Macular Degeneration Part 3: Supplementation & The AREDS Formulation Transcript

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Podcast Introduction and Macular Degeneration Series

What we know is that AREDS has been scientifically proven to reduce the risk of progression of macular degeneration by 25% in those with intermediate AMD, but it does not help prevent disease in those with early AMD.

Perhaps more importantly, what we don't know is if the AREDS supplements can prevent AMD in people who are at risk but don't yet have findings since that was not studied.

Emerging research has shed light on five additional powerful nutrients, such as mesozyazanthin, astaxanthin, bioflavonoids, sulforaphane, and the omega-6-GLA, which offer promising benefits for supporting retinal health and combating AMD progression.

The downside with these nutrients is that large-scale clinical trials have not yet been done using these nutrients. Welcome to the IQ Podcast. I'm Dr.

Rani Banik, here to help you boost your IQ with powerful insights that connect your eyes, your brain, and your whole body wellness. Welcome to the IQ podcast.

I'm your host, Dr. Ronni Banek. And in this podcast, I share insights and how you can keep your eyes and brain healthy from the inside out. And this month, I've been doing a series on macular degeneration.

In case you missed the past two episodes, please go back and take a listen. In part one, I talked about the foundations of macular degeneration. what it is, what happens in the retina, what it looks like, who is at risk, and what are some of the standard treatments for macular degeneration are.

In part two, I talked about the root causes of macular degeneration using an integrative and functional medicine lens. And I talked about then after the root causes, how do you address them?

What are some DIY strategies you can employ in your daily life based off of nutrition and lifestyle modification to help support your eye health and prevent progression of macular Now, in part three, I wanted to talk to you about supplementation.

Now, currently, the AREDS supplements, the AREDS stands for age-related eye disease study. There were two studies done, two very large clinical trials sponsored by the National Institutes of Health done in the United States.

looking at supplementation for macular degeneration. So there were some formulations used and the study is basically, I'll give you a teaser, they helped a certain percentage of the population.

AREDS Study Results and Limitations

About 28% of people with a particular stage of macular degeneration, intermediate stage macular degeneration, benefited from taking the supplements. But there was a pretty significant percentage of people who didn't benefit.

People with early AMD didn't benefit. People with advanced AMD didn't benefit. And again, 28% of people benefited, but that means that 72% of people did not benefit who had intermediate-stage AMD, and they still progressed.

So I truly, as an integrative eye doctor, I've really done a deep dive into the ARED supplement formula and try to identify what the issues were. Why didn't it help more people?

I mean, it's great that it helped 28%, but why didn't they help more people? And so I put together a video series that I published on YouTube a few years back on AREDS.

What's wrong with AREDS? And what are these supplements missing? And how can we do better? And potentially the AREDS formulation may be toxic for some people.

and I explained why that is. So I'm gonna actually go ahead and share those videos with you as part of this episode. Those are prerecorded, but you can still benefit from the information there.

And I really hope that you get a better understanding of supplementation for macular degeneration based off of these videos. So please enjoy. And if you have any questions, comments, please post them because I love getting feedback from my listeners.

and I love to have a dialogue and conversation with them. And so I would love to hear your thoughts and comments on this about AREDS. And if you do take any eye supplements, what you find has worked for you, I would love to hear from you.

So please don't just leave us a review this time. I really want to hear, get your feedback. So comment below and remember to subscribe because that's the best way for you to support me and my team in producing this podcast and getting this valuable information out there to you.

and your friends and your family about eye health. So enjoy my series on the AREDS supplementation for macular degeneration. Why the AREDS eye supplements don't fully protect your vision and why they may even be dangerous.

Hello, I'm Dr. Rani Banik, America's integrative neuro-ophthalmologist. Today, I'll be delving into two landmark studies using eye supplements, the AREDS and AREDS2 studies.

First, in part one of this video, I'll explain the background behind the two studies and what their results were. Next, in part two, I'll share why these AREDS formulations, though significant in their time, are now outdated for protection against macular degeneration and blue light.

The AREDS formulation is missing several key eye nutrients, and I'll share with you what they are. Then, in part three, I'll explain why taking the AREDS formulation may be dangerous for some people and may actually increase the risk for macular degeneration.

Finally, be sure to watch until the end of the video for my recommendations in part four and some alternatives to the AREDS vitamin formulations. Part one, AREDS and AREDS2.

The Age-Related Eye Disease Study, or AREDS, and its follow-up, AREDS2, were groundbreaking clinical trials sponsored by the National Institutes of Health, or NIH, in the United States.

