



## Healthy Foods to Control Cholesterol

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### ABSTRACT

Nowadays people realise that cholesterol is not good for human health. Increased blood cholesterol leads to blockage in the blood vessels of heart and brain. Too much of blockage can lead to heart attack or stroke. Human body produces the cholesterol needed to function properly, also this comes from the diet. Eating too much of foods that are high in cholesterol, saturated fats, and trans unsaturated fats (trans fats) or having an inherited predisposition can result in a high level of cholesterol in the blood. Studies show (Kuklina et al., 2009) that a large proportion of adults with high levels of bad cholesterol (low-density lipoprotein cholesterol LDL-C) remain untreated or undertreated despite growing use of lipid-lowering medications. Selection of low cholesterol foods in diet can prove to be helpful for the better health.

### KEYWORDS

cholesterol, heart attack, diet, LDL, HDL

With reference to the fats, foods can be of four types, these are polyunsaturated, monounsaturated, saturated and Trans fat. Polyunsaturated and monounsaturated are the preferred fats. Saturated fats and Trans fats are those that we should consume the least because these fats are responsible for the development blockages in the blood vessels.

There are many foods available which can alter the fate of our cholesterol. Nutritionists believe that right and healthy selection of diet is the most economical way to bring down the cholesterol. Eliminating a few foods and increasing a few other can help to minimise chances of heart diseases (Do et al., 2013), heart attack and stroke.

#### Some healthy foods include-

**Oat bran;** Oat bran contains much fiber contents, making it more effective at lowering cholesterol and helping digestion. It also has more protein, calcium, iron, thiamin, phosphorus, riboflavin, magnesium, and zinc. It reduces the insulin requirements in diabetics. Oat bran is a more concentrated source of fibre than whole oats.

Once consumed, oat bran enters the digestive tract where its soluble fiber absorbs water and forms a gel-like substance, creating a feeling of fullness. Oat bran absorbs on average 25 times its volume in liquid. The feeling of fullness and being less hungry leads to much less frustration while dieting.

It helps in weight loss and in bringing down the sugar level in biologically unique way. In stomach it forms gel-like substance, which passes through the gastric acid, bile, and finally the pancreatic juices. This turns the gel into pulp; this pulp becomes part of the stool, and thereby carries the calorie-dense components of fats, glucose, and amino acids out of the body through the stool. This process slows down the assimilation of sugar (glucose) and removes calories from the body while keeping blood sugar levels low and stable. Couple of teaspoons daily with a cup of hot low fat milk may be taken daily in breakfast or it may be added to soup.

**Olive oil;** olive oil is rich in monounsaturated fat (good fats), there are many health benefits of olive oil. It is naturally free of cholesterol, trans fat, salt, sugar, and gluten. These essential properties give olive oil, health benefits. It helps protect against heart disease, cancer, oxidative stress, blood pressure, diabetes, obesity, rheumatoid arthritis, osteoporosis, and has been known to promote healthy aging and it aids in digestion.

The monosaturated fats in olive oil (Pérez-Jiménez et al., 2007) favourably alters cholesterol level, it boosts HDL (good cholesterol), lowers LDL (bad cholesterol), cuts down the chances of

clots, blockages and fights high cholesterol. To get the maximum cholesterol lowering benefits of olive oil, saturated fats like red meat and dairy products may be cut down.

**Walnuts;** Walnuts are a rich source of heart-healthy monounsaturated fats and omega-3 fatty acids. Walnuts should be consumed in whole form, including the skin because 90% of the phenols in walnuts are found in the skin, including key phenolic acids, tannins, and flavonoids.

Walnut provide an unusually high level of vitamin E (The form of vitamin E found in walnuts is somewhat unusual, and particularly beneficial in the form of gamma-tocopherol). This has been found to provide significant protection from heart problems.

In blood it decreased LDL cholesterol; decreased total cholesterol; increased gamma-tocopherol increases omega-3 fatty acids in red blood cells (alpha-linolenic acid).

