

Cholesterol - The dietary factors.

Since writing the first article on cholesterol, I have since been asked by a few people to run through cholesterol testing, what the normal values are and how to interpret them.

When a cholesterol result comes back it usually has 5 values listed on it. The first is the total cholesterol level for which “normal” is ideally under 4.

The second reading is the level of triglycerides (blood fat) which should be less than 1.7. The triglyceride reading is frequently elevated in people with metabolic dysfunction and is a good indicator that their body has stopped processing fats correctly.

The third reading is for HDL cholesterol which most people recognize as the “good” cholesterol, and this should be above 1. HDL is the transport vehicle which takes triglycerides and cholesterol back to the liver to be either cleared from the body or recycled.

The fourth reading is for LDL cholesterol which is best under 2.5. This is the cholesterol type which usually gets a bad rap. (See my previous article as to why this is not entirely deserved). LDL is the transport system the body uses to get fats to the cells where they can be used to make hormones and cell membranes etc...

The final reading is the LDL to HDL ratio. This should be less than 4.5 and is often considered to be more important than the total cholesterol reading. This is because it reflects the ability of the body to get cholesterol back to the liver where it should be cleared as a component of bile, or recycled.

High cholesterol is often treated as an isolated problem but as I mentioned in my previous article, elevated blood cholesterol is normally just symptomatic of a much broader metabolic problem. Very rarely will you get abnormal cholesterol readings in a person with a good healthy metabolism and healthy diet.

It is vital not to underestimate the relationship between certain foods and high cholesterol. Yes, it is true that saturated fat contributes to high cholesterol, so fatty foods such as red meat, cheese, take away foods and fried stuff should be kept to a minimum. Saturated fat however, is not the only contributor to high cholesterol – the wrong sorts of starchy carbohydrates are just as problematic and here is why.

In order to make cholesterol the body starts with things called acetate fragments which come from the breakdown of saturated fats and the burning of carbohydrates. The more processed the carbohydrate is, the more acetate fragments it produces. Diets which contain too much saturated fat and/or too many processed carbohydrates such as sugar and white flour lead to an increased production of acetate fragments in the body, and an excess of acetate fragments usually results in an increased production of cholesterol. In most of us, consistently eating the wrong fats and carbohydrates will elevate serum triglycerides and cholesterol, increase LDL transport of fats and cholesterol to tissues and overwhelm the capacity of HDL to bring the excess back to the liver.

Our diets are full of fats and carbohydrate types that were not widely available in the food chain until last century. It has now become “normal” to eat sugar, processed grain foods, altered fats and foods high in saturated fat on a daily basis. If you want to improve your cholesterol naturally, you will need to drastically reduce your sugar and processed food intake and minimize the amount of saturated fats in your diet, replacing them with good fats. It is not enough just to reduce the level of saturated fat which is what most people are told to do. The processed carbohydrates must be reduced as well, because it is the way these affect the overall metabolism combined with their acetate fragment-

producing capability which makes them such a problem. The key to this is planning ahead.

Instead of scones, sweet slices, muesli bars, snack bars, biscuits, muffins or cake for morning or afternoon tea, eat a piece of fruit with a small handful of raw nuts. Have a bag of raw nuts and a fruit bowl at work, or have a tin of salmon, an avocado and some ryevita crackers on hand so you can make one up in a jiffy. Nairn's oat crackers with low fat cottage cheese and tomato, or a cold chicken drum stick and a banana could also be an option. Low fat yoghurt with frozen berries added and a tsp of honey is a great way to avoid the sugar-laden yoghurts sold in the supermarket. This can be made in bulk, stored in the fridge and used as needed for a snack. For those who are dairy sensitive, replace the yoghurt with silken tofu (Moore Wilson's) which makes a lovely creamy mix.

Replace white breads and buns with Vogel's bread and keep this to a maximum of 2 slices per day. Make open sandwiches with loads of fish or chicken on them and salad, sprouts, tomato, hummus, avocado, gherkins, radish, cucumber, raw carrot, raw beetroot etc... rather than two slices of bread per sandwich and a meager filling such as a slice of ham, cheese or peanut butter.

Don't be fooled by so-called cholesterol-lowering spreads. These are full of chemicals and are not real food. Use avocado, pesto, olive oil, hummus or *minimal* amounts of lite butter instead of standard butter or margarine on sandwiches. Cook mainly with water, and only a little good quality oil such as olive oil. Steam, poach, grill, lightly stir-fry, bake or dry-roast your food. Eliminate fried and convenience foods completely.

Replace your toast breakfast with whole oat porridge with fresh fruit and low fat yoghurt, or have 1 tin of sardines in spring water and a tomato on Vogel's toast. Have 2 poached eggs on brown toast with marmite 1-2 times per week. (Yes, eggs in moderation are fine because the amount of cholesterol in an egg is very small and is not enough to cause high cholesterol of its own accord. Remember, high cholesterol is a *metabolic* problem. Eggs are also a valuable source of essential fatty acids and sulphur which is required for good liver function).

Keep foods which are high in saturated fat to a minimum. Eat only very lean red meats and keep these to once or twice a week. Eat beans, chickpeas, lentils, tofu, poultry, fish and seafood in preference. Limit cheese to a small serve and only once a week. Keep most dairy to a minimum, choosing low fat products preferably.

Go for unrefined grain products such as whole oat porridge (not instant or flavoured), Nairn's plain oat cakes, unsweetened wholegrain breakfast cereals, Ryevita crackers, pumpernickel or essene bread, Vogel's bread, brown wholegrain buns and wraps, wholegrain pasta (not white), plain Vitawheat crackers, brown rice, quinoa, barley and buckwheat noodles. Keep the serving sizes small so they fit into the palm of your hand. Avoid white rice and refined rice crackers and breads, white bread, corn bread, anything made with plain or self raising flour, sugar, corn syrup, maltose, glucose, sucrose, and ice cream, chocolate or anything else that combines fat and sugar as its key ingredients.

Eat more kumara and yams, and include green and colourful vegetables generously in at least both your lunch and dinner.

Instead of ice cream or sweet desserts at night (when you'll store most of these foods as fat) have stewed fruit with low fat yoghurt, or a few nuts with a couple of prunes, dates or figs.

Always eat carbohydrate foods with a good quality protein food such as chicken or fish at every meal so that the sugars from the carbohydrate food are released more slowly

into your blood stream. Eat a small portion of food every 3 hours and do not allow more than 3½ hours to go by in the day without eating. The combination of quality foods and timing significantly reduces the insulin response which is very important when wanting to correct a metabolic problem such as high cholesterol.

In the third article I'll cover the specific nutrients required to lower cholesterol and support a healthy metabolism.