The ARID studies were landmark clinical trials because up until that time, there was no large research study to investigate the potential benefits of a supplement for eye health.

These two studies evaluated the potential efficacy of specific nutrient formulations in reducing the risk of two conditions. One, age-related macular degeneration, also known as AMD, and two, cataracts.

The original ARED study conducted between 1992 and 1998 included over 4,700 participants between the ages of 55 to 80 years old. They all had cataract, macular degeneration, or both cataract and macular degeneration.

The macular degeneration results were based on over 3,600 participants who had early, intermediate, or advanced AMD. The study participants were given various combinations of five nutrients, or placebo, for five years.

The nutrients in the original AREDS formulation included the following. Vitamin C, 500 milligrams. Vitamin E, 400

IUs. Beta-carotene, 15 milligrams. Zinc, 80 milligrams.

And copper, 2 milligrams. The ARED's results showed benefit for only a small subset of participants. In individuals with intermediate or advanced AMD in one eye, the vitamins reduced the risk of developing advanced macular degeneration by about 25% over five years.

AREDS2, Lutein, Zeaxanthin, and Omega-3s

In other words, if people already had intermediate AMD, there was still a significant chance of progressing to an advanced stage of disease with significant vision loss.

Also, there was no benefit of the AREDS formulation for those with early stage AMD or with cataract. The AREDS study was actually continued for another five years for a total of 10 years of follow-up.

The researchers found that continued supplement use for 10 years was associated with a 25 to 30% reduced risk of advanced AMD. In other words, 34% of people on the AREDS formulation still progressed to Advanced AMD, while 44% on placebo progressed to Advanced AMD.

The AREDS results, though much anticipated by eye doctors and patients alike, were quite disappointing in my opinion. They were frankly underwhelming when it comes to protecting eye health.

Now, why did the AREDS study not show more benefit? Why did the supplements not protect more people from vision loss? Well, stay tuned for later in this video when I'll share with you my insights into these two questions.

But first, let's talk a little bit about AREDS too. The AREDS-II study started in 2006 and was completed in 2013. It aimed to build on the original AREDS findings by testing modified formulations.

AREDS-II included over 4,200 participants ages 50 to 85 who all had intermediate or advanced AMD. Early AMD was excluded from the AREDS-II study. AREDS2 tested variations in ingredients in their formulations, such as the replacement of beta-carotene with lutein 10 mg and zeaxanthin 2 mg.

By the way, beta-carotene was associated with a higher risk of lung cancer in smokers, so it was eliminated from the AREDS formula. Now, let's talk about lutein and zeaxanthin.

These are two powerful macula carotenoids that have a yellow-orange pigment and are cousins to both beta-carotene and vitamin A. Lutein and zeaxanthin serve as our eye's natural UV protectors and blue blockers by protecting the macula in the back of the eye against free radicals and oxidative stress.

Because our bodies cannot make lutein or zeaxanthin, we need to get these critical essential eye nutrients from either diet or supplementation. There are numerous studies that have shown that increased dietary lutein and zeaxanthin from green, orange, and yellow vegetables and fruits is associated with a reduced risk for vision loss from AMD.

Aside from lutein and zeaxanthin, AREDs2 also included omega fatty acids, DHA and EPA, at doses of 350 mg and 650 mg respectively. So, what did the AREDs2 results show?

The study confirmed the efficacy of the original AREDs formulation in decreasing the risk of AMD progression by about the same 25% reduction rate. There was no difference seen in substituting lutein and zeaxanthin for beta-carotene.

However, despite high hopes, AREDs2 did not find significant additional benefits of omega-3 fatty acids. But just because AREDs2 didn't show any benefit of the omegas, that doesn't mean that these nutrients aren't helpful for vision health.

Did you know that most adults spend over 10 hours a day on devices? In our screen-dominated world, meet your

eye's new ally, Fortify. Fortify is designed to defend your macula against blue light with a potent blend of lutein, zeaxanthin, mesozeaxanthin, and astaxanthin.

Fortify also helps to support your optic nerve, retina, and cornea with Mackey and bilberry extracts, dincobaloba, and a powerful form of vitamin E called tocoprionol.

Five Missing Nutrients for Eye Health

From teens to adults, Fortify empowers you for healthier screen time. I'm Dr. Rani. Don't let screams dim your view. See the world without limits with Fortify.

Science in every capsule. Act now. Visit my website to learn more about Fortify's powerful ingredients and to purchase. Let Fortify be your partner against blue light.

Fortify. Empowering your vision. Part two, five powerful ingredients that are missing in AREDS. After what I've shared so far about AREDS, in case you're getting anxious about not being able to protect your eyes with supplements, there's no need to worry.

