

# ADVANTAGE

## Cholesterol



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Cholesterol is a substance produced by the liver and also found in certain foods. Cholesterol is used to make some vitamins, hormones, and to build cell walls and create some bile salts.

### Myths vs Facts

Using margarine instead of butter will lower cholesterol

Margarine contains trans-fat which can raise your LDL (bad) cholesterol



Thin people don't have high cholesterol

People of all body types can have high cholesterol so be sure to have your cholesterol levels checked regularly

Only older people will have high cholesterol

Even children, particularly those in families with a history of heart disease, can have high cholesterol



### What causes high cholesterol?

The foods you eat



Being overweight



Being inactive

Family history



Overall health

### How is cholesterol managed?

Eat healthy



Lose weight

Get regular exercise



Don't smoke!



### Types of Cholesterol?



**High-density lipoprotein ("good" cholesterol)** helps prevent heart disease and has a protective effect on your blood vessels. Helps to prevent heart attacks, strokes and other vascular diseases.



**Low-density lipoprotein ("bad" cholesterol)** may build up in your arteries and form plaque. Plaque narrows your arteries and may eventually lead to strokes and heart attacks.



### Questions and Answers

for Dr Thapelo Motshudi

- What is cholesterol?**  
Even though we routinely talk about cholesterol as if it's one entity, there are in fact a number of different types of cholesterol molecules produced in the body. All of us have cholesterol in our bodies, what varies is the amount and the fraction of the different types. Cholesterol is a molecule of fat that has multiple functions, including being one of the components of the walls of our cells, and it is active in a number of chemical reactions. This means that we need it to survive, so saying that someone "has cholesterol" only means that she has more of the undesirable type in her blood than is recommended, not that she shouldn't have it at all. Even though this is too simplistic, generally the broad categories spoken about are LDL (low density) and HDL (high density) cholesterol. It is preferable to have more HDL and less LDL.
- What causes high cholesterol?**  
High or elevated cholesterol is called hypercholesterolaemia. One can be born with a gene that causes the disease, called familial hypercholesterolemia, or it can be acquired throughout life. The familial type also has subdivisions and manifests much earlier in life. Acquired hypercholesterolaemia is generally diet and lifestyle related.
- How does high cholesterol show itself?**  
The symptoms of high cholesterol depend on the type of hypercholesterolaemia, i.e. familial or acquired, and how high it actually is. What is common, is that one is likely to develop heart disease, strokes and other problems related to the amount of blood going to different parts of the body. This is because cholesterol lines the inner layer of blood vessels and narrows them, thus decreasing the amount of blood going to a number of organs, which can result in heart attacks and strokes. In the severe form of familial hypercholesterolaemia children will have deposits of cholesterol in the tendons of their muscles, causing joint pains and skin lesions.
- How is high cholesterol diagnosed?**  
Doctors use blood tests to diagnose hypercholesterolaemia. This test is normally performed after one has fasted for a prescribed period of time, to avoid measuring the cholesterol from food. However, sometimes hypercholesterolaemia is found when one has blood tested for unrelated conditions, and elevated cholesterol is found as an incidental finding. In young patients with familial hypercholesterolaemia the disease is actively sought when a child presents with a stroke or other features of high cholesterol described above. It is also commonly tested for in occupational health screening tests. It is very important to note that the value given for the upper limit of total cholesterol as being normal will vary depend on the laboratory used, so it is important that you do not compare your blood results, analysed at one laboratory, to those of a friend or a colleague analysed at a different lab. Your doctor will help interpret your individual results.
- How is hypercholesterolaemia treated?**  
The goal of treatment for familial and acquired hypercholesterolaemia is the same, which is to reduce the fraction of LDL, and thus increase the ratio of HDL. This is done firstly with what is called lifestyle modification, which includes a reduction in dietary fat, loss of weight if overweight, exercise, and stopping smoking if you are a smoker. There are also specific drugs/tablets that are used to lower LDL and improve ones total cholesterol profile. In addition, treatment is also directed to specific complications one might have already developed.