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CCM NEWSLETTER

Dr. Ima Tanner & Dr. Jorge Duchicela

Decoding Cholesterol

For the past couple months, the newsletters have been focusing on the conditions that contribute to heart disease, heart attacks and stroke. Understanding your blood pressure is just as important as understanding the role that cholesterol plays in your health. Like high blood pressure, high cholesterol is also very common. This newsletter will attempt to explain what cholesterol is, why it matters, how it's checked and how it's controlled.

What is Cholesterol?

Cholesterol is a waxy substance that helps to build cells and make vitamins and hormones.

Maybe you just thought that cholesterol only comes from what we eat. This is half true. Our liver actually makes all the cholesterol we need. We get extra cholesterol when we eat things like **meat, poultry and dairy.**

There are different types of cholesterol. Some are good for you and some, when in large amounts, can be bad for you. You will probably recognize some of them from your blood work results.

LDL (stands for *low-density lipoprotein*): We call this the **BAD** CHOLESTEROL mainly because it can contribute to the buildup or plaque in your blood vessels that can increase your risk for heart attack, strokes and artery disease.

HDL (stands for *High-density lipoprotein)*: We call this the **GOOD** CHOLESTEROL because at a health level, this may actually protect against heart attacks and strokes. This type of cholesterol carries that bad cholesterol away from your arteries and back to your liver where it is broken down.

TG (stands for *triglycerides*): this is the most common type of fat; it's where we store all the excess energy from our diet.

↑TG + ↑ LDL + ↓ HDL = Fatty buildup and ↑ risk of stroke and heart attacks

Okay- so why does all of this matter?

Well, high cholesterol is one of the MAJOR controllable risk factors for heart disease, heart attacks and strokes. Therefore, it's really important to do these three things:

1.) **Check your cholesterol**
2.) **Change your diet and lifestyle**
3.) **Control your cholesterol**

Now, there may be some factors beyond your control. You may have a specific genetic makeup that keeps cells from efficiently removing the bad cholesterol from your blood or your liver may be making too much cholesterol. *TAKE NOTE- This is not the main reason for high cholesterol for the majority of people.*

What are my Risk Factors for a high *bad* cholesterol?

1.) **Poor Diet:** Stay away from saturated fats and animal meats. Additionally, the trans-fat found in commercially baked cookies, crackers, and things like microwave popcorn are loaded with bad cholesterol.
2.) **Obesity:** BMI >30
3.) **Lack of exercise:** having a LOW HDL score is *not good*, but you can change that. Exercise will actually improve your levels of good HDL cholesterol!
4.) **Smoking:** I can go on and on about all the horrible things smoking does to your body, but in this case, smoking damages the walls of your arteries, making them more prone to plaque buildup. Also, smoking can lower your good cholesterol.
5.) **Age:** As our bodies get older, the body chemistry changes and this can increase our levels of cholesterol.
6.) **Diabetes:** Just like with smoking, high blood sugar also damages the walls of your arteries. Additionally, it will lower your good cholesterol.

So, you are at the doctor's office. Your blood work was taken and now it's time to review the results. How do you even interpret the results?

The name of the test is called a **'Lipid Panel'.**

Here are the results you should look for and some numbers to look at:

Name of Test	Result
Total Cholesterol (Total Chol)	Try to get <200
LDL	<70 (if you have diabetes or heart disease <100 (if you are 'high risk') <100-129 (optimal for most people)
HDL	<40 (NOT GOOD) >60 (BEST)
Triglycerides (TG)	<150 (Optimal) 200-499 (HIGH) 500+ (VERY HIGH)

Of course, your doctor takes into account your prior cholesterol levels, any medications you are on and your other medical conditions when making recommendations on where your cholesterol numbers should be.

How does your doctor determine if you should start medication for your cholesterol?