In fact, there is hope on the horizon. Recent research has revealed that several powerful nutrients may be able to fill in the gaps when it comes to ocular nutrition.

These nutrients that were notably absent from the ARED's formulations may provide the extra boost your eyes need to protect against conditions like macular degeneration, cataracts, dry eye, and more.

I'm going to share with you what exactly these five nutrients are. Powerful eye nutrient number one is mesozeaxanthin, the lesser known of the three macular carotenoids.

Mesozeaxanthin is the most important macular carotenoid, more important than lutein or zeaxanthin. Now you may wonder, why is it the most important? It's because mesozyazanthin is deposited in the very center of the macula, an area called the foveola, responsible for our highest resolution visual acuity or 20-20 vision.

Mesozyazanthin plays a crucial role in protecting against oxidative stress and inflammation, especially from exposure to blue light and UV light. While lutein and zeaxanthin were included in the AREDS2 formulation, mesozeaxanthin was not.

We now know of mesozeaxanthin's synergistic effects with the other two macular carotenoids in maintaining macular health and just how powerful a shield it can be.

Now, what's the downside to mesozeaxanthin? Well, unfortunately, it's not readily available in foods. It's believed that the body converts lutein into mesozeaxanthin, and that's how we get this key nutrient into the eye.

In my opinion, though your body may be converting lutein into mesozeaxanthin, direct supplementation with mesozeaxanthin is by far the best way to boost your levels.

Studies have shown that mesozyazanthin supplementation may enhance visual function and reduce the risk of macular degeneration, making it a valuable addition to comprehensive eye health formulations.

Powerful eye nutrient number two, another emerging ingredient with promising benefits for eye health, is astaxanthin. Astaxanthin is also a carotenoid, but unlike the macular carotenoids, it has a beautiful red pigment to it.

Astaxanthin is a potent antioxidant. It's often touted as the, quote, king of antioxidants because it's more powerful than vitamins A, C, and E, one of the body's natural antioxidants, glutathione and alpha lipoic acid.

Astaxanthin is naturally found in red algae known as Haematoccus pluvialis, as well as seafood that is pinkish-red,

such as salmon, trout, and shrimp.

This marine-derived nutrient exhibits potent anti-inflammatory and neuroprotective properties, which are crucial for combating the oxidative stress and inflammation associated with macular degeneration.

Now, while astaxanthin was not included in AREDS or AREDS2 formulations, subsequent small studies have highlighted its potential to support retinal health and improve visual function, suggesting its importance in future formulations aimed at preventing and managing AMD.

Powerful eye nutrient number three is actually not a single nutrient, but a class of compounds known as bioflavonoids. Bioflavonoids, such as anthocyanins, commonly found in colorful berries and cursitin, found in red onions and apples, have garnered attention for their antioxidant and anti-inflammatory properties, which are essential for protecting against AMD progression.

Preclinical studies using specific bioflavonoid compounds for retinol, optic nerve, and lens health have proven to be quite promising. Other bioflavonoids have also shown in human studies to help with dry eye or reduce eye pressure by up to three points.

Bioflavonoid compounds found abundantly in colorful fruits and vegetables work synergistically with other nutrients to combat oxidative stress and inflammation in the retina.

While bioflavonoids were not specifically investigated in the ARED studies, their inclusion in comprehensive eye health formulations may offer additional benefits for AMD prevention and management.

powerful eye nutrient number four. Another ingredient that has garnered attention for its potential benefits in promoting eye health is sulforaphane, a compound found in cruciferous vegetables such as broccoli and broccoli sprouts.

Sulforaphane is derived from its precursor, glucoraphanin, and has been shown to activate the nRF2 pathway. In case you've never heard of nRF2, I know most people probably have not.

This is a key cellular defense mechanism involved in detoxification and the antioxidant response. By enhancing the NRF2 pathway, sulforaphane helps to boost the body's natural defense systems against free radicals and inflammation.

Studies have demonstrated that sulforaphane can protect retinal cells from oxidative damage and reduce inflammation in animal models of retinal degeneration.

This suggests its potential as a therapeutic agent for AMD. Furthermore, clinical trials investigating the effects of sulforaphane-rich broccoli sprout extracts on human retinal health have shown promising results indicating its potential as a dietary intervention for AMD management.

Incorporating sulforaphane-rich foods or supplements into the diet may offer a natural and effective strategy for supporting eye health and preventing eye disease.

