

Part II

Unknown Aspects of Eyesight and Nutrition

An Unpublished Interview with Dr. Paul Eck

In this exclusive interview, Dr. Eck explains major aspects of vision problems that have never been covered before. He gives recommendations that are different from those you will find in typical nutrition books.

He explains why common nutritional recommendations, namely, to give large doses of vitamin C, B-vitamins, and vitamin E, may, for some people, cause increased stress on the eye.)

If you are concerned about any vision problems — far-sightedness, near-sightedness, cataracts, macular degeneration, diabetic retinitis, or others, you will want to read this interview.

If you have results with the suggestions contained in this interview, please let us know.

SW: Why don't you start by giving us a general overview?

ECK: You cannot get caught up in single deficiencies when you consider eye problems. I have found that eye problems are related to overall systemic distortions in mineral levels.

— The biggest mistake made in nutrition is to consider the eyes apart from the rest of the body. [You have to think of the pattern in the whole body.]

Improvement in visual problems cannot be attained with isolated nutrients that are known to be good for the eyes. Unless you reduce one's overall metabolic stress level, you are treating the eyes on a symptomatic basis.

SW: How does a person's metabolism relate to his susceptibility to eye problems?

ECK: People with a fast rate of metabolism have far more eye problems than people with a slow rate of metabolism.¹

It is very unusual to see a fast metabolizer who doesn't have some sort of eye problem. He has either got astigmatism, he's got diabetic retinitis, severe myopias, cataracts, glaucoma, diabetic, retinitis, etc.

I see a lot of children with eye problems who have an extremely fast metabolism. They have high levels of sodium and potassium, which represent excessive adrenal gland activity. They also have a low ratio of calcium to magnesium, and they are in a state of relative burnout.

There is no question in my mind that there is a relationship between hyperactivity and eye problems.

SW: What can you tell us about cataracts?

ECK: I used to think that people with cataracts suffered from excessive calcium deposits on the lens of the eye.

I expected to find this condition most often in people with slow metabolisms — who tend to accumulate calcium in their body tissues.

Yet oddly, cataracts are associated most often with fast metabolizers — at least 10 or 12 times as often as in over slow oxidizers. It is odd, but tissue calcium levels tend to be very low in cataract people.

The person with a fast metabolism is losing his calcium from the tissues and from the bone, i.e., he is in a negative calcium balance.

And yet, taking calcium by itself wouldn't necessarily help a person with cataracts. If their copper levels are low, they can't properly utilize the calcium.

Fast oxidizers are notoriously low on copper, which is needed to retain calcium in the tissues. A low copper level (or high copper levels that are not biologically available) cause calcium to be leached out from the tissues.

Such calcium appears as tartar on the teeth, and as rheumatoid arthritis when it deposits into the joints. The eyes become affected when the calcium deposits into the lens of the eye.

SW: Fast oxidizers are also low on zinc. How does this affect their vision?

ECK: Fast oxidizers are high-stress, highly nervous, energetic people. The constant stress they are under often causes them to be chronically low on zinc.²

Zinc is found in higher abundance in the eye than in

any other organ of the body. Therefore, when the zinc levels are down, it is impossible to build-up and maintain the protein structure in the eye.

Zinc affects protein metabolism, especially the protein structuring of the eye. If the eye protein structure is distorted, changes in the focus of the eyes occur. Then the image forms before or behind the retina. The result is near- or far-sightedness.

Stress depletes zinc. The result will be a flare-up in eye problems during periods of stress. The eyes can become sore and the eyelids inflamed. The eyes may become tender, slightly painful, and sensitive to light.

Protein breakdown is also caused by excessive stress. This is the pattern you find in people with a fast metabolic rate. In children particularly, family problems, emotional stresses, and poor diet can lead to severe eye disorders.

SW: What can you tell us about glaucoma?

ECK: The typical glaucoma mineral pattern shows calcium, magnesium, and zinc all deficient. You find the sodium low and the potassium high — a classic exhaustion pattern.¹

People with a low sodium-to-potassium ratio are prone to inflammation and swelling in a general way. I suspect that this tendency toward accumulation of fluids also affects the eyes and may lead to glaucoma.

SW: What do you think about the use of vitamin C for glaucoma patients?

ECK: I have seen papers in which it was stated that vitamin C reduced intra-ocular pressure. In many people with a low sodium-to-potassium ratio, vitamin C might indeed help. Vitamin C raises sodium levels and would tend to correct the imbalance between sodium and potassium.

In other cases, however, increasing one's vitamin C intake could cause harm, because sodium promotes the retention of fluid within the tissues. Some people with glaucoma will already have a high sodium-to-potassium ratio.

Individuals with high sodium-to-potassium ratios, particularly over 4 to 1, are prone to fluid retention.

