

person's risk of developing chronic diseases such as cardiovascular disease, arthritis and cancer.

This study introduces the long latency deficiency disease theory of chronic diseases, which implies that development of chronic diseases is related to a long standing nutrient deficiency. The study further suggests that doctors should recommend a daily multivitamin with optimal levels of vitamins (sometimes well above RDA values) to all patients to prevent chronic diseases.

This is a significant concept for overall health maintenance and is creating a definite shift in medical philosophy. The information from this study is vitally important and should be included in any health and wellness program.

Conclusion

With all of this information it is apparent that a multivitamin type product containing all the components of AREDS, optimal levels of vitamins and adequate amounts of lutein is the product of choice for patients with macular degeneration. The base of scientific evidence regarding lutein, multivitamins and macular degeneration is growing constantly. Current research suggests 6 mg of lutein per day for prevention and maintenance and higher amounts, as high as 20 mg of lutein per day, for therapeutic use.

Based on current peer reviewed medical journals, the Standard of Care for patients diagnosed with macular degeneration would involve an optimal multivitamin product including the AREDS components and most importantly containing adequate amounts of lutein, ranging from 10 mg – 20 mg of elemental lutein per day.

Dietary supplements are becoming part of the standard of care, not only for macular degeneration, but also for the prevention of chronic dis-

eases. The sooner a person, irrespective of their age, initiates an optimal multivitamin with adequate amounts of lutein, the better their long term prognosis for maintaining their overall health and vision.

MAXIVISION® PRODUCTS

MAXIVISION® Whole Body Formula

is an advanced comprehensive daily multivitamin based on current research. It contains the same components used in the AREDS Study, has the highest lutein content (20mg/dose from 400mg of FloraGlo® Lutein) of any product on the market and contains optimal levels of vitamins recommended in the JAMA study. **MAXIVISION® Whole Body Formula** is a product driven by results and is widely recommended by doctors for patients with macular degeneration. Professional samples are available for doctor offices.



1. A randomized, placebo-controlled, clinical trial of high-dose supplementation with vitamins C and E, beta carotene and zinc for age-related macular degeneration and vision loss: AREDS Report No. 8. Arch Ophthalmol. 2001;119:1417-1436.

2. Dietary Carotenoids and Risk for Age-related Macular Degeneration in the Age-Related Eye Disease Study (AREDS). J.P. SanGiovanni, E.Y. Chew, F.L. Ferris, N.Kurini, R.D. Sperduto, A.S. Lindblad, J.M. Seddon, B.E. K. Klein, T.R. Friberg, AREDS Research Group. Association for Research in Vision and Ophthalmology (ARVO). 2004.

3. Double Masked, Placebo-Controlled, Randomized Trial of Lutein and Antioxidant Supplementation in the Intervention of Atrophic Age Related Macular Degeneration: The Veterans Lutein Antioxidant Supplementation Trial (LAST Study). S.P. Richer, W. Stiles, L. Statkute, K.Pei, J.Frankowski, J.Nyland, J.Pulido. D Rudy, M Tshipursky. Journal of the American Optometric Association. 2004;75(4):216-230.

4. Vitamins for Chronic Disease Prevention in Adults, Clinical Applications. Robert H. Fletcher, MD, MSc, Kathleen M. Fairfield, MD, DrPH. Journal of the American Medical Association (JAMA). 2002;287:3127-3129.

Complete studies available at www.maxivision.com.

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AREDS was sponsored by Bausch & Lomb.
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New Standard of Care

MAXI VISION®

Prevention • Macular Degeneration • Treatment

What is the Standard of Care for Macular Degeneration?

Emerging Trends

New research provides important insights into this visually debilitating disease. Doctors are reacting to this research and reevaluating their treatment strategies!

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New Standard of Care

Standard of Care, which has medical and legal ramifications, insures patients are receiving the most advanced therapy based on peer reviewed medical journals providing irrefutable research. There is an abundance of new information and various claims being made. In the last couple of years, there have been several landmark studies involving macular degeneration and dietary supplements. As a result, the Standard of Care for patients with dry macular degeneration is emerging.

AREDS Study

One of the first major changes in the Standard of Care for dry macular degeneration patients occurred with the publication of the **Age Related Eye Disease Study (AREDS)**,⁽¹⁾ which was sponsored by the National Institutes of Health (NIH). It was a ten year ground breaking study resulting in conclusive evidence that high amounts of antioxidants and zinc were helpful in preventing progression of advanced dry macular degeneration. It firmly established a rationale for treating dry macular degeneration with vitamins and minerals. However it also produced some very disconcerting problems. AREDS originated over 14 years ago when the research was considering high concentrations of zinc and beta carotene in conjunction with macular degeneration. Further studies have brought to light some potential problems with these high doses and today's nutritionists question these high levels in products like **PreserVision™** because of potential complications. Smokers should not use products like these which contain high levels of beta carotene (>25,000 IU) because of increased risk

of lung cancer and very high levels of zinc may be implicated in urinary tract infections; all of this aside from the potential gastrointestinal distress.

Lutein Studies

Although AREDS did not include lutein in the study protocol, a research paper published at the 2004 Association for Research in Vision and Ophthalmology (ARVO), **Dietary Carotenoids and Risk for Age-related Macular Degeneration in the Age-Related Eye Disease Study (AREDS)**,⁽²⁾ concluded that a higher intake of lutein was associated with a decreased likelihood of having advanced AMD at baseline in the AREDS participants. The purpose of the study was to evaluate the relationship between dietary carotenoid intake and prevalence of age-related macular degeneration (AMD) in the Age-Related Eye Disease Study (AREDS).

Lutein is emerging as a vital nutrient in macular disorders. It may be one of the most important discoveries in the prevention and treatment of macular degenerative disease. Lutein has been shown to be an essential carotenoid in the macular area; however it is not produced by the body. It must be obtained through foods or supplements. Lutein was not included in the AREDS Study because it was not available when the study originated.

In the last few years there have been numerous studies looking at lutein and its involvement in the prevention and treatment of macular disease. These studies show lutein is an essential nutrient involved in maintaining normal function of the macular area in the retina. One of the latest landmark studies, **The Veterans Lutein Antioxidant Supplementation Trial**

(LAST Study),⁽³⁾ shows a therapeutic benefit for lutein in all stages of dry macular degeneration. This study demonstrated that 10 mg of lutein (L) alone or 10 mg of lutein (L/A) combined with additional carotenoids and antioxidants/minerals significantly increased macular pigment optical density and improved distance and near visual acuity, glare recovery and quality of vision (contrast sensitivity function) with the L/A group having a broader effect. Subjective improvements in Amsler Grid metamorphopsias and scotomas were also observed. **This is the first conclusive study showing lutein improves visual function in patients with dry macular degeneration.** This is extremely important information for patients with macular degeneration and will certainly have an influence in what doctors recommend.

Lutein may be one of the most important nutrients in macular degenerative disease and should be included in any prevention or treatment regimen.

Check the product label! Lutein is expensive and many products on the market do **not** contain anywhere near the minimum amount needed on a daily basis. One of the major offenders in this area is the Centrum product line with 250mcg per dose, which is only 0.25mg per dose (1000mcg = 1mg). **This is not effective according to current studies.**

Vitamins for Chronic Disease

Another prominent landmark study, **Vitamins for Chronic Disease Prevention in Adults**,⁽⁴⁾ published in the Journal of the American Medical Association (JAMA) concludes that suboptimal (below a minimal level which is necessary to prevent a chronic disease) levels of vitamin intake over a period of time increases a