Finally, powerful I-nutrient number five is an omega known as gamma-linolenic acid or GLA. GLA is an omega-6 fatty acid found in certain plant-based oils like evening primrose oil and borage oil.

GLA plays a crucial role in modulating inflammation and maintaining the integrity of cell membranes. While omega-3 fatty acids were investigated in ARED's tube, the potential benefits of omega-6 fatty acids like GLA were not explored.

Zinc Risks and Genetic Sensitivity

Emerging evidence suggests that GLA supplementation may help alleviate dry eye syndrome and help with

diabetic retinopathy as well as support overall ocular health.

With respect to the omega-3 fatty acids, some experts believe that the dosage used in ARETS2, a total of 1,000 mg per day of DHA and EPA combined, may have been too low to elicit a measurable effect.

This highlights the importance of dosage optimization in future studies. Overall, the recognition of these five ingredients underscores the importance of ongoing research and the need for updated formulations that can support optimal eye health.

While the AREDS and AREDS2 studies did reveal important insights into the potential for supplements to help reduce the risk of vision loss from AMD, these studies also helped make us aware of certain risks of taking supplements.

What I want to talk to you about now is the potential toxicity associated with A-reads, especially when it comes to the dosage of zinc. For reference, the U. S.

Recommended Dietary Allowance, or USRDA, of zinc is 8 mg for women and 11 mg for men. The tolerable upper intake level of zinc is 40 mg a day for both women and men.

With intakes above this level, symptoms of zinc toxicity may develop. Notably, the first ARED study included twice the upper intake dose of zinc at 80 mg per day.

Though one arm of the AREDs2 also investigated using 25 milligrams of zinc, the higher dose of 80 milligrams is actually what is found in most AREDs branded supplements on the market today.

While zinc plays a vital role in eye health and has been shown to help protect against macular degeneration, recent evidence suggests that excessively high zinc intake may not be beneficial for everyone.

In fact, Individuals with specific genetic variations called short nucleotide polymorphisms, also known as SNPs, may have a predisposition to zinc sensitivity.

They can be at higher risk for AMD progression when exposed to such high doses of zinc. For example, certain combinations of SNPs in the CFH and ARMS2 genes may double a person's risk of progression of AMD.

High dose zinc supplementation, particularly in individuals with specific genetic predispositions, may thus be problematic. This highlights the need for personalized approaches to AMD prevention and management, perhaps with the utilization of genetic testing prior to the initiation of a dietary supplement regimen.

Now, let's review what we've covered so far.

Recommended Supplement Strategy and Product Bundle

The landmark ARED studies have provided invaluable insights into the role of specific nutrients and AMD prevention, highlighting the importance of six nutrients, lutein, zeaxanthin, vitamin C, vitamin E, zinc, and copper.

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Perhaps more importantly, what we don't know is if the AREDS supplements can prevent AMD in people who are at risk but don't yet have findings since that was not studied.

Emerging research has shed light on five additional powerful nutrients such as mesozyazanthin, astaxanthin, bioflavonoids, sulforaphane, and the omega-6-GLA, which offer promising benefits for supporting retinal health and combating AMD progression.

The downside with these nutrients is that large-scale clinical trials have not yet been done using these nutrients. Finally, zinc, though important to support retinal health and prevent AMD progression, can be toxic in high doses.

Without knowing, if you have a genetic predisposition to zinc sensitivity, high levels of zinc may in fact increase your risk of vision loss. Therefore, it is best to avoid doses of zinc above 25 mg.

Now, we're up to the last and perhaps most important part of this video that you've been waiting for. I'll be sharing my thoughts on how you can choose the eye supplement that is best and safest for you.

When choosing an eye health supplement, it's essential to prioritize formulations that incorporate a comprehensive array of nutrients, including those identified in the ARED studies, as well as the newly recognized ingredients.

This ensures that all aspects of retinal health are adequately supported, from antioxidant production to modulation of inflammation and activation of detoxification pathways.

Therefore, what I recommend for optimal eye supplementation is this. Not just a single vitamin, but a combination regimen to provide your eyes and your whole body with complete nutrient support.

This regimen should include 1. A comprehensive multivitamin with added bioflavonoids, specifically berry extracts as a source of anthocyanins, curcetin, and broccoli seed or sprout extract for their sulforaphanes.

There are two things I want to point out when it comes to a multivitamin. First, be sure your multi provides you with the standard range of B vitamins, vitamins A, C, and E, and minerals including zinc, magnesium, selenium, and copper.

Second, when it comes to vitamin E, I always look for it in a more advanced form called tocotrienol instead of the usual tocopherol form. Togo trienol is much more potent as an antioxidant and has been shown in preclinical studies to help with cataract prevention.

