

☞ **Exercise** A regular exercise program can help raise your HDL (good) cholesterol, can help you lose weight, and can even help lower other heart risks.

☞ **Stop smoking** Smoking lowers your HDL (good) cholesterol and increases your risk of heart attack.



☞ **Control high blood pressure and diabetes** Regular monitoring, compliance with medication (if prescribed), diet control are measures that help.

☞ **Reduce the stress in your life** Meditation and relaxation techniques are helpful.

☞ **Change your diet** Reduce intake of all high cholesterol containing food such as meat, eggs, fish, poultry and dairy products. Avoid 'obvious' fats such as butter and 'hidden' fats used in processed foods. *Talk to your pharmacist for advice on diet for high cholesterol.*

If you find out that your cholesterol levels are high, consult your doctor. Besides the lifestyle changes and other measures, your doctor may also prescribe medicines to lower your blood cholesterol. Make sure you take your medicines as prescribed and test your blood cholesterol levels regularly.

Your pharmacist can help you find out which of the medicines are prescribed for cholesterol lowering. *Ask your pharmacist for advice.*



Pharmacy Care Programme
Indian Pharmaceutical Association
Community Pharmacy Division, (IPA-CPD)

Kalina, Santacruz (E), Mumbai-400 098.

Tel.: +91-22-2667 1072 Telefax : +91-22-2667 0744

E-mail: ipacdpune@yahoo.co.in www.indianpharma.org

This information is intended for educational purpose only. It is not designed in whole or part, as advice for self-treatment. Neither this leaflet nor any statement should be misconstrued as endorsement of self-treatment.

Distributed in Public Interest by:



Understanding cholesterol



Understanding cholesterol

'Ritesh was a lazy chap when he was young...too lazy to exercise or walk, nibbling fast food all the time. Retired from work, he spent his time watching T.V., eating and sleeping. His friend advised him to join him for a routine medical check up, wherein he found out that his blood sugar as well as blood cholesterol was way beyond normal. He was advised to consult his doctor, who prescribed medicines as well as a diet and exercise plan. Today, Ritesh goes for a early morning brisk walk everyday and has resorted to a vegetarian diet.'

Ritesh's determination and quick action helped him save his life! ...he was lucky to have got a second chance at life...!

What is cholesterol?

Cholesterol is a member of a family of molecules called lipids. It is a fatty substance, which is mainly made in your body.

Where does cholesterol come from?

Most of the cholesterol in your body is made by the liver. Cholesterol is also a component of the fat in foods, so the rest of the cholesterol in your body comes from the foods you eat. This means that when you eat foods high in animal fat, you are also eating foods high in cholesterol.



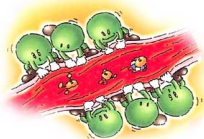
Do you need cholesterol?

Yes, you need cholesterol for important functions of the body.

Cholesterol plays a vital role in how every cell

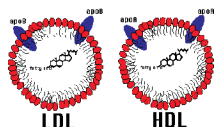
wall works, throughout your body. It is also used by your body to make other vital chemicals.

However, too much cholesterol in the blood can increase your risk of getting coronary heart disease. The most common cause of high blood cholesterol levels in people is too much fat in the diet.



Transport system...

Cholesterol molecules can't travel through blood in their original form because they don't mix with water, the major ingredient of blood. They have a special 'transport system' for reaching all the cells that need it, wherein cholesterol (and fat) is packaged with protein to form **lipoproteins**, which can travel through the blood.



Cholesterol uses the blood circulation as its 'road system' and is carried on 'vehicles' made up of proteins.

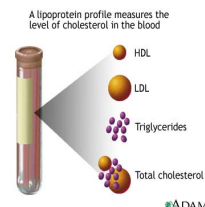
Types of lipoproteins

- ☞ **VLDL (Very Low Density Lipoproteins)** carries fat to different parts of the body.
- ☞ **LDL (Low Density Lipoproteins)** carries cholesterol to different parts of the body. As LDLs travel in the blood vessels, some cholesterol pieces may stick to the blood vessel walls, narrowing them. Therefore, **LDL is called 'bad' cholesterol** and is associated with a higher risk of heart disease.
- ☞ **HDL (High Density Lipoproteins)** returns cholesterol left in the blood vessels to the liver. HDLs pick up stuck cholesterol pieces and bring them back to the liver. So, **HDL is called 'good' cholesterol** and its high concentrations in the blood are associated with a low risk of heart attack.

Test your cholesterol

You should get your **lipid profile** checked at least

once in 6 months. A lipid profile involves checking of 5 parameters i.e. Total Cholesterol (TC), HDL cholesterol, LDL Cholesterol, VLDL cholesterol, Triglycerides (TGs).



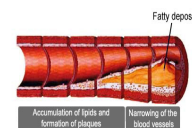
What do the numbers mean?

- ✓ Your TC level should be less than 200.
- ✓ Your LDL level should be less than 130.
- ✓ Your HDL level should be 45 or greater.
- ✓ Your TGs should be below 200 mg/dL.

The other parameters that are helpful are TC/HDL ratio and LDL/HDL ratio. Higher the ratio, higher is the risk of coronary heart disease.

What if you have high cholesterol levels?

Cholesterol deposits itself on the inside of the walls of your arteries and narrows down the passage for the blood flow. This is known as 'atherosclerosis' and it usually affects the major arteries such as Coronary artery (artery supplying blood to the heart) and reduces the blood flow to the heart, which ultimately leads to heart disease.



Risk factors

- ☞ Age
- ☞ Diabetes
- ☞ Family history of coronary heart disease
- ☞ Lazy/sedentary lifestyle with no exercise
- ☞ Cigarette smoking and alcoholism
- ☞ High fatty food
- ☞ High blood pressure
- ☞ Obesity



Your action plan to control cholesterol

- ☞ **Watch your weight** The quickest way to lose weight is to reduce the amount of fat in your diet, and regular exercise.

