

# The Tuesday Minute

*Nutritional information.... one byte at a time*

## *This Week's Topic*

### **Cutting Edge Approach To Cholesterol**

If the check engine light was on in your car would you rather find the cause or disconnect the circuit? That may sound like a ridiculous question, but that is exactly what we do when we use a statin drug to reduce cholesterol. In crisis situations statin drugs can increase nitric oxide short term; but overall, they can cause real problems things like muscle weakness, reduced thyroid function by inhibiting the conversion of T4 to T3, memory reduction, reduced immunity, and a depletion of key nutrients like carnitine, CoQ10, zinc, selenium, vitamin E, and many healthy lipids.

With statin drugs causing so many side effects, let's talk about a different strategy. Cholesterol has many positive roles. It is the starting material for several of our hormones. As we age our hormone levels drop and some physicians feel the body is trying to increase cholesterol so that it can be used for repair and hormone repletion.

Certainly it is known that some cholesterol is used like a band-aid to repair holes in the cell membranes caused by free radicals. We need cholesterol for healthy cell membranes, mitochondrial function, brain function, hormones, bile, peripheral nervous system, and vitamin D.

Let me show you a different way to think about cholesterol that maximizes the positive

aspect of this necessary lipid while reducing its "dark side." When you sit down with a patient what's the first question they ask? How's my cholesterol, doc? I have a great CD that I want to send to you at no cost, by Dr. Mark Houston one of the country's premier anti-aging specialists. As a matter of fact he teaches many of the courses necessary to become board certified in anti-aging medicine. He brings to light some very exciting properties of cholesterol.

We know that total cholesterol is broken into 2 major classes. HDL's which are used for repair and have always been labeled as the good guys and LDL cholesterol which has always taken the rap as the bad guys. That's mostly true; however, it turns out that the size of the HDL and LDL particles is a very strong indicator of risk.

Dr. Houston says there are at least five sizes of each ranging from large to small. So there are large HDL particles which are healthy, think of them like beach balls, big and fluffy; and there are small HDL particles which are not healthy, picture them as hard baseballs. In the same token there are large and healthy LDL particles and smaller unhealthy LDL particles. The more "large HDL's" we have the better.

Now, here is where the light came on for me. We have always heard that the danger of the LDL's is when they become oxidized. Pause on that word oxidized for a second. A better description is modified. LDL's can be modified or changed into one of three different risk factors. Oxidation is one of them but acetylation and glycosylation are two other modifications. Of course, what does oxidation, acetylation, and glycosylation cause? The "I" word, Inflammation.

A person with blood sugar problems who glycosylates their LDL's is actually worse off than someone who only has oxidized LDL's. The point I am making is that it's only when the LDL's are modified into the risk factors there is a problem. And really, it is the small LDL's that are at the greatest risk. So we have the type of particles, HDL's or LDL's. Then we have the particle size, big beach balls or small dense base balls, and then we have the modification factors. Stay with me because now we are getting to the good part.

The vascular system has over 14,000 feet of cell membrane exposure. This means the blood has direct contact with the vascular cells. If the cell membrane is healthy, then the cholesterol particles are wisely chosen by the body based on how they are needed. However if the vascular cell membranes are compromised, undesirable particles get in and get trapped into structures like the proteoglycans and that is where they get modified into the destructive oxidized or glycosylated particles.

Dr. Houston uses the word picture that a baseball can't get through a tennis court net, but a golf ball can. What makes healthy cell

membranes? Good fats especially Omega 3 fatty acids and certain monounsaturated fatty acids like olive oil.

Our goal then is threefold. First, to increase the factors that increase healthy vascular cell membrane function. Second, to use nutrients that have been shown to naturally affect particle size. We want to increase the size of the LDL's and HDL's. This will prevent them from inadvertently crossing the vascular barrier. Finally, we want to reduce the modification of the smaller particles into the dangerous oxidized, acetylated, or glycosylated forms. This threefold strategy is brilliant. I wish I would have thought of it.

Dr. Houston has asked Biotics to create a line of products specifically designed to meet his threefold strategy. Click below to learn about one of his new products I'm really excited about Lipid-Sirt which can help the body create healthy lipids. Many of your patients are already on cholesterol medication from their doctors. Lipid-Sirt would be a great addition to enhance what they are already doing.

For patients who won't take statins due to the side effects, Lipid-Sirt could be their answer. Dr. Houston's threefold approach is solid and completely revolutionizes the "what's my cholesterol number" mentality. Click here to get a CD both you and your patients will find fascinating.

Let's increase the "quality" of one of our greatest repair substances, cholesterol. Thanks for reading this week's edition of the Tuesday Minute. I'll see you next Tuesday.