Special Research Report: AREDS 2 Results

The National Eye Institute released the five-year results of AREDS 2 this week, at ARVO, the annual meeting of the Association for Research in Vision and Ophthalmology. This follow-up to the Age-Related Eye Disease Study (AREDS) looked at changing the formula for the AREDS supplement. Specifically, they studied the effect of adding lutein, zeaxanthin and omega-3 to the original formula. The results showed that lutein and zeaxanthin may be helpful, but omega-3 did not have a positive effect over five years.

The original AREDS formula contains:
- 15 mg betacarotene
- 500 mg vitamin C
- 400 iu vitamin E
- 80 mg zinc
- 2 mg copper

There were several issues (see AREDS 2 Results page 2)
with this formula. It is known that betacarotene may promote lung cancer in smokers. The level of zinc is very high and did cause some gastrointestinal problems in patients in the original study. AREDS did not contain lutein and zeaxanthin. At the time the study began, there were some indications that lutein might be helpful. But, there was no reliable source of large quantities of these carotenoids, so it was not included in AREDS.

DESIGN

The AREDS 2 research was designed to identify the effect of several things:

• Adding lutein and zeaxanthin
• Adding omega-3
• Adding lutein, zeaxanthin and omega-3

In addition, they wanted to find the effect of:

• Removing the betacarotene
• Reducing the level of zinc
• Both removing betacarotene and reducing the level of zinc

Neither the 4,203 participants nor the researchers knew which formula they were receiving or if they were getting a placebo. The individuals were assigned randomly to the various groups. It’s important to note that the serum levels of lutein/zeaxanthin and the dietary habits of the participants were also measured. This may turn out to be important in later analysis.

At the end of the research, they looked at:

• Development of advanced AMD
• Progression of vision loss

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RESULTS

The study showed that removing the betacarotene and lowering the zinc did not have an effect on the progression rate. Lung cancer rates were higher in the betacarotene group, mostly in former smokers who had stopped smoking more than a year before. It was noted that about 50% of AMD patients are smokers or former smokers, so this is an important finding.

Lutein and zeaxanthin would be appropriate substitutes for betacarotene and they did not cause any increase in the risk of lung cancer. In addition, betacarotene competes for absorption with lutein and zeaxanthin, so they should not be taken together or the positive effects will be reduced, as they were in this clinical trial.

The original AREDS formula reduced the risk of progression to advanced AMD. Adding lutein and zeaxanthin provided about a 20% reduction in progression beyond the original AREDS, in those who had the lowest dietary intake of lutein and zeaxanthin.

The addition of omega-3 did not reduce the risk of progression.

The development of cataract was not affected by any of the supplements.

There is insufficient data to make recommendations about the level of zinc. Given the choice, 90% of AREDS 2 participants (see AREDS 2 Results page 4)
also took Centrum, which has 15 mg of zinc. According to Dr. Chew, this high level of zinc (about 95 mg when combined with AREDS 2) worked and was not harmful. By the way, participants in the original AREDS research also took Centrum.

CONCLUSION

The results led the researchers at the National Eye Institute to recommend that the AREDS formula be adjusted by the removal of betacarotene and addition of lutein and zeaxanthin.

500 mg vitamin C
400 iu vitamin E
10 mg lutein
2 mg zeaxanthin
80 mg zinc
2 mg copper

Dr. Chew stated, “We hope that this formulation will be a safer and more efficacious one for our patients. It simplifies the patient’s life. We have one formulation that will be for smokers and nonsmokers and which hopefully will be successful in reducing the risk of advanced macular degeneration.”

THE REST OF THE STORY

This study collected a mountain of data and the researchers will be digging through it for years.

One area of interest relates to diet. The people in the study, as a whole, were very well nourished and well educated. Still, the participants who got the most benefit from the supplement had the worst diets. They also showed the most improvement in the level of lutein and zeaxanthin in their blood. Dr. Chew
is curious to evaluate the participants with the lowest dietary intake of lutein and zeaxanthin to see if their cataracts developed differently from those more highly nourished. Clearly, there is a lot more to be learned here and a lot more detail to tease out. The NEI is very interested in continuing this analysis.

