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Month 5 – Video #2

Heart Disease / Cardiovascular

1. You have LDL (labeled as the bad cholesterol), HDL (labeled as the good cholesterol) and Triglycerides. LDL 100-129 and HDL around 60. Typically we like to see your total cholesterol 170-200. Triglycerides below 150.

   I hate the fact that LDL has been labeled as bad cholesterol because LDL's help create hormones we need in the body. More important is that we have the proper particle size and number in the blood stream.

   HDL is very anti-inflammatory in nature and helps to remove LDL from the blood stream.

   Triglycerides showing high can indicate a diet too high in bad saturated fats or perhaps the individual is consuming too much sugar and therefore has a hard time metabolizing or digesting fat. High Triglycerides means that you have too much fat in the blood stream.

   There is actually a higher morbidity (death) rate with low cholesterol than there is with high cholesterol. This fact makes the use of statin drugs (cholesterol lowering drugs) being pushed by big pharma suspect.

2. The sale of statin drugs is a 34 billion dollar a year industry predicated on the notion that cholesterol above 200 (and I think some are using lower numbers now making the prescription writing even easier) is a health risk so, we must get the number down and statins are the drug to do this. As I said above, there is a higher morbidity rate in individuals with low cholesterol vs those with high cholesterol. This makes the use of statin drugs suspect, especially when there are studies emerging now that indicate statin use may actually increase the risk of cardiovascular events or problems vs lower them. A review of multiple studies has indicated that statin drugs actually lead to an increase in type II diabetes by increasing insulin production which drives inflammation.

This has also been linked to heart disease and premature aging. Please do your own research and evaluate your options with your doctor before starting any statin drug regimen.

3. **The NMR Test** (Nuclear Magnetic Resonance Test) is in my opinion the most valuable blood test you can utilize to evaluate your lipid profile. It will give you LDL, HDL, Triglyceride as well as other levels, but most important are the lipoprotein particle size and number.

   We want the particle number to be less than 1000. A particle number over 1000 increases the traffic in the arteries making you more prone to atherosclerosis and or inflammation of the endothelial lining of the blood vessels. Particle numbers between 1000 and 1500 will respond nicely to the cellular healing diet. Particle numbers above 1500 may benefit from the use of niacin, red yeast rice and Vista (in our store) to help bring this number down.

   We want the particle size to be greater than 500. Particle sizes under 500 increase the probability of penetration into the endothelial lining creating an immune response which drives inflammation and plaquing. Following the Cellular Healing Diet (Dr. Dan Pompa) will help bring this number down.

4. **Vitamin D testing** is also very important for evaluating cardiovascular health. Most Americans are vitamin D deficient because they believe they get enough in their diet. The truth is that Vitamin D is really a steroid hormone and not your typical vitamin like vitamin A or E. Vitamin D is typically obtained through sun exposure, but even in the state of Florida, where I am located, people are found to be largely vitamin D deficient. Most labs give a range of somewhere between 20 and 50 ng/mL as a normal range with you being deficient if the number is under 12. Ideally we want your number to be somewhere between 60 and 100 ng/mL. Over saturation with vitamin D will compete with vitamin A and K2 and most are already deficient in K2 due to eating processed vs grass fed organic beef. It should be taken with vitamin K2 in the proper ratio as it has been shown to prevent or slow calcification or arteriosclerosis in the blood vessels. Most are deficient in K2 especially if not consuming grass fed beef. Taking vitamin D3 with K2 in the right ratios combined with the Cellular Healing Diet (Dr. Dan Pompa) is great for autoimmune modulation and has been shown to decrease the risk of stroke, hypertension and heart attack by approximately 50%.

5. **Homocysteine testing** should show levels between 7 and 10 ideally. Above 10 usually indicated methylation problems. Supplementation with MoRS may be helpful. If it drops below 7 the body may have trouble producing Glutathione (a natural produced

substance in the body which is a strong antioxidant, promotes healthy growth and immune cell activity and helps the body eliminate toxins and heavy metals). Homocysteine is an amino acid (the building blocks of proteins) that we may find in high levels in the blood when proteins break down. High levels of Homocysteine have been associated with arteriosclerosis, heart attack, stroke and the possible development of Alzheimer's disease.

6. **CRP – C-Reactive Protein testing** is a substance produced in the liver as a response to inflammation and is measured in mg/L. It has been well accepted as a general inflammation marker. A high CRP level has been associated with a higher risk of heart disease, stroke or heart attack. Ideally we want levels below 1. Levels between 1 and 2.9 indicate a moderate level of risk and above 3 a high level of risk.

7. **PLA2 testing** is another enzyme test that in conjunction with CRP levels can help evaluate a person's risk of coronary heart disease. Although a newer test and not ordered as frequently, it may help evaluate a person's risk of ischemic stroke, coronary heart disease and the development of atherosclerosis. It may also be high in people who either have, or are at risk of metabolic syndrome and high blood pressure. Below 190 ng/mL is considered a low risk for developing the above. 191-235 moderate risk and 236 and above high risk. When above 190 I begin to suspect heavy metals.

8. **ADMA (Asymmetric Dimethylarginine)** is another substance measure to evaluate risk level for coronary heart disease. Lab values are measured in ng/mL and you should go with the lab ranges where tested. Elevated ADMA levels have been associated with an increased risk level of cardiovascular events, atherosclerosis, angina, type II diabetes, renal disease, and coronary heart disease. Increased levels of ADMA inhibit NO (Nitric Oxide – a powerful vasodilator) production which in turn reduces peripheral blood flow and cardiac output through vasoconstriction of the blood vessels.