In these cases, the vitamin C can further increase the sodium levels and promote excess inflammation — or fluid build-up. Therefore, anyone using vitamin C for eye problems has to be alert to any such side-effects.

You can't just assume that vitamin C has only good effects. Those people most likely to be harmed by an increase in vitamin C intake are those with a rapid metabolism. This would be signified by sweaty palms, a high level of physical and mental activity, and a high level of nervous tension.

SW: Do you have any comments on the use of vitamin A for eye problems?

ECK: Fast oxidizers are prone to eye problems and fast

oxidizers are almost always deficient in vitamin A.

Vitamin A is essential to adrenal gland function. Adrenals become hyperactive when a vitamin A deficiency exists.

If the adrenal glands are allowed to remain hyperactive, the person will be unable to retain calcium and will be prone to cataracts. We have mentioned this earlier.

Also, if the adrenal glands are hyperactive, which occurs in vitamin A deficiency states, the body's protein tissue breaks down. This could result in a breakdown in the protein structure of the eyes. One of the potential consequences of this breakdown in older people is macular degeneration.

I feel that vitamin A alone, however, has been over-rated for eye problems. Vitamin A is synergistic with zinc; that is, they work together. Without adequate zinc, vitamin A's effectiveness is severely reduced.

In a zinc deficiency, the adrenals become hyperactive, just as they do in a vitamin A deficiency.

Zinc and vitamin A both slow down adrenal activity, which would result in an increase of available calcium and magnesium. In addition, the taking of calcium and magnesium (along with the zinc and vitamin A) would help improve eye problems in many individuals.

SW: What about vitamin B-2 for eyes. It is mentioned often in the literature

ECK: Again, as with vitamin A, vitamin B-2 is overrated for night-blindness. My research indicates that zinc is far more important. Zinc spares both vitamin A and vitamin B-2.

Personally, when I notice I am having trouble adjusting to night vision, I take zinc and a combination tablet of vitamins A and C. Within two or three days all is well.

SW: What can you tell us about near-sightedness?

ECK: Near-sightedness is very closely related to excessive stress, particularly at an early age. When I was under severe stress, my eyes deteriorated. I would say I lost a good 35% of my vision within a period of eight months.

Fast oxidizers like myself are more susceptible to near-sightedness than slow oxidizers. Children — who are fast oxidizers — go to optometrists much more often for near-sightedness than for other eye problems.

On the other hand, people with a slow rate of metabolism are more prone to far-sightedness. As you become older, your body metabolism slows down, and this is when you see an increase in far-sightedness.

To sum up, people with a fast metabolism generally have low levels of calcium to magnesium. It may be that the low calcium-to-magnesium ratio affects the eye muscles in such a way that incoming images focus before the retina.

Those with a slow metabolism generally have a high level of calcium to magnesium. This is associated with

far-sightedness, in which the incoming images focus behind the retina.

SW: What about floaters, in which the person is bothered by floating particles in the eyes?

ECK: I can't offer a lot of proof on this, but I found out that most people with floaters have a severe zinc deficiency.

Just giving them zinc will not cure them, however, because zinc is related to other minerals.

For example, there is a relationship between magnesium and zinc. Magnesium acts as a buffer or "biological cushion" to protect the body against stress and shock. As a buffer, magnesium acts to prevent the body from losing zinc.

If the magnesium levels are depleted, then zinc alone may not produce satisfactory results.⁴ Ordinarily, giving magnesium along with zinc result in a double- or triple-fold response.

SW: What can you say about detached retinas?

ECK: Almost all detached retinas occur as a result of chronic stress and is triggered by a major acute stress. Optometrists know that.

A person goes through a severe period of stress and all of a sudden he has a detached retina. The stress depletes the zinc in the eye, which is needed for building up proteins. Without the zinc as a protection, there is an increase in copper activity, which dissolves the protein structuring.

The tissue weakens, and then it tears.

I see an almost 85% correlation of detached retina with a severe zinc deficiency. I am not talking about moderately low zinc levels of 15 (normal is 22 mg./percent. I am referring to zinc levels 8 or lower, which is quite rare except in children with failure-to-thrive syndrome.

These children have zinc levels even lower, 4 to 5, and they have the same eye symptomatology.⁵

Detached retinas occur mostly in people who have a tendency toward copper accumulation in the tissues.⁶ The presence of high copper levels in the tissues worsens the effects of stress, because the excess copper competes against the available zinc.

Thus, a person with high copper is highly susceptible to stress damage and detached retinas.

SW: In other conversations, you have mentioned to me the relationship between near-sightedness and infection, including dental decay.

ECK: There is a known relationship between infection and other diseases, such as diabetes. Infection, oddly enough, is a zinc deficiency. This is why it is also related to near-sightedness.⁷

Many children's eyes go bad on them early in life because of chronic infections — ear infections or various

other bodily infections. As a result, their eyes deteriorate rapidly.