Walnuts reduce risk of Excessive Clotting by decreasing maximum platelet aggregation rate and decreasing platelet activation. Walnuts have valuable amounts of blood pressure-regulating minerals such as Potassium, Calcium and magnesium which have significant benefits of blood pressure regulations.

Adequate intake of omega-3s (Harris et al., 2008), including the alpha-linolenic acid (ALA) present in walnuts, has repeatedly been shown to help improve a wide variety of cardiovascular functions, including blood pressure. Adults have been able to significantly increase their blood level of ALA with as few as 4 walnuts per day. Like most nuts, they can easily be added to healthiest way of eating. It may be added to favourite salad, vegetable dish, fruit, or dessert.

**Almonds;** like walnuts, almonds and other nuts can reduce blood cholesterol. Rich in polyunsaturated fatty acids, nuts also help keep blood vessels healthy. Just make sure the nuts you eat aren't salted or coated with sugar. All nuts are high in calories, so a handful will do. To avoid eating too many nuts and gaining weight, replace foods high in saturated fat with nuts. For example, instead of using cheese, meat or croutons in salad, add a handful of walnuts or almonds.

**Linseed oil;** also known as **flaxseed oil**, is made from the seeds of the flax plant. Linseed and linseed oil are rich in alpha-linolenic acid (ALA), an essential fatty acid that appears to be beneficial for heart disease.

Linseed oil is a good source of Omega 3. It should be consumed every day in small quantity. However if linseed oil is

used in the diet for long time, without other oils, it may cause Omega 6 LA deficiency symptoms. So the best bet is to blend linseed oil with other oils such as sesame oil, sunflower oil, evening primrose oil that contain more Omega 6. Linseed oil is good for the heart because it is the richest source of alpha-linolenic acid. Linseed itself (ground or whole) also contains lignans, which may have antioxidant actions.

Several studies indicate that linseed oil can lower cholesterol, thereby significantly reducing the risk of heart disease. Taking linseed oil may also protect against angina (chest pain) and high blood pressure. It may be useful in preventing heart attack. It may also help prevent elevated blood pressure by inhibiting inflammatory reactions that cause artery-hardening plaque and poor circulation

**Foods with added plant sterols or stanols;** Foods are now available that have been fortified with sterols or stanols (Maki et al., 2012) substances found in plants that help block the absorption of cholesterol.

Margarines, orange juice and yogurt drinks with added plant sterols can help reduce LDL cholesterol by more than 10 percent. Plant sterols or stanols in fortified foods don't appear to affect levels of triglycerides or of high-density lipoprotein (HDL), the "good" cholesterol.

#### Other changes to diet;

For any of these foods to provide their benefit, we need to make other changes to diet and lifestyle, cut back on the cholesterol and total fat — especially saturated and trans fats — that you eat. Saturated fats, like those in meat, full-fat dairy products and some oils, raise total cholesterol. Trans fats, which are sometimes found in margarines and store-bought cookies, crackers and cakes, are particularly bad for cholesterol levels. Trans fats raise low-density lipoprotein (LDL), the "bad," cholesterol, and lower high-density lipoprotein (HDL), the "good," cholesterol.

In addition to changing diet, keep in mind that making additional heart-healthy lifestyle changes are key to lowering your

cholesterol. Talk to your doctor quitting smoking and maintaining a healthy weight to help keep your cholesterol level low.

**CONCLUSIONS;** Fat intake should be restricted in the diet. Removing the high fat portions of chicken, eggs and meat (these are high in cholesterol) can bring down the cholesterol contents in blood. Walnuts, fishes have omega fatty acids. Fruits, vegetable, whole grains and pulses have zero cholesterol. So it is better to shift to plant based foods.

Oat bran, olive oil, linseed oil, walnuts, almonds and foods having added stanols should be added to diet for the healthy living.

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