CRITICAL

Heart
Disease
Tests

That Could

SAVE
YOUR LIFE!

by Dr. Mark Stengler

S STENGLER

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These critical heart disease tests your doctor is ignoring could SAVE YOUR LIFE!

"I'm only in my fifties and my arteries are already all plugged up. I even had to agree to have stents put in! I just don't get it doc my cholesterol levels weren't even that high!"

With over 205,000 Americans having a second heart attack every year, Jim is far from alone. But if you're already in that boat with him don't despair; there are things you can do to drop your heart risk starting today.

If you haven't had any heart problems yet don't make the mistake of assuming you're safe. The plaque in Jim's arteries certainly didn't build up overnight, and just like Jim you could already be at risk for heart disease, a heart attack, or stroke and not have a clue. After all, there's a reason heart disease is called "the silent killer."

Being unaware that you even have a problem until you have that first heart attack isn't uncommon. Symptoms can be misleading (if you have any at all) and testing, is often inadequate.

Your doctor likely tests for traditional blood markers such as total cholesterol, HDL, LDL, and triglycerides. When your numbers come back looking reasonably good you no doubt relax, thinking you've dodged the heart disease bullet for another year. But that decision could turn out to be a deadly mistake.

75% of heart attack victims have "normal" LDL cholesterol

Traditional blood markers are only part of the picture. Focusing only on these lipid values is dangerous, and "normal" values don't mean you're safe.

Research published in the *American Heart Journal* found that 50% of patients who have been hospitalized with coronary artery disease have normal cholesterol levels. Even more shocking, 75% of people who have had a heart attack had "normal" LDL cholesterol levels according to standard lipid panels! But the number that will really have you rethink standard testing is 60%. That's the percentage of people which standard lipid panels don't identify, but who ARE at risk for cardiovascular disease.

In other words, well over half the people who are at risk for this deadly disease are heading home thinking they're in the clear. Yet, for over 15 years, the medical

establishment has had the public convinced that heart disease prevention simply requires testing your basic lipids, and medicating with statin drugs.

Take a second life-saving look at your LDL levels

You've, no doubt, heard of LDL cholesterol. LDL is checked in traditional lipid panels, however there are far more accurate ways to measure LDL.

Elevated LDL Cholesterol Direct: Standard lipid panels use a calculated method to determine your numbers which is often inaccurate and doesn't reveal your real risk. One of the problems with a calculated LDL is that it's strongly influenced by your triglyceride (fat) concentration. The more accurate way to test LDL is with what is known as a Direct LDL measurement.

Genetics, weight, a high fat or high carbohydrate diet, a sedentary lifestyle, certain medical conditions like kidney disease or hypothyroidism, and some drugs can cause your LDL levels to rise. To lower your LDL levels keep your saturated fats moderate, your carbs low (especially high glycemic carbs) and make sure you're getting enough good fats.

Watching your weight, giving up smoking, and getting regular exercise can all help bring your LDL numbers down too. And supplements such as red yeast rice, plant sterols, garlic extract, Indian Gooseberry and niacin can help normalize your LDL without resorting to drugs.

Elevated Small Dense LDL: Emerging research reveals that the *size* of your LDL particles is a far more important measurement than your total LDL cholesterol number. Small LDL particles can penetrate your artery walls and, once inside, they kick off inflammation and plaque buildup.

The causes behind a raised small particle LDL level are essentially the same as overall elevated LDL cholesterol, but insulin resistance and diabetes can also raise your numbers. Certain drugs, like steroids and beta blockers, can also drive your levels up.

Low HDL 2b Cholesterol: HDL is often called "good cholesterol." The higher your HDL level the more protection it offers by pulling excessive cholesterol from your blood stream and removing it from where it doesn't belong. There are subtypes of HDL with the most important being *HDL 2b*. While your total HDL level may show up as normal on a standard lipid test you may still have a low HDL 2b level which is a cardiovascular risk.

Genetics, too many carbs in the diet, insulin resistance, being sedentary and smoking can all cause low HDL 2b levels. Medical conditions such as hypothyroidism, diabetes, obesity and kidney disease, as well as beta blockers and steroids can all lower your levels. You can raise you HDL 2b levels by slashing the carbohydrates and trans fats in your diet. In addition, losing weight, regular exercise, quitting smoking and supplementing with niacin can all help raise your numbers.

Elevated Apo B: Apo B is a component of LDL cholesterol that helps your cells take in LDL. It's a more accurate measurement of LDL. Elevated levels may mean you're at increased risk for heart disease, even if your regular LDL cholesterol is normal.

Like the other lipids discussed above, elevated Apo B has most of the same general risks and treatments. Additional supplements that can help to lower Apo B include omega-3 fatty acids, plant sterols and high fiber foods.

Low Apo A-1: Apo A-1 is a major component of HDL cholesterol, which helps to clear cholesterol from your artery walls. The higher your Apo A-1 the better protection you have against cardiovascular disease. For the causes of it being too low, and advice on elevating it, see "Low HDL 2b Cholesterol" above.

Elevated Lp(a) Lipoprotein a: Lp(a) Lipoprotein a is an LDL particle with "apoprotein a" attached to it. Elevated levels are linked to blood clots, atherosclerosis, and a three to five-fold increased risk for cardiovascular disease. Elevated Lp(a) levels are *mainly* caused by genetics, but can also increase with menopause and lower estrogen levels in women, diabetes, and kidney disease. Lower your levels naturally with niacin, fish oil, coenzyme Q10, and N'acetylcysteine supplements.

