



GHADIALI

General Surgery

P R E S E N T S

Dr. Mufa T. Ghadiali is skilled in all aspects of General Surgery.
His General Surgery Services include:

- General Surgery
- Advanced Laparoscopic Surgery
- Surgical Oncology
- Gastrointestinal Surgery
- Hernia Surgery
- Endoscopy

CHOLESTEROL SCREENING

Multimedia Health Education

Disclaimer

This film is an educational resource only and should not be used to make a decision on **Cholesterol Screening**. All such decisions must be made in consultation with a physician or licensed healthcare provider.

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GHADIALI

MULTIMEDIA HEALTH EDUCATION MANUAL

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INTRODUCTION

Cholesterol is a waxy, fat-like substance that is made in the body by the liver. Cholesterol forms part of every cell in the body and serves many vital functions.

What is Cholesterol?

Our bodies need cholesterol to:

- Maintain healthy cell walls
- Make hormones (the body's chemical messengers)
- Make vitamin D
- Make bile acids, which aid in fat digestion

When there is too much cholesterol in your blood, it builds up in the walls of your arteries. Over time, this buildup causes "hardening of the arteries" so that arteries become narrowed and blood flow to the heart is slowed down or blocked.

The blood carries oxygen to the heart, and if enough blood and oxygen cannot reach your heart, you may suffer chest pain.

If the blood supply to a portion of the heart is completely cut off by a blockage, the result is a heart attack.

High blood cholesterol itself does not cause symptoms so many people are unaware that their cholesterol level is too high. It is important to have a simple blood test to find out what your cholesterol numbers are. Lowering cholesterol levels that are too high lessens the risk for developing heart disease and reduces the chance of a heart attack or dying of heart disease.

(Refer fig. 1)

Types of Cholesterol:

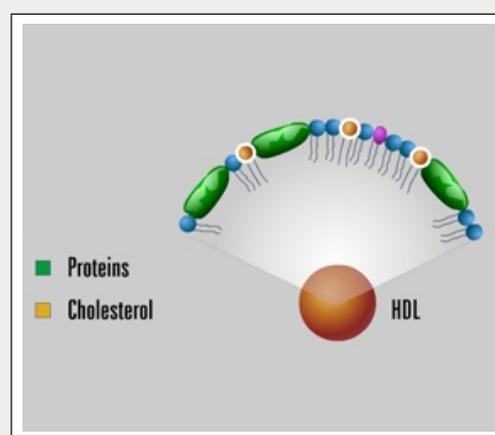
There are different types of cholesterol - and not all cholesterol is harmful.

- Low-density lipoprotein (or LDL) cholesterol is a bad type of cholesterol that is most likely to clog blood vessels, increasing your risk for heart disease.
- High-density lipoprotein (or HDL) cholesterol is a good type of cholesterol. HDL cholesterol helps clear the LDL cholesterol out of the blood and reduces your risk for heart disease.

(Refer fig. 2 & 3)

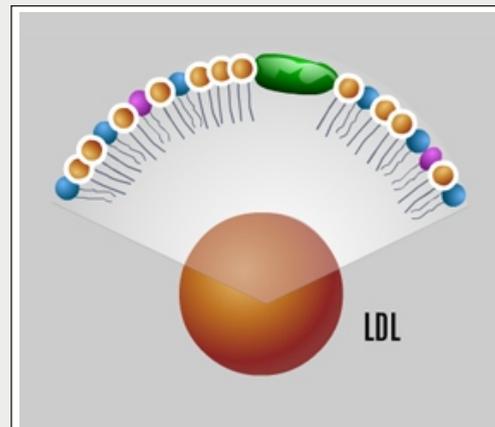


(Fig.1)



(Fig.2)

(Refer fig. 2 & 3)



(Fig.3)

Unit 2: Purpose of Cholesterol Screening

Why is the Test Performed?

Cholesterol testing is recommended as a screening test to be done on all adults at least once every five years. It is frequently done in conjunction with a routine physical exam.

It is usually ordered in combination with other tests including HDL-C, LDL-C, and triglycerides, often called a lipid profile.



(Fig.4)

Cholesterol testing may be recommended more frequently for those who have one or more risk factors for heart disease.

Major risk factors include:

- Cigarette smoking
- Age (men 45 years or older or women 55 years or older)
- Hypertension (blood pressure of 140/90 or higher or taking high blood pressure medications)
- Family history of premature heart disease
- Pre-existing heart disease or already having had a heart attack
- Diabetes mellitus

(Refer fig. 4)

Unit 2: Purpose of Cholesterol Screening

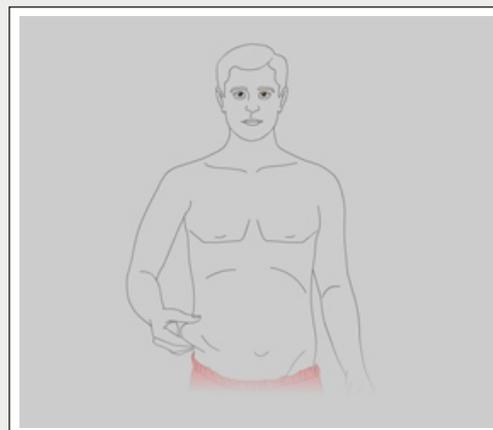
What Do Your Cholesterol Numbers Mean?