Participants are still being followed every six months and we surely will be hearing more results from this important AREDS 2 research.

Learn about the latest research initiatives in the field of Age Related Macular Degeneration (AMD) including the five year AREDS2 study results that looked at adding lutein, zeaxanthin and omega-3 to the original formula. These findings will be discussed along with other current information at the Friendship Heights Village Center on Saturday, June 8, 2013 from 10 a.m. - 12 noon. Ophthalmologist Richard Garfinkel, M.D., of the Retina Group of Washington and former Medical Advisor to the Macular Degeneration Network, will be the guest speaker. Free parking is provided on the back deck of the Courtyard by Marriott. To register for this free program please call: 301-656-2797.

**LOW VISION TIP:**

VizWiz is a great free app for your iPad, iPhone, or iPod touch that allows low vision users to recruit remote sighted “web workers” (human volunteers) to help them with visual problems in nearly real time. Users simply take a picture with their device, speak a question, and then receive multiple spoken answers. Day or night, this app is remarkably accurate.

Kevin Osborne, Adult Services Manager, Charles Beatley Regional Library, Alexandria, VA (Kevin demonstrated this app at POB’s “Technology Petting Zoo” on May 9th)
VISION MATTERS
The Aging Retina
What You Should Know

This free symposium will discuss a leading cause of vision loss in people over 50 - Age Related Macular Degeneration (AMD).

AMD gradually destroys the macula, the part of the retina that provides sharp central vision. Learn about the latest research initiatives from highly regarded ophthalmologist:

Richard A. Garfinkel, MD, Retina Group of Washington
Former Medical Advisor
Macular Degeneration Network

WHEN: Saturday, June 8, 10 a.m. – noon
WHERE: Friendship Heights Village Center
4433 South Park Avenue • Chevy Chase, MD

Complimentary Parking on the rear deck of the Courtyard by Marriott.
To register for this free program, call: (301) 656-2797

This event is sponsored in partnership with

Prevention of Blindness Society of Metropolitan Washington
Village of Friendship Heights
Sibley Memorial Hospital
Courtyard by Marriott
Johns Hopkins Medicine
Calendar of Events

• Saturday, June 8th
MACULAR DEGENERATION NETWORK
SPRING/SUMMER SYMPOSIUM
Attend the combined May/June Macular Degeneration Network Event – MARK YOUR CALENDAR-JUNE 8th, and plan to join Past Medical Advisor to POB’s AMD Network, Richard A. Garfinkel, M.D. as he discusses the “Retina Over 50.” Friendship Heights Village Center, 4433 South Park Avenue, Chevy Chase, MD, 10 a.m. – 12 noon. Complimentary parking on the rear deck of Courtyard by Marriott of Chevy Chase at Hills Plaza. Please call to register: 301-656-2797.

• Tuesday, June 11th
LOW VISION SUPPORT GROUP
Guest Speaker: Lorena LoVerde, M.D., Washington National Eye Center at MedStar Washington Hospital Center, 110 Irving Street, NW, Professional Office Building, South Tower, Conference Room A (near Blimpies) on 1st floor. Call to reserve complimentary lunch, 202-877-5329.

• Wednesday, June 12th
LOW VISION INDEPENDENCE THROUGH ARTS & CULTURE,
DC Public Library at Martin Luther King, Jr. Memorial Library, 901 G Street, NW, Washington, DC, 11 a.m. – 1 p.m., Complimentary light lunch. Open discussion “WHAT ART FORM MAKES YOU HAPPY?” Call to reserve lunch at 202-727-2142.
Calendar of Events

• Wednesday, June 19th
LOW VISION GROUP, Vinson Hall,
6251 Old Dominion Drive, McLean, VA, 10:30 a.m.,
Open Discussion, Gloria Sussman, Facilitator.
For more details, call 703-742-9070.

• Friday, June 26th
“PICTURE THIS: Described Art Tour,” 1 p.m., National
Gallery of Art, West Building. Meet at second floor
Rotunda, 6th & Constitution Avenue, NW, Washington, DC.
For more information, call 202-737-4215.

Please send an E-mail to communications@youreyes.org.
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