Children with hidden or overt copper toxicity have recurrent ear infections. These children need zinc desperately.

Of course, one can't always give zinc by itself, however, because in some cases, zinc can lower sodium levels and increase one's susceptibility to infections. That is why it is prudent to add some vitamin B-6, which tends to raise sodium.

SW: What recommendations could you give our readers about diet and the eyes?

ECK: Those with eye problems should make sure they aren't ingesting excessive amounts of dietary copper. One generally unknown source of copper is soybean proteins. Another is chocolate, which is high in copper. Other foods that are high in copper include wheat germ, liver, brewer's yeast and torula yeast.

Individuals who are taking herbs should have them analyzed to see if they are high in copper.

People think of herbs as a source of nutrition and benefit, not as a source of toxic metals or excess metals. Unless you perform mineral research, you would never consider the minerals in herbs as even being important.

However, the minerals in herbs are important. For instance, black cohosh is high in iron and copper, which is why it is so excellent for female menstrual problems. Unfortunately, any mineral that is beneficial to human life is also toxic in excess.

People should also be careful about eating too much whole grains in the form of cereals or breads. Whole grains — except in sprouted form — are rich in phytates, substances that can reduce calcium, magnesium, and zinc — the nutrients that are particularly protective of eye function.

In some individuals, even a slice or two of whole grain bread is enough to trigger problems.

Another little-known factor affecting eyesight is the water you drink. If the water is acid, it can leach copper and other minerals from pipes, even though the water itself is low in these minerals. From galvanized pipes, you ingest cadmium and zinc.

Drinking water could be high in iron, or high in calcium relative to magnesium, which suppresses copper activity and could contribute to low copper tissue levels. Other drinking water promotes excessive copper tissue levels. In either case, the eyes can be affected.

We have a family in Texas that had been poisoned by the high iron levels in their drinking water. They were suffering from nosebleeds, from headaches, hypertension, allergies, and severe muscular rigidity.

Who ever thinks to check their drinking water, however, if they have an eye problem, or any sort of problem?

SW: I myself noticed that I developed pains in my eyes when I took iron supplements I didn't need.

ECK: That's because iron, whether in the water or in food or supplements, lowers zinc and magnesium levels. The result is an increase in stress, which can be felt as an increased sensitivity to light, or as eye pains.

Excess iron also could lower copper, which is necessary for connective-tissue formation. This could lead to all the same eye problems as those caused by copper excess.

Another recommendation for your readers is that zinc, or zinc combined with magnesium, will often relieve the sensitivity of sore, painful eyes.

On the other hand, be careful with zinc because it can lead to tremendous fatigue — by causing iron to be displaced from the tissues.

Remember: You cannot necessarily raise zinc levels by giving zinc. A low zinc (or an abnormally high zinc under the circumstances) is indicative of adrenal failure. It takes more than zinc to correct adrenal depletion.¹

SW: What else can people do?

ECK: One final suggestion I can make is eye exercises.

I have seen a least 15 people who were helped dramatically by eye exercises, including my mother. When my mother was about 31 years old, she had to wear very thick lenses. She became excited about a book by Bates entitled Sight without Glasses and practiced the exercises religiously.

Today my mother is 84 years old and she has perfect vision. She doesn't wear any glasses whatsoever.

SW: Do you have anything you wish to say in conclusion?

ECK: Yes, first, it is not going to be easy for anyone to find references on what we have been discussing, because this is a new area of research.

Second, regarding nutritional research, the sad thing is that when results aren't forthcoming from one single nutrient, researchers tend to "put down" nutrition as a helper for health problems.

Nutrition can help, but you will never solve eye problems by searching for isolated nutritional deficiencies.

Eye problems are the result of overall imbalances — not single deficiencies. Until these overall patterns are identified and evaluated, there will be very little progress in nutritional eye research.

Vitamin E and Eyes

by Dr. Paul Eck

Vitamin E can increase inflammation in the eyes, or of the eyelids, and you must be alert for this affect. Vitamin E raises sodium levels, which can increase inflammation — a result that is not widely known.

Any time I took vitamin E, I became edgy, very uncomfortable, and anxiety-ridden — that is, hyperactive.

I mentioned earlier the association between hyperactivity and eye diseases. For some individuals, any nutrient that raises their sodium levels will increase their tendency to develop eye dysfunction.

Copper and Children's Vision Problems

by Dr. Paul Eck

Out of 300-400 hair analyses I have done with children between the ages of 2 to 13 with vision defects, I have found that almost every single one of them had a high copper level. Such children almost always had a sodium-to potassium inversion, i.e., a ratio of less than 2.5 to 1.

They were also hyperactive, and suffered from learning disabilities, behavioral problems and were frequently autistic. It is well-known that there is a relationship between such problems and visual disorders.