Everyone age 20 and older should have their cholesterol measured at least once every 5 years. It is best to have a blood test called a "lipoprotein profile" to find out your cholesterol numbers.

This blood test is done after a 9- to 12-hour fast and gives information about your:

- Total cholesterol
- LDL (bad) cholesterol – the main source of cholesterol buildup and blockage in the arteries
- HDL (good) cholesterol – helps keep cholesterol from building up in the arteries
- Triglycerides – another form of fat in your blood

(Refer fig. 5)



(Fig.5)

If it is not possible to get a lipoprotein profile done, knowing your total cholesterol and HDL cholesterol can give you a general idea about your cholesterol levels. If your total cholesterol is 200 mg/dL* or more or if your HDL is less than 40 mg/dL, you will need to have a lipoprotein profile done. HDL (good) cholesterol protects against heart disease, so for HDL, higher numbers are better. A level less than 40 mg/dL is low and is considered a major risk factor because it increases your risk for developing heart disease. HDL levels of 60 mg/dL or more help to lower your risk for heart disease.

Triglycerides can also raise heart disease risk. Levels that are borderline high (150-199 mg/dL) or high (200 mg/dL or more) may need treatment in some people.

Total Cholesterol	Category
Less than 200 mg/dL	Desirable
200-239 mg/dL	Borderline High
240 mg/dL and above	High

LDL Cholesterol Level	LDL-Cholesterol Category
Less than 100 mg/dL	Optimal
100-129 mg/dL	Near optimal/above optimal
130-159 mg/dL	Borderline high
160-189 mg/dL	High
190 mg/dL and above	Very high

What affects Cholesterol Levels?

A variety of things can affect cholesterol levels. Below are things you can do something about.

- Diet
- Weight
- Physical Activity

Diet:

Saturated fat and cholesterol in the food you eat make your blood cholesterol level go up.

Saturated fat is the main culprit, but cholesterol in foods also matters.

Reducing the amount of saturated fat and cholesterol in your diet helps lower your blood cholesterol level.

(Refer fig. 6)

Weight:

Being overweight is a risk factor for heart disease. It also tends to increase your cholesterol.

Losing weight can help lower your LDL and total cholesterol levels, as well as raise your HDL and lower your triglyceride levels.

(Refer fig. 7)

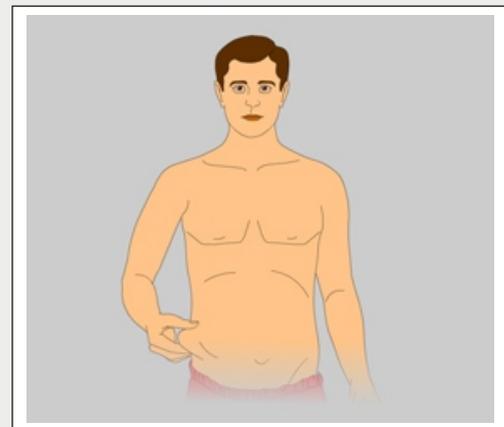
Physical Activity:

Not being physically active is a risk factor for heart disease. Regular physical activity can help lower LDL (bad) cholesterol and raise HDL (good) cholesterol levels. It also helps you lose weight.

(Refer fig. 8)



(Fig.6)



(Fig.7)



(Fig.8)

Unit 2: Purpose of Cholesterol Screening

What affects Cholesterol Levels?

Things you cannot do anything about also can affect cholesterol levels.

These include:

Age and Gender.

As women and men get older, their cholesterol levels rise. Before the age of menopause, women have lower total cholesterol levels than men of the same age. After the age of menopause, women's LDL levels tend to rise.

Heredity.

Your genes partly determine how much cholesterol your body makes. High blood cholesterol can run in families.

(Refer fig. 9)



(Fig.9)

Treating High Cholesterol

The main goal of cholesterol-lowering treatment is to lower your LDL level enough to reduce your risk of developing heart disease or having a heart attack. The higher your risk, the lower your LDL goal will be.

There are two main ways to lower your cholesterol:

Therapeutic Lifestyle Changes (TLC)

Includes a cholesterol-lowering diet (called the TLC diet), physical activity, and weight management.

Drug Treatment

If cholesterol-lowering drugs are needed, they are used together with TLC treatment to help lower your LDL.

To reduce your risk for heart disease or keep it low, it is very important to control any other risk factors you may have such as high blood pressure and smoking.

