

# MacularProtect Complete<sup>®</sup> AREDS2 Capsules

## Description

MacularProtect Complete AREDS2 combines a broad array of vitamins, minerals and antioxidants to provide powerful protection for macular and whole body health. Based on the AREDS and AREDS2 clinical trials and other advanced research, MacularProtect Complete AREDS2 works to protect the macula, the area of the retina where the sharpest central vision occurs. It also features a comprehensive multivitamin component reflecting the latest research on nutrition's role in overall body health. Beta-carotene free, it is appropriate for both smokers and non-smokers.

## MacularProtect Complete AREDS2 Highlights

- ▶ Convenient, all-in-one formula combines high-potency antioxidant protection with full multivitamin and mineral coverage
- ▶ Powerful support for individuals concerned about preserving their eyesight and maintaining overall body health
- ▶ Contains vitamins C and E, zinc and copper at levels found to support eye health in the AREDS clinical trial
- ▶ Provides 10 mg lutein and 2 mg zeaxanthin, reflecting AREDS2 levels
- ▶ Beta-carotene free – can be used by those who should avoid high intake, including current and former smokers
- ▶ Features a diverse array of bioflavonoids and antioxidants in addition to essential vitamins and minerals
- ▶ Manufactured in NSF<sup>®</sup>-certified facilities from finest quality, bioavailable ingredients



*Now also available as a tasty drink mix!*

## AREDS & AREDS 2 Results

The AREDS clinical trial reported that high-risk AMD patients taking antioxidants and zinc improved their chance of retaining their macular health status by 25% and preserving their vision by 19%<sup>1</sup>. The second AREDS trial (AREDS2) tested whether supplemental lutein and zeaxanthin (and/or marine omega-3s) taken with the AREDS formula could reduce risk of progression to advanced AMD by an additional 25% compared to taking the AREDS supplement alone.

Though lutein and zeaxanthin did not meet that 25% threshold, analyses showed these nutrients do offer a measure of protection<sup>2</sup>. The National Eye Institute now

recommends the original AREDS formula, with lutein and zeaxanthin replacing beta-carotene, as the new standard of care for those with at least intermediate AMD.

## Importance of Multinutrients

Staying healthy as we age is as important as preserving eyesight. Most experts now recommend a daily multivitamin for all adults. A USDA study confirms people over 50 who use multivitamins generally meet recommended intakes of nutrients, while many non-users do not<sup>3</sup>.

Multi-vitamin and mineral supplements have been shown to play a pivotal role in helping to maintain health and improve quality of life. In the Physicians Health Study II, cancer occurrence was lower in men taking a multi daily versus a placebo<sup>4</sup>. In AREDS, multi use was linked with a lower risk of developing any type of cataract, or of cataract progressing<sup>5</sup>. In addition, several randomized trials found that daily multi use improved measures of mental function in older individuals<sup>6,7</sup>. Other studies underscore the need for better intakes of nutrients like vitamin D to support bone, and possibly cardiovascular health<sup>8,9</sup>.

MacularProtect Complete AREDS2 offers a full range of essential vitamins and minerals, including important trace elements. It also contributes diverse, healthful antioxidants such as lycopene, flavonoids, alpha lipoic acid, n-acetylcysteine and taurine that help neutralize free radicals and protect cells.

## Rationale for Key Ingredients

### Vitamin A (500 IU)

Vitamin A is essential for protecting night vision and is vital for corneal health. It also works with zinc and the amino acid taurine to support function of eye structures such as retinal photoreceptors. The formula contributes a conservative level (as retinyl palmitate) to ensure adequate body stores.

### Vitamin C (750 mg)

Vitamin C is a water-soluble antioxidant that is concentrated in ocular tissues where it deactivates free radicals. Free radicals are the highly reactive compounds produced through the body's use of oxygen and generated by outside sources such as UV light. Oxidative damage to the retina is believed to be a risk factor for macular degeneration<sup>10</sup>. Vitamin C also aids in the recycling of other antioxidants such as vitamin E. Evidence indicates that vitamin C and E requirements are higher in smokers – a group at higher risk for AMD<sup>11,12</sup>. MacularProtect Complete AREDS2 supplies the form and level of vitamin C used in AREDS, plus an additional 250 mg.

### Vitamin E (400 IU)

Fat-soluble vitamin E is the major chain-breaking antioxidant present in retinal and macular membranes. As a first line of defense against fatty acid peroxidation, vitamin E helps protect cell membranes against free radical attack. MacularProtect Complete AREDS2 uses natural source vitamin E rather than synthetic, as research shows that natural source offers superior bioavailability and is better retained in tissues<sup>13</sup>. It also delivers broad spectrum vitamin E from alpha to gamma tocopherol, that together play a health-protective role<sup>14</sup>. The formula includes 400 IU of vitamin E, the level used in AREDS.

### Zinc (80 mg)

Zinc is an essential mineral that is selectively concentrated in the eye. It is found in the retina, choroid, ciliary body, iris, optic nerve, sclera, cornea, and lens. Within these ocular structures zinc is believed to interact with vitamin A and taurine to modify photoreceptor membranes, to help regulate the light-rhodopsin reaction, to influence nerve transmission, and to serve as an antioxidant<sup>15</sup>. MacularProtect Complete AREDS2 provides the same form and level provided to AREDS participants.



MacularProtect Complete AREDS2 delivers a potent blend of nutrients found to protect macular health in the AREDS and AREDS2 clinical trials. The product is free of beta-carotene and is appropriate for both non-smokers and smokers. It also features a comprehensive multivitamin component for whole body health.

