blend facilities we create value-adding nutrient combinations custom-made for you. Our fortitech premixes can offer the right balance of ingredients supporting a healthy heart.

DSM can help you get to market faster with appealing eye health solutions that work.

The above information is based on scientific studies, and a list of the latest references is available on request.
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More than meets the eye

Healthy vision is among the main concerns of adults in connection with aging. The challenge is to build optimum eye health in youth and maintain it throughout adult life.

Eye diseases can have a devastating impact on vision and pose a threat to the enjoyment of everyday life. The severity and irreversibility of eye diseases such as AMD and cataracts have generated interest in ways to either prevent or delay their progression. Science suggests that proper nutrition can help to maintain the health of our eyes.

Lutein and Zeaxanthin

The target for healthy eyes includes protection of the macula, a highly sensitive yellow spot of the retina responsible for detailed central vision. Its yellow color comes from two plant pigments – lutein and zeaxanthin – which are only obtained through the diet or supplements. The unique location of lutein and zeaxanthin indicates their protective role: filtering out harsh blue light and reducing free radical damage in the eye. Since dietary intake is often low, lutein and zeaxanthin supplements are proven to enhance macular pigment concentration in the eye.

Maintaining the healthy macular pigment is important to reduce the risk of developing Age related Macular Degeneration (AMD). AMD is a serious, progressive and currently irreversible disease that is a leading cause of acquired blindness in developed countries.

Vitamin A

Vitamin A is an essential part of vision. A form of vitamin A is bound to the vision photoreceptor cells on the retina. The chemical changes that occur to this form of vitamin A when light enters the eye are the basis of how vision works. The first signs of vitamin A deficiency include night blindness, and persistent deficiency can result in total vision loss. Vitamin A deficiency is still the leading cause of childhood blindness and is a continuing problem in developing countries, including Asia and Africa.29,30

Vitamin A deficiency can also be an issue for some sections of the population in developed countries, such as the elderly, and pregnant and lactating women.31-33 Supplying an adequate amount of vitamin A or beta-carotene, which is converted to vitamin A in the body, is vital for good vision.24,34

Long-chain omega-3 fatty acids

DHA and EPA are long-chain omega-3 polyunsaturated fatty acids. DHA is involved in the development of vision in the first six months of life. As an important component of retinal pigment cells, it is vital to the optimum function of the retina throughout life. These eye-friendly fats can be formed to only a limited extent in the body, so supplements provide a reliable source, particularly in people whose dietary intakes are also low.

![The unique location of lutein and zeaxanthin in the macula points to their protective role: filtering out harsh blue light and reducing free-radical damage in the eye to reduce the risk of AMD.](image)

FloraGLO® is a trademark of Kemin Industries Inc. The above information is based on scientific studies, and a list of the latest references is available on request.

For more information on this Health Benefit Solution by DSM, visit [www.dsm.com/human-nutrition](http://www.dsm.com/human-nutrition) or e-mail info.dnp@dsm.com

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