(Refer fig. 10)

Therapeutic Lifestyle Changes (TLC)

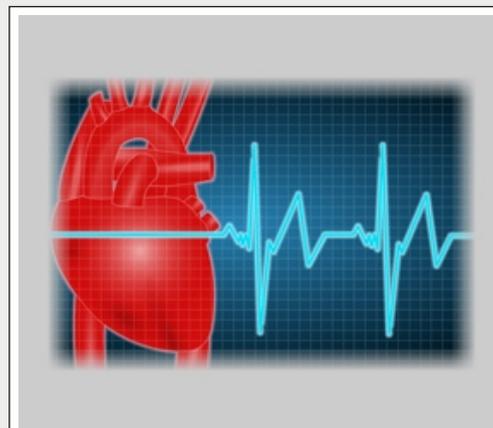
TLC is a set of things you can do to help lower your LDL cholesterol.

The TLC Diet:

This is a low-saturated-fat, low-cholesterol eating plan that calls for less than 7 percent of calories from saturated fat and less than 200 mg of dietary cholesterol per day.

The TLC diet recommends only enough calories to maintain a desirable weight and avoid weight gain.

(Refer fig. 11)



(Fig.10)



(Fig.11)

The TLC Diet:

If your LDL is not lowered enough by reducing your saturated fat and cholesterol intakes, the amount of soluble fiber in your diet can be increased. Certain food products that contain plant stanols or plant sterols (for example, cholesterol-lowering margarines) can also be added to the TLC diet to boost its LDL-lowering power.

Weight Management:

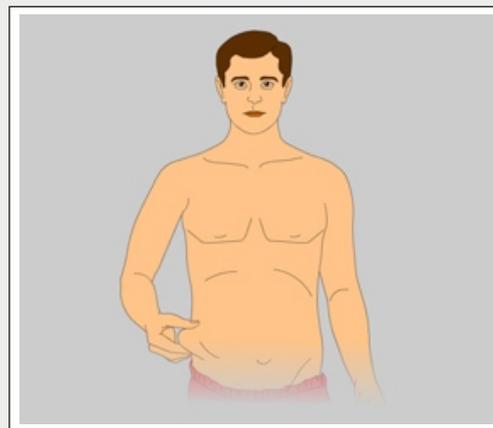
Losing weight if you are overweight can help lower LDL and is especially important for those with a cluster of risk factors that includes high triglyceride and/or low HDL levels and being overweight with a large waist measurement (more than 40 inches for men and more than 35 inches for women).

(Refer fig. 12)

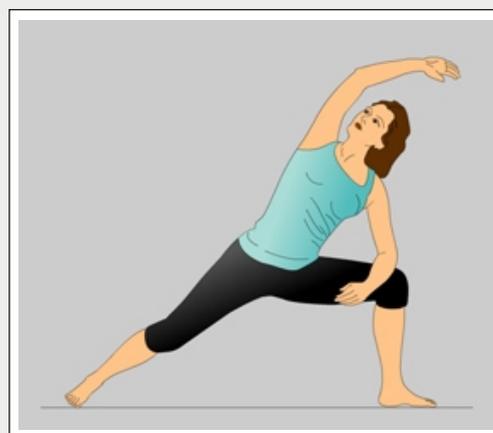
Physical Activity:

Regular physical activity (30 minutes on most, if not all, days) is recommended for everyone. It can help raise HDL and lower LDL and is especially important for those with high triglyceride and/or low HDL levels who are overweight with a large waist measurement.

(Refer fig. 13)



(Fig.12)



(Fig.13)

Drug Treatment

Even if you begin drug treatment to lower your cholesterol, you will need to continue your treatment with lifestyle changes. This will keep the dose of medicine as low as possible, and lower your risk in other ways as well.

Drug Treatment

There are several types of drugs available for cholesterol lowering including:

- Statins
- Bile acid sequestrants
- Nicotinic acid
- Fibrates, and
- Cholesterol absorption inhibitors.



(Fig.14)

Your doctor can help decide which type of drug is best for you. The statin drugs are very effective in lowering LDL levels and are safe for most people. Bile acid sequestrants also lower LDL and can be used alone or in combination with statin drugs. Nicotinic acid lowers LDL and triglycerides and raises HDL. Fibrates lower LDL somewhat but are used mainly to treat high triglyceride and low HDL levels. Cholesterol absorption inhibitors lower LDL and can be used alone or in combination with statin drugs.

Once your LDL goal has been reached, your doctor may prescribe treatment for high triglycerides and/or a low HDL level, if present. The treatment includes losing weight if needed, increasing physical activity, quitting smoking, and possibly taking a drug.

Although every effort is made to educate you on **CHOLESTEROL SCREENING** and take control, there will be specific information that will not be discussed. Talk to your doctor or health care provider about any concerns you have about **CHOLESTEROL SCREENING**.

YOUR SURGERY DATE

READ YOUR BOOK AND MATERIAL

VIEW YOUR VIDEO /CD / DVD / WEBSITE

PRE - HABILITATION

ARRANGE FOR BLOOD

MEDICAL CHECK UP

ADVANCE MEDICAL DIRECTIVE

PRE - ADMISSION TESTING

FAMILY SUPPORT REVIEW

Physician's Name : _____

Patient's Name : _____

Physician's Signature: _____

Patient's Signature: _____

Date : _____

Date : _____