Well- it's a good question, but it's not an easy one to answer. Your doctor will want to first assess your risk of having a cardiovascular event (like a stroke or heart attack). Assuming you haven't already had a heart attack or stroke, your doctor may use what is called an ASCVD risk estimator.

The ASCVD risk estimator is a tool that uses the following information to determine the risk that you could have an event like a heart attack or stroke in the next 10 years:

Age

Sex

Race/Ethnicity

Total Cholesterol

HDL

Systolic Blood pressure

History of diabetes, smoking and current medication use for high blood pressure

If your risk is high enough to start treatment, a statin is recommended as the first choice to lower heart attack and stroke risk.

There are a variety of different types of medications to lower your cholesterol and therefore decrease your risk. I'll break it up into two groups: *Statins and Non-Statins.*

STATINS: *Atorvastatin (Lipitor), Simvastatin (Zocor), Rosuvastatin (Crestor), Pravastatin (Pravachol)*

These drugs slow down your body's production of cholesterol and they help remove any cholesterol buildup in your blood vessels.

There is a lot of evidence showing that taking a statin provides the greatest benefit with the least safety issues. There are different strength levels of statins, and studies have found that the *moderate to high intensity statins* give the most benefit. Physicians are comfortable with using statins because they have been around for a long time and we know the risks, and more importantly we know the benefits of being on a statin.

Patients who are most likely to need a statin are:

- *Someone who has had a heart attack or stroke*
- *A very high LDL (190mg/dL or higher)*
- *Diabetic*
- *Someone who scores a 7.5% or higher on their ASCVD risk calculator*

Sometimes your doctor may have you on a statin even if you don't fit into one of those groups. Your doctor will be taking into account your overall health and other factors to determine if you need to start a statin.

People who have had a heart attack or stroke in the past will need to be on the highest intensity statin, if they can tolerate it. Sometimes a couple different statins will need to be tried before finding the one that works the best.

Statins tend to be very well tolerated. That being said, about 10% of patients experience muscle pain. This is a reversible side effect and usually can be managed by trying a different medication and/or dose.

Liver damage from statins is extremely uncommon, but prior to starting a statin and periodically your doctor will check your liver function tests to make sure everything is okay. If you have a history of liver disease and are taking other medications that can damage the liver, your doctor may choose to monitor your liver more closely.

NON-STATINS: *Welchol, Zetia, Repatha etc.*

Not all patients can tolerate the optimal statin dose, therefore these non-statin medications may be considered if you are unable to take statins for a variety of reasons. How these medications work can be a little complicated, so I won't bore you with the details. Some of these medications regulate how much cholesterol you absorb from the foods you eat or will help your liver get rid of cholesterol. You should know that some of these medications can be prescribed with statins, but not all of them. These medications also come with side effects that can be annoying but not severe. Lastly, these medications can be pretty expensive, so your doctor may not reach for them as the first choice.

Even if you are taking cholesterol lowering medications, it is still important to continue to make healthy lifestyle choices. Eating a healthy diet and regularly exercising will actually help your medicines work better. If you have questions about your diet and if you are consuming too much cholesterol, bring it up at your next visit-- you may be surprised by what you learn.

While monitoring your cholesterol levels isn't done as often as blood sugar monitoring in a diabetic or blood pressure monitoring in a person with high blood pressure, it is still important to take your prescribed cholesterol medication every day and keep your scheduled appointments.

As you are beginning to learn, your risk of having a stroke or heart attack isn't only dependent on just ONE FACTOR. It may seem overwhelming at times, trying to keep track of all the factors that could raise your risk of a cardiovascular event, but we are here to help. We welcome any questions or concerns about your health, medications, and lifestyle choices.

If you haven't been seen in the clinic for over a year, consider calling the clinic to schedule an appointment for a checkup and discussion about your health and health goals.

Your most recent cholesterol blood work was on: _____

Your cholesterol medications are: _____

_____

_____

Let us know if you have run out of your medications and need a refill.

Your next office visit is on: _____