

## BEH PODCAST – EPISODE 7

### USING BEH BASIC PROTOCOL – SUPER DHA

Dr. Miller: We are talking about DHA, which is part of the basic protocol. The basic protocol is how we refer to the seven supplements that we recommend for everyone with an eye disease or everyone trying to prevent serious eye disease. This protocol would also be appropriate for anyone who has family members where you're worried the genetic condition might eventually affect them.

The DHA is one of the things in the protocol because in the Better Eye Health program it can help your eyes actually regenerate. DHA is one of the supplements in this category, along with Lutein and the Taurine ]. These supplements are building blocks that are needed if you're going to try to rebuild cells in the eye, brain or spinal cord. Around 50% of the weight of the brain is fat and 50% of those fats are DHA. DHA stands for Docosahexaenoic Acid. You don't need to know the chemical name, but Docosa is Greek for the number 22. So DHA is a 22 carbon long fatty acid, with a substitution at the 3 position, which makes it an Omega-3 fatty acid. It's found mostly in fish, but the reason it's found in fish is that fish are in a food chain that begins with algae. Algae are the main source on the planet for these long chain Omega-3 fatty acids.

The Omega-3 fatty acids found in plants, such as things found in borage oil. GLA and CLA are some of the other things with Omega-3 fatty acids that we talk about. The Omega-3 fatty acids found in plants can be converted in the body to longer chain fatty acids, like EPA, which is a 20 carbon long fatty acid, or DHA which is a 22 carbon molecule. Which are important, but it takes about 1,000 molecules of GLA to make one molecule of DHA. The body can do it, but not very efficiently. So, when you're trying to regenerate cells in the brain or the eye, it's a good idea to have enough of the raw material around, so your body isn't trying to rebuild something, without the brick and mortar that it needs to get things done.

If you go into the OrganicMD.com website and just search for DHA, there is a multi-page booklet that was put together years ago. It described all of the medical conditions that occur when you are deficient in DHA. So, DHA is important, not just for the health of the brain, but for the skin, the gut, the organs, and the bones. DHA is a critical substance for the body and it is especially critical for the eyes.

The product we use from the J.R. Carlson company is made from small fish from the North Sea and Northern Atlantic. These fish are relatively clean still because small fish are lower on the food chain; they haven't had a chance to concentrate the toxins and things that larger fish at the top of the food chain contain. Also, smaller fish are richer in DHA. A single pill of the Carlson product

has the minimum 500 mg per day that we recommend for someone with eye disease. There are other products on the market, but if you're not taking the Carlson Super DHA product, you do want to make sure you're getting at least 500 mg. of DHA per day. For other products, you may need to take 2, 3 or even 4 pills a day to get that 500 mg, so just make sure you check that.

DHA is mainly incorporated into the membrane of the cell. Healthy membranes are important, not just for the integrity of the cells, but for the functioning of the cells. One of the things that happens if you don't have enough of the proper raw materials, is that if the body's trying to build a cell, it will insert the fatty acids it can find that will sort of fit, but that don't really do the job. The analogy that I like to use is that you're trying to build a nice solid brick wall, but all you can find are pieces of 2x4 that are about the same size as bricks. Since you need something to fill the holes in the wall, so you stick those pieces of 2x4 into the gap, and no surprise, you end up with a pretty poorly constructed and fragile wall that doesn't last very long.

Trans fatty acids can be even worse than just the wrong material., The reason you hear that you need to avoid them is that when trans fatty acids get incorporated into the cell membrane, it is a problem in the brain. They completely disrupt the functioning of the membrane. They're quite inflammatory, and the cells end up dying. If you eat a lot of trans fats, you'll have a lot of cells with these fats incorporated into their membranes, which means you will have a lot of cells that do not do their job well.

Remember the cells in the brain are no different than any other cell in the body. Whether you have a degenerative disease or not, the cells in your brain are turning over, just like every other cell in your body. Now, they are more complex cells. They don't turn over every couple of weeks, but I promise you, you do not have a cell in your body older than 10 years old. That's bones, organs, brain, spinal cord, everywhere else. And this is rather new information. This notion is not what I was taught in medical school. In medical school, I was taught that you get a certain number of brain cells. That's what you have for the rest of your life, and if they die off you're in trouble. But it turns out, they do regenerate themselves. They do replace themselves, and they can be generated in the face of degenerative diseases, like these diseases of the eye.

So, that's the story of DHA, and again, if you want to read more about it, go to [organicmd.com](http://organicmd.com). In the upper right there's a search box. Search for "DHA", and you'll find that nice booklet that you can download as a PDF.