

Cholesterol levels are ordered in a blood test called a "LIPID PANEL". The test can be done either fasting (the patient has not eaten for 8 hours) or non-fasting. If the test is done non-fasting and it is abnormal, then it will have to be repeated after fasting. If it is still abnormal then we will bring the patient into the office for a detail risk assessment and recommendations on how to decrease the risk of heart disease and stroke. Studies show that even children as young as age 11 have evidence of arteries that at beginning to become clogged.

A lipid panel is ordered for the following patients

1. All 11 and 18 year olds
2. All patients whose BMI is over the 95th% for age and are therefore diagnosed with obesity.
3. For patients with a family history of heart disease before age 55 years.

LIPID PANEL MEASURES:

TOTAL CHOLESTEROL = (LDL + HDL + OTHER LIPIDS)

AND TRIGLYCERIDES

WHAT ARE THESE "THINGS" ?



LDL (low-density lipoprotein cholesterol, also called "BAD" cholesterol) can build up on the walls of your arteries and increase your chances of getting heart disease. That is why LDL cholesterol is referred to as "bad" cholesterol. The lower your LDL cholesterol number, the lower your risk of clogged arteries



HDL (high-density lipoprotein cholesterol, also called "GOOD" cholesterol) protects against heart disease by taking the "bad" cholesterol out of your blood and keeping it from building up in your arteries. Exercise increase HDL cholesterol. It is best to have a high level of "good" HDL. HDL helps keep your LDL level in check.



Triglycerides are fats carried in the blood from the food we eat. Excess calories, alcohol, or sugar in the body are converted into triglycerides and stored in fat cells throughout the body. Triglycerides are the form in which most fat exists in food and the body. A high triglyceride level has been linked to higher risk of coronary artery disease

SO IN SUMMARY WE WANT LOW LDL, HIGH HDL AND LOW TRIGLYCERIDES

1) Go for Lean Meats. That means limiting fatty red meats (steak, hamburger) and switching to fish, chicken, turkey, and even lean port like pork tenderloin. Do not eat the skin of chicken, turkey etc. Avoid frying foods. When eating red meats – watch the portions, they should be no bigger than the palm of the hand.

2) Focus on Fruits and Vegetables. Fruits and vegetables have the advantage of being relatively low in calories for how "filling" they are, so you can eat a lot of them without storing energy as body fat. Apples and pears also contain soluble fiber, which reduces bad cholesterol levels and are therefore great in your low cholesterol diet plan.

3) Search for the Low Fat Versions of Dairy Products. Switch to low fat or skim milk, low fat or no fat yogurt, 2% cheeses, and 1/3 fat cream cheese. Use thin sliced sandwich cheeses to get the flavor of cheese but half the fat. Note, yogurts marketed for children are very high in sugar – avoid these products and use mainstream product instead.

4) Choose Your Cooking Oil with Care. Stop frying foods and instead broil or bake them. In using oils use only oils high in monounsaturated or polyunsaturated fats. Avoid all trans-fat which is a saturated fat. Foods made up mostly of monounsaturated and polyunsaturated fats are liquid at room temperature, such as olive oil, safflower oil, peanut oil and corn oil. Rule of thumb if it will solidify at room temperature or even in the refrigerator it is an unhealthy fat!

5. Increase foods with OMEGA 3's which are made up of **EPA, DHA, and ALA**. A diet high in Omega 3's can lower cholesterol and triglycerides. Animal foods with omega 3's are fatty fish like salmon, mackerel, herring, lake trout, sardines and albacore tuna. Plant sources of omega-3 fatty acids include flaxseed (ground), oils (canola, flaxseed, soybean), and nuts and other seeds (walnuts, butternuts and sunflower). Note, Tilapia, snapper, grouper, Mahi is all warm water fish. They are good sources of protein and low in fat if cooked without frying or with a lot of sauces BUT they do not have omega 3's. However, eating them instead of head red meat like hamburger will in itself will lower cholesterol. There are many omega 3, also known as fish oil supplements, on the market. We may recommend that a supplement be taken daily. Many children's vitamins now contain DHA, for neurological development but it is also good for lowering cholesterol and triglycerides.

6. Eat oatmeal, whole grains and high fiber foods, which will lower your LDL (bad) cholesterol. These foods will also fill you up and therefore allow you to reduce your intake of unhealthy foods, such as processed snack foods.

7. Limit processed sugars (white sugar, corn syrup), found in baked goods, Capri Sun, Sunny D, and even some other foods such as tomato sauces. **These sugars will raise your triglycerides.** Read the food labels! In addition avoid fruit juice, even those with no-sugar added. Juice contains naturally occurring fruit sugar. It takes 3-4 oranges to make 1 8oz glass of juice, therefore giving you the same fruit sugar as your would get from eating 3-4 oranges, plus you get none of the fiber. **EAT THE FRUIT AND AVOID ALL FRUIT JUICES AND OTHER SUGARY DRINKS.**

7. Stop smoking. Smoking raises triglycerides and in itself increase risk of heart disease and stroke.

8. Limit alcohol which raises your triglycerides.

9. Exercise increases your HDL (good) cholesterol.

TO RAISE HDL
Exercise

TO LOWER TRIGLYCERIDES
Avoid sugar including natural sugar found in juices
Increase your intake of foods with Omega 3'S
Limit alcohol consumption
Avoid "junk food"
Stop smoking

TO LOWER LDL
Limit red meat
Low fat daily
Increase Omega 3's
Cook with healthy oils