**Suggested Use:** Take a total of four capsules daily, with meals.

**Note:** Pregnant or lactating women or individuals with medical conditions should consult a physician before using.

MacularProtect Complete AREDS2 contains 80 mg of zinc, a level that was found to support eye health in the AREDS clinical trial. Check with your physician prior to taking MacularProtect Complete AREDS2 to ensure that this level of zinc is appropriate for you. Keep out of the reach of children.

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

Supplement Facts		
Serving Size 4 Capsules	Servings Per Container 30	
	Amount Per Serving	%Daily Value
Vitamin A (from retinyl palmitate)	500 IU	10%
Vitamin C (as ascorbic acid)	750 mg	1,250%
Vitamin D (as cholecalciferol)	900 IU	225%
Vitamin E (from d-alpha tocopheryl succinate and mixed tocopherols)	400 IU	1,333%
Thiamin (vitamin B1 from thiamin hydrochloride)	4.5 mg	300%
Riboflavin (vitamin B2)	5 mg	294%
Niacin (as niacinamide)	10 mg	50%
Vitamin B6 (from pyridoxine hydrochloride)	20 mg	1,000%
Folate (50% from folic acid, 50% from calcium folinate)	400 mcg	100%
Vitamin B12 (as cyanocobalamin)	100 mcg	1,667%
Biotin	100 mcg	33%
Pantothenic Acid (from calcium pantothenate)	12.5 mg	125%
Calcium (from calcium carbonate)	100 mg	10%
Iodine (from potassium iodide)	75 mcg	50%
Magnesium (from magnesium oxide)	100 mg	25%
Zinc (from zinc oxide)	80 mg	533%
Selenium (from selenomethionine)	70 mcg	100%
Copper (from copper oxide)	2 mg	100%
Manganese (from manganese amino acid chelate)	2.5 mg	125%
Chromium (from chromium polynicotinate)	100 mcg	83%
Molybdenum (from molybdenum amino acid chelate)	37.5 mcg	50%
Taurine	100 mg	†
N-acetyl-L-cysteine (NAC)	75 mg	†
Lemon Bioflavonoids (50% bioflavonoid complex)	50 mg	†
Quercetin	50 mg	†
Turmeric Rhizome Extract (95% curcuminoids)	25 mg	†
Alpha Lipoic Acid	20 mg	†
Ginkgo Leaf Extract (24% ginkgolflavone glycosides)	20 mg	†
Bilberry Fruit Extract (standardized to anthocyanidins)	15 mg	†
Grape ( <i>Vitis vinifera</i> ) Seed Extract (95% proanthocyanidins)	15 mg	†
Lutein (FloraGLO®)	10 mg	†
Lycopene	2 mg	†
Trans-Resveratrol	1.25 mg	†
Boron (from protein hydrolysate)	1 mg	†
Zeaxanthin	2 mg	†
Vanadium (from vanadyl sulfate)	15 mcg	†

† Daily Value not established.

Other Ingredients: Gelatin, Water, Silica and Magnesium Stearate.



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## Copper (2 mg)

The mineral copper is necessary for function of a key antioxidant enzyme. It is also needed to produce connective tissue, nerve sheaths, skin pigment, and for the proper utilization of iron. Since high levels of zinc compete with copper for absorption, copper is included in MacularProtect Complete AREDS2 to help ensure adequate levels of this essential mineral. The formula's copper level represents 100% of the Daily Value and is the form and amount use in the AREDS trial.

## Lutein, FloraGLO® (10 mg) and Zeaxanthin (2 mg)

Lutein and zeaxanthin are two similarly structured carotenoids found in green leafy vegetables like spinach, kale and mustard greens. These carotenoids make up the macular pigment of the retina, the tissue with the highest concentration of lutein and zeaxanthin in the body. As part of the macular pigment, zeaxanthin and lutein filter blue (visible) light that can cause photo-oxidative stress.

Intervention studies indicate supplementation with these carotenoids can favorably modify the pigment density of the macula<sup>16,17</sup>. AREDS2 reported an 18% reduction in progression to advanced AMD in participants who received the AREDS supplement with lutein/zeaxanthin in place of beta-carotene (compared to those taking the original AREDS supplement with beta-carotene)<sup>2</sup>. For participants receiving lutein/zeaxanthin supplements, a 26% reduced risk of progression was seen in those consuming the least lutein/zeaxanthin at the study's start, compared to those consuming the most<sup>2</sup>. The average daily intake of these two carotenoids among Americans 50 and older is less than 2 mg – far lower than the 12 mg tested in AREDS2<sup>18</sup>. The formula's lutein/zeaxanthin level reflects that used in AREDS2.

## Other Essential Nutrients for Eye and Whole Body Health

MacularProtect Complete AREDS2 provides robust levels of key B-vitamins, particularly vitamin B12, which can be difficult to absorb by those over 50, as well as vitamin B6 and folate for artery and colon health. A large clinical trial found this B vitamin trio reduced AMD risk in women with or at risk for heart disease<sup>19</sup>, and higher vitamin B12 and folic acid blood levels have been linked to lower AMD risk in an observational study<sup>20</sup>. These B-vitamins may also support cognitive function<sup>21</sup>.

Plant compounds with antioxidant activity such as the flavonoids contribute to the health benefits of eating five or more fruit and vegetable servings daily. Regular intake of berry flavonoids, for example, is linked to better odds of retaining heart health<sup>22</sup>. MacularProtect Complete AREDS2 contains a unique array of protective flavonoids from diverse sources: bilberry, citrus, grape seed, Ginkgo biloba, turmeric and quercetin, which is found in many fruits and vegetables.

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