Two, look for a supplement curated for UV and blue light protection. This should include a macular carotenoid blend with lutein, zeaxanthin, and mesozeaxanthin.

I prefer the macular carotenoid blend found in the ingredient Lutomax 2020. Lutomax 2020 is a branded ingredient that provides the three macular carotenoids in a five to one to one ratio that is backed by scientific evidence.

Your eye supplement should also contain astaxanthin. Number three, a complete omega supplement that provides the omega-3 fatty acids, DHA and EPA, along with the anti-inflammatory GLA.

Omega-7 and omega-9 fatty acids can also be beneficial due to their anti-inflammatory benefits. This combination of three types of supplements with its wide range of nutrients can support not only eye health, but also whole body health.

If you're seeking a supplement brand tailored for eye health, I invite you to explore the Ageless Eyes Bundle. The Agile Size Bundle has been carefully formulated based on research in ocular nutrition.

It includes three foundational supplements based on the latest scientific evidence to provide nourishment at a deep cellular level to support your vision.

The Ageless Eyes bundle contains Fortify, a potent macular carotenoid blend with astaxanthin, tocotrienol, and two types of berry extracts. Next, the Ageless Eyes bundle contains Nourish, a complete multi with a range of bioflavonoids selected for eye health and backed by science.

And finally, Ageless Eyes has Soothe, a complete omega with 3, 6, 7, and 9. Whether you choose to support your eye health with the Ageless Eyes Bundle or a different combination of supplements, it's my hope that your precious eyes will remain strong and healthy.

I hope you can continue doing all the activities you love, such as reading, driving, using a device, enjoying the beauty of nature, and most importantly, seeing the faces of your loved ones.

I wish you vibrant vision for the future ahead. Remember, however, it's always important to consult with an eye care professional and discuss individualized supplement recommendations based on your personal health history, your genetic factors, and lifestyle habits.

If you'd like to work with me to create a vision optimization plan personalized for you based on the power of eye healthy nutrition, supplements, and lifestyle, please contact my office at 646 820-2074 or via email at info at rudranibanikmd.com.

Remember, your eyes deserve the best care. Vision is precious and should not be taken for granted. Start protecting and preserving your eyes today. This is Dr.

Rani Banik. I hope you enjoyed this video. Be sure to like and share it with family and friends. Also, for more information about integrative eye health, be sure to subscribe to my YouTube channel.

Until next time.

Closing Remarks and Upcoming Book

I hope you've enjoyed these videos on supplementation for macular degeneration, my AREDS series, where I talked about, first of all, what's wrong with AREDS, the five missing ingredients in AREDS, what are the risks with AREDS, and then alternatives to AREDS.

So I hope you've gained some really important insights into why the supplements, yes, they are recommended for patients with intermediate-stage macular degeneration to help reduce progression of disease, but why they're not recommended for everyone because honestly I think that there were some flaws in the formulation so please go back and take a listen if you want to hear that again but again I would love as I said earlier in the episode I would love to get your feedback and your thoughts on this because it is a very important topic and it is a bit controversial as well and I'm open to hearing your thoughts and comments and yeah.

Yeah, let's have a conversation about this. But in the meantime, I wish you all the best with your eye health and I hope that this entire series, not just today's episode on macular degeneration, but I hope that this whole series has really helped you understand this disease better.

If you or a loved one, a family member, friend, neighbor, co-worker has macular degeneration, please share it with them so they can be empowered to understand this disease better as well.

And also, there's some exciting news. I have been working on a book on integrative strategies for macular degeneration for quite some time. I actually began this book back, oh my goodness, I think it was 2019 that I began the book.

And it's been kind of sitting on my back burner for a very long time. And I'm finally going to be publishing it this year in 2026. Stay tuned for that release of my book, The Macular Degeneration Solution, Seven Integrative Strategies to Fight Macular Degeneration and Leaky Eye Syndrome.

So stay tuned for that and definitely subscribe to my podcast so that you'll get notifications when it comes out or even join my email list and you'll definitely get notifications when it comes out.

But looking forward to that. But in the meantime, let me know if you have any questions. And I wish you all the best. And I'll see you next time for another episode on the IQ Podcast.

Take care. Thank you for tuning in to the IQ Podcast. I hope you enjoyed today's episode and learned something new to help you boost your IQ. Leave us a review and share the podcast with your family and friends.

Stay connected with me for more eye-opening insights on eye health, nutrition, and lifestyle. Until next time, keep your vision clear and your IQ sharp.