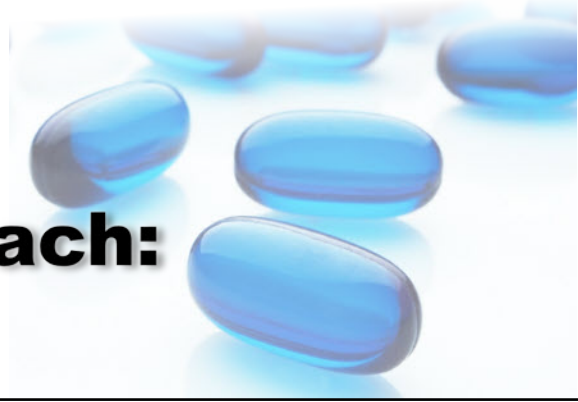


Tuesday Minute Transcript

This Week's Topic

New Cholesterol Approach: Size DOES Matter



"Let me show you a different way to think about cholesterol because it turns out that the size of the HDL and LDL particles is a very strong indicator of risk."

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.

Statin drugs can cause: muscle weakness, sexual dysfunction, reduced thyroid function by inhibiting the conversion of T4 to T3, memory reduction, reduced immunity and a depletion of key nutrients like carnitine, CoQ 10, zinc, selenium, vitamin E and many healthy lipids.

With statin drugs causing so many side effects, let's consider 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.

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.

When you sit down with a patient, what's the first question they ask? How's my cholesterol, doc? We know that total cholesterol is broken into two major classes: HDLs,

which are used for repair and have always been labelled 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 5 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" healthy LDL particles and "smaller" unhealthy LDL particles. The more "large HDLs" we have the better.

Now, here's the part where I had one of those "Aha!" moments. We have always heard that the danger of LDLs is when they become oxidized. Pause on that word oxidized for a second. A better description is "modified." LDLs 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.

Oxidation, acetylation and glycosylation cause "inflammation." A person with blood sugar problems who glycosylates their LDLs is actually worse off than someone who only has oxidized LDLs. The point I am making is that it's only when the LDLs are modified into these risk factors that there is a problem. And really, it is the small LDLs that are at the greatest risk.

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, where they get modified into the destructive oxidized, acetylated 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 three-fold: first, to increase the factors that promote 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 LDLs and HDLs. 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.

I've provided an article below with details on the specifics of testing and where it can be done. Dr. Houston's three-fold strategy is brilliant. I wish I would have thought of it. Dr. Houston asked Biotics to create a line of products specifically designed to meet his three-fold strategy. Below you'll find a dramatic study that uses one of his products, 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 three-fold approach is solid and completely revolutionizes the "what's my cholesterol number" mentality. Let's increase the "quality" of one of our greatest repair substances, cholesterol.

Thanks for reading this week's edition. I'll see you next Tuesday.