

Cholesterol and Vitamin D

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By Lynn Mayer, MA, CNC

The fall blood testing is on and I highly recommend that you take advantage of the additional offering to have your vitamin D levels checked along with your regular blood panel which includes a look at your cholesterol levels.

As has been written in previous, more detailed articles that can be found in the Daily Planet archives, there are many health advantages to having adequate measures of vitamin D as well as cholesterol in your body.

In summary, along with some updated viewpoints: cholesterol is the foundation for hormone production. Stress hormones as well as sex hormones have cholesterol at the root of their molecular make-up. It is not uncommon when people are under stress to have an elevation in their cholesterol levels. The body in its innate wisdom is likely to be producing more cholesterol to have plenty available for the increase in hormone production asked for in response to the stress.

We have “good” cholesterol – the HDLs or Happy Lipoproteins - and “bad” cholesterol - the LDLs often referred to as the Lousy Lipoproteins. The truth is that we need both of them. The LDLs transport cholesterol from the liver out to the organs and tissues for hormone production. The HDLs transport the cholesterol back to the liver for elimination from the body.

Cholesterol has many roles in the body. It is used by the body as raw material in the healing process. Cholesterol often elevates as part of a protective immune system response to chronic infection. Also, it is called into action upon the weakening of the arterial wall due to inflammation. Cholesterol plaquing is often the body’s innate response to try and heal or shore up the tissue. The body sends the cholesterol to the damaged area to heal the wound and prevent springing a leak in the arteries.

If your blood test results come back with elevated total cholesterol along with elevated LDLs it may point to increased stress or a chronic infection that must be addressed. If it is the triglycerides that are elevated, there are most likely too many refined foods, sugar in particular, in your diet. The course of action would be to cut the junk food out of your diet. If the HDLs are low, add some essential fatty acids into your diet such as fish or flax oil.

Cholesterol is a necessary component of cell membranes and is very important to have in large amounts in the skin where it is vital for skin health and strength. Cholesterol must be also available in our bodies and our skin in particular in amounts sufficient to allow UVB conversion to vitamin D. A vitamin D precursor is synthesized in the skin from cholesterol in response to absorbing UVB rays from the sunlight. The vitamin D precursor then gets converted in the liver to an intermediate form and into its active hormonal form in the kidneys where it joins with an important enzyme for conversion. If cholesterol levels are too low, our bodies may not have what it takes for proper vitamin D synthesis.

If vitamin D levels are low, there seems to be some evidence that vitamin D works better when taken in lower, more physiologic doses of 2,000-4,000 IU daily rather than high dosage IU once a week or once a month. Although our bodies make quite sufficient amounts in a 20 minute, 40% skin exposure to the midday summer sun, in latitudes higher than 40° (Telluride is 37.9) there is insufficient sunlight to achieve optimum levels of D during six to eight months of the year.

We may have gotten ourselves into trouble with our scare of both the sunlight (using lots of sunscreen) and our panic about cholesterol. Neither are villains.

Lynn Mayer is a Certified Nutrition Consultant and Health Coach here in Telluride, Colorado. Lynn is available for consultation in person, by phone 970 369-4790 or through her website www.thejoyofhealth.com.