DYSLIPIDEMIA: OUR MIS-DIRECTED TREATMENT EFFORTS

Evaluation and treatment of dyslipidemia (high cholesterol) has been totally mis-directed in the last 30-40 years. It's hard to believe, isn't it? The problem is not that we don't have great doctors treating patients, it's really because medicine is not keeping up with the latest research, unless it comes from a pharmaceutical company's clinical trials. We now have at our fingertips, a new and revolutionary approach to treating dyslipidemia. It's important to first understand what it is and how it is caused.

If we go to our PCP and get our yearly bloodwork done and it's discovered that we have high cholesterol, we are most likely looking at high LDL-C, triglycerides or VLDL and possibly low HDL-C. Of course, none of this is good, but if we are being treated from the results of a standard lipid panel, then we are seriously missing a lot of important information. This standard lipid profile does not tell us our risk for coronary heart disease (CHD). It's important to have advanced lipid testing as this gives us information regarding the functionality of each marker. Did you know that LDL-C and HDL-C each have five different forms? Some of the forms of LDL-C have no relationship to CHD, others have a direct effect. Some of the forms of HDL-C are cardioprotective, some are pro-atherogenic (contribute to atherosclerosis). So, if your doctor tells you it's great to have a high HDL-C, it's time to start asking some questions. Women should have HDL-C no greater than 70 and men no greater than 50.

Before treatment of any kind for dyslipidemia, we have to investigate the underlying cause, as most of the time, genetics is not to blame. In fact, genetics is the cause only 20% of the time. The three main causes (80% of the time) of dyslipidemia are:

- *Chronic poor nutrition resulting in metabolic endotoxemia. This includes macronutrients (food) and micronutrients (vitamins/minerals).*
- *Chronic infections. This can be bacterial, viral, parasitic or TB.*
- *Chronic toxic exposure. This can include exposure to heavy metals, pesticides, organocides, tobacco, arsenic in rice products, etc.*

So, let's talk a little about our lipoproteins. HDL-C and LDL-C are our first line of defense against the above 3 offenders. Their job is to bring these offenders to either our liver or lymphatic system to be destroyed. Once this happens, both LDL-C and HDL-C can become dysfunctional and then atherogenic. This means that LDL-C can change and become part of the plaque in our coronary arteries. If we had the information from an advanced lipid profile, we could know the particle number and size as both are the best indicators for CHD. Small, dense particles of LDL-C with a high particle number will determine our risk for CHD much better than a standard LDL-C. When looking at HDL-C, it's important understand that these particles act like garbage trucks and deliver cholesterol to the liver. If HDL is damaged and cannot get rid of its cargo, it becomes "dysfunctional" HDL-C and can increase our risk for MI (myocardial infarction) 16 fold. So, how important is good liver function? How would we predict HDL functionality? We could use serum markers like myeloperoxidase, APOC3 and HS-CRP.

Clinical trials now show that a nutritional approach to dyslipidemia actually works better than traditional drug therapy (statins). Statin use can reduce LDL-C particle number by 30-50%. This commonly comes with some side-effects. Of course, there are times when a patient needs traditional medical treatment and functional medicine treatment. Did you know that there are actually 45 steps in the atherosclerotic pathway? Many nutrients/nutraceuticals can block these steps as shown by recent clinical trials at the Mayo Clinic.

- *Berberine*
- *Phytosterols*
- *Niacin*
- *Lycopene*
- *Quercetin*
- *Omega 3 fatty acids*

Of course, it's not just about taking a bunch of supplements. As far as that goes, it's important to know the right dose, the proper timing of supplements and the right combination of supplements. It's about cleaning up the diet and eating a healthy Mediterranean Diet to reduce your lipids and blood sugar and decrease your risk of CHD. Exercise is also a key part of this entire process. Exercising 60 minutes a day and making sure that includes 30-40 minutes of resistance work and 20-30 minutes of some cardiovascular exercise. If you haven't been exercising or you have some physical limitations, it's important to start where you are and build on that.

My clients are held accountable to their programs which include diet changes, micronutrient support and an exercise program. We do this through the use of a daily journal – this is key! It's time to start taking responsibility for your own health and educating yourself and your family about what YOU can do to change your health.

IMPROVE YOUR HEALTH... IMPROVE YOUR LIFE!

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