

OPTIMISING CHOLESTEROL LEVELS

Cholesterol has many essential functions in our bodies however having high cholesterol levels puts you at a greater risk of developing cardiovascular disease. It is not simply high 'total' cholesterol that places you at risk but rather high levels of low-density lipoprotein cholesterol (LDL) and triglycerides; along with low levels of high-density lipoprotein cholesterol (HDL). HDL cholesterol is known as the 'good' cholesterol as it protects you by transporting cholesterol away from your arteries for excretion by the body. LDL cholesterol is considered 'bad' as high levels increase the deposition of fatty plaques on the inside of your arteries leading to atherosclerosis. Having high levels of triglycerides in your blood subsequently increases your levels of small, dense LDLs. These small dense LDLs are the most dangerous form of cholesterol as they put you at the greatest risk of damaged arteries and subsequent blood clots that are the cause of heart attacks and strokes.³ Foods with high antioxidant and anti-inflammatory properties are of particular benefit in preventing atherosclerotic plaques from rupturing and blocking blood vessels.⁴

Some individuals are genetically predisposed to high cholesterol levels, but for the majority of us it is a consequence of being overweight, consuming too much saturated fat and not exercising enough. A healthy diet and lifestyle are crucial factors in the management of cholesterol levels. You can help to optimise your cholesterol levels by incorporating these important diet and lifestyle factors into your life:

Eating a varied and healthy diet
Losing excess weight
Avoiding smoking
Minimising alcohol intake
Exercising and being active regularly

TARGETING CHOLESTEROL THROUGH DIET

▪ **Reduce your intake of saturated fats.**

Saturated fat in the diet is the major cause of high LDL cholesterol levels. Your liver makes cholesterol from the saturated fat in your diet and the more saturated fat you consume the more cholesterol it makes. Avoid foods high in saturated fats, such as cream, butter, fatty meats, sausages, processed meats and fried take away foods. Instead ***choose low-fat dairy products, lean meats (with the fat removed before cooking) and skinless chicken.***

▪ **Include mono and polyunsaturated fats in your diet.**

Use ***sunflower, safflower, olive or canola oils*** for cooking. It is worth paying more for extra virgin cold-pressed oils that have not had their beneficial phytochemicals (such as antioxidants) destroyed during processing. ***Peanut, sesame, walnut and macadamia oils*** are delicious alternatives and can be added to salads or vegetables or drizzled onto fresh bread. Use ***avocado*** as a spread on sandwiches and include unsalted ***nuts and seeds*** in meals and as snacks. Nuts and seeds contain a vast array of essential nutrients for the promotion of cardiovascular health. For example, a handful of ***almonds*** will provide you with your daily requirement of Vitamin E and Vitamin E that is found naturally in foods has been shown to reduce cardiovascular risk through its beneficial effects on cholesterol.⁵

There is compelling scientific evidence for the benefits of omega 3 fatty acids in treating cholesterol imbalance. The Heart Foundation recommends that all Australians eat a combination of 2-3 150g serves of ***oily fish (eg sardines, salmon, mackerel, tuna)*** every week along with plant sources of omega 3 (eg ***flaxseeds/linseeds, walnuts***).⁶ For those who do not reach this target for fish consumption, fish oil supplementation is recommended at a level of 500-1000mg daily.⁶ Flaxseed/linseed contains the highest level of plant based omega 3 fatty acids, however the conversion of these short chain omega 3s into the beneficial long chain omega 3s in our bodies is very limited. Flaxseeds can be found in some commercial breads and cereals and you can add walnuts and flaxseeds to homemade muesli and muffins. LSA meal (linseed, soy and almond) is a great mix to sprinkle on your breakfast cereal each morning.

we know what matters

- **Eat plenty of foods high in fibre.**

High fibre breads and cereal products, legumes, fruit and vegetables should play a major role in everyone's diet. The soluble fibre (such as beta-glucan in oats) present in these foods has been proven to lower LDL levels and increase HDL cholesterol. A form of carbohydrate in plant-derived foods, known as resistant starch also has beneficial effects on cholesterol. Resistant starch is present in 'al-dente' pasta, cold cooked potatoes, under-ripe bananas and 'Hi-maize' bread and cereal products.

The World Health Organization claims that a low intake of fruit and vegetables is a major contributor to heart disease and stroke¹. Considering that an average Australian eats only 2.6 serves of the recommended five or more serves of vegetables a day we could reduce our population risk significantly simply by doubling our vegetable intake².

- **Choose lower Glycaemic index (GI) and lower Glycaemic load (GL) foods.**

A high intake of refined sugars, high GI foods or high GL meals results in a large insulin spike which increases triglyceride levels and stimulates cholesterol synthesis. In particular, avoid nutrient poor, sweet foods and drinks such as lollies, soft drinks and cordials that will increase your "unhealthy" cholesterol levels.

- **Soy Protein.**

Adding soy protein to your diet can have significant health benefits and is actually recommended by the United States Food and Drug Administration for the lowering of blood cholesterol.⁷ A daily intake of 25g of soy protein is recommended which equates to 2-4 servings of tofu or soy milk per week.

- **Moderate your dietary cholesterol intake.** Minimise your intake of offal meats (liver, kidney, brains), fatty meats and full fat dairy products while moderating your consumption of egg yolks and shellfish (eg prawns).

- **Plant sterols.** These compounds are now available in some margarines, milks and yoghurts. They block the absorption of dietary cholesterol through the intestine, and through this mechanism, a significant reduction in cholesterol can be achieved by consuming 2-3g of plant sterols daily. This is the amount found in 1 to 1½ tablespoons of plant-sterol containing margarines. A greater quantity does not however give a greater benefit.

- **Losing excess body weight.** Maintaining a healthy body weight is a major determinant of maintaining healthy cholesterol levels, with weight loss having a profound effect on altering your cholesterol levels. Refer to the article on the capital chemist website titled "Weight Loss" (<http://www.capitalchemist.com.au/resource/164>) for advice on the most successful methods to achieve healthy and sustainable weight loss.

LIFESTYLE FACTORS

Smoking cessation, staying active and minimising alcohol consumption are all extremely important in the optimisation of cholesterol levels. Aim to exercise every day, choosing physical activities that you will enjoy and keep up on a regular basis.

Make your own choices to eat and live the best that you can for keeping your cholesterol within a healthy range. Not only will your cholesterol levels improve, your whole body will be healthier and happier.

References:

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