Learning the Language of Cholesterol

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Are you confused by cholesterol terminology? Would you like to have a better understanding of the landscape of cholesterol? I hope I can be of help.

Fat and cholesterol, both called lipids as they are fat and fatlike substances, travel together through the blood attached to proteins. Hence the name “lipoproteins”. There are five primary types of these lipoproteins identified so far, our medical emphasis on two of them: the LDLs (low density lipoproteins) and HDLs (high density lipoproteins).

The cholesterol is the same in both of these; the distinction being in the particular protein that it is attached to, the amount of cholesterol the lipoprotein contains and the difference in its function. The low density lipoproteins (LDLs) contain 50% cholesterol, are the primary transport of cholesterol to the tissues where they are much needed for a variety of functions but are considered “bad” in the medical spotlight.

The high density lipoproteins (HDLs) contain 20% cholesterol, functions to remove cholesterol from the cells and transport it to the liver where it is converted to the bile acids needed for detox and elimination and are considered “good” in the scheme of things.

The cholesterol content of all five lipoproteins is what is measured when the blood is drawn and their sum is the total cholesterol. The optimal range for total cholesterol is now considered to be around 200. I say around because your cholesterol level can change from day to day, to the time of day that the blood was drawn as well as in relation to what your last meal was. Total cholesterol has very little to do with heart health. It is the HDL (good) and its ratio to total cholesterol that is most important.

The ratio of the total cholesterol to HDL is best when it is less than 4. This means your HDLs should compose at least 25% of your total cholesterol. To do the math - take your total cholesterol and divide it by your total HDL, a number obtained that is less than 4 is indication of a good ratio. If it is higher than 4, you have work to do.

Other components of our cholesterol landscape include the triglycerides and the very low density lipoproteins (VLDLs).

Triglycerides are the chemical form of fat found in foods and in your body. When you eat a meal, any surplus glucose is stored as glycogen in the liver and skeletal muscles. The glycogen is then on hand to be released to meet the energy demands of the body. Your body, however, can only store so much

glycogen. When its stores are met, the liver converts any excess glucose into triglycerides and cholesterol. These fats are then transported by the VLDLs and the LDLs to peripheral tissues in order to avoid a buildup of fat in the liver. The ideal triglyceride/total cholesterol ratio should be below 2. To do the math - take your total triglycerides and divide it by your total cholesterol. You want to see a number less than 2.

Elevated triglyceride levels then, as well as elevated cholesterol and LDL levels, are almost always caused by a diet high in breads, grains and sugars – otherwise known as The Standard American Diet (SAD). By reducing the intake of these above foods, triglyceride and cholesterol levels often normalize. One client reduced her cholesterol level from 600 down into a normal range with just dietary and lifestyle modifications.

To bring cholesterol levels down and the ratios into alignment here are the places to start: reduce the refined carbohydrate load in your diet. This includes bagels, crackers, pasta, bread and cereals. Eliminate the fake trans-fats. Reduce the toxic load. Toxins from the environment, processed foods, smoking and alcohol all take a toll on the liver where the cholesterol is processed. Include essential fats (flax and fish oil) and increase the fiber content of your meals.

Yes, there are hereditary factors. Heredity plays a role in approximately one in five hundred people. You must, however, rule out the obvious before using heredity as the excuse for a mismanaged lifestyle.

If you would like to review last week's article on the important role cholesterol plays in the body and how we have been mislead into thinking that its consumption is the problem, I invite you to read it on my website www.thejoyofhealth.com.