Curbing chronic inflammation is key to heart health

Chronic inflammation in your blood vessels causes plaque to form leading to a hardening of the arteries, known as atherosclerosis. There are tests available that can effectively measure blood vessel and artery inflammation to give you a better picture of your heart health than standard lipid tests alone.

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Elevated C Reactive Protein (CRP): While there are more doctors measuring CRP levels these days, it's still not routinely tested. And that's a real shame since large population studies have shown that elevated levels of this important marker of inflammation are a strong indicator of cardiovascular disease. People with higher CRP levels have a two to four-fold increased risk of developing atherosclerotic disease compared to those with low levels!

Elevated CRP levels are caused be anything that increases inflammation including obesity, diabetes, poor diet, stress, infections, sleep apnea, and chronic illnesses such as hypothyroidism, kidney disease, autoimmune diseases, and high blood pressure. To bring your CRP levels down try a Mediterranean style diet, regular exercise and quitting smoking. Supplements, including Coenzyme Q10, vitamin E, vitamin D, niacin, pine bark extract, and fish oil can also help bring your numbers down.

Elevated Interluekin-6: Interluekin-6, a protein known as a cytokine, increases when there's an inflammatory response by your body like you'd see with an infection. It also rises with high lipid levels, cardiovascular disease, diabetes, heart failure, autoimmune disease, gum disease, high blood pressure, and smoking. Interluekin-6 levels are often lowered with simple diet changes and stress management. But if you're suffering with an acute or chronic infection, you'll need to knock out the infection to bring your levels back down.

Galectin-3: Galectin-3 is a direct marker of inflammation. The protein binds to carbohydrates known as beta-galactosides. Galectin-3 plays an important role in your body's immune response, promoting inflammation. Research has shown that higher galectin-3 levels are a good predictor of heart failure and may lead to cardiovascular disease and even death. If you have heart disease, galectin-3 is an FDA cleared blood test, and your cardiologist may use it to monitor your disease. Galectin-3 also increases when you have an injury. Modified citrus pectin supplements can naturally reduce your galectin-3 levels.

Homocysteine: Homocysteine is the result of the amino acid methionine being metabolized by your body. Elevated levels of this protein metabolite increase your risk of atherosclerosis and blood clots, and they can send your cardiovascular risk skyrocketing by up to a 200%! Elevated homocysteine levels are mainly caused by your genetics (MTHFR gene mutation), but they can also go up because of kidney disease, pernicious anemia, or hypothyroidism.

Homocysteine levels are reduced by eating greener leafy vegetables and cutting back on meat, eggs, and dairy. Folic acid, trimethylglycine, vitamin B6, and vitamin B12 supplements can also help lower your levels.

The link between metabolic markers and your heart

Cardiometabolic risk is a term doctors and scientists use to describe your chances of having diabetes, heart disease or stroke. Cardiometabolic markers are indicators found in your blood that are measured, to help determine your risks for these diseases.

Elevated Hemoglobin A1C, Fasting Glucose, and Fasting Insulin: Hemoglobin A1C, fasting glucose and fasting insulin levels can all be measured to assess how your body metabolizes glucose. With prediabetes and diabetes rates skyrocketing, and their strong link to cardiovascular disease, it's critical to have these numbers checked.

If your A1C, fasting glucose and fasting insulin levels are high the cause could be genetics, obesity (especially increased abdominal fat), a high carb diet, a sedentary lifestyle, stress, nutritional deficiencies, or even medications such as steroids. Diabetes, sleep apnea, polycystic ovarian syndrome, and Cushing's disease can raise your levels too.

You can reduce your numbers naturally with a diet that's low in carbohydrates, high in fiber, and that includes a moderate amount of protein. To get your numbers back to healthy levels it's also important to slash your stress, get regular exercise and adequate rest, and to lose weight if needed. Supplements such as chromium, biotin, berberine, cinnamon extract, and turmeric are also helpful.

Fibrinogen: Fibrinogen is a protein that forms into a clot in response to a tissue or blood vessel injury. Having raised fibrinogen levels increases your risk of a stroke, but when your LDL cholesterol are also up, your risk for coronary disease can increase by a frightening 6 fold! You can lower your fibrinogen levels naturally by drinking more water, losing weight and regular exercise. Quitting smoking and starting on certain supplements such as nattokinase, fish oil, vitamin E, and niacin could also help bring your levels down.

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Elevated Parathyroid Hormone (PTH): Parathyroid hormone, produced by glands located near your thyroid, helps regulate calcium, vitamin D, and phosphorous in your blood stream. A raised PTH level can lead to raised calcium levels which can contribute to heart disease. Elevated PTH is most often caused by vitamin D deficiency or a tumor of the parathyroid glands, and treatment depends on the cause. If a tumor is causing your elevated levels then you'll likely need surgery, and if they're due to low vitamin D then supplements may be able to help.

Abnormal Leptin: Leptin, a hormone made by fat cells and transported by the blood stream to the brain, regulates your appetite and metabolism. Overweight people often have leptin resistance. Although they produce high amounts of the hormone, it doesn't make it to the brain cells, leading to increased hunger. Leptin resistance is typically caused by being overweight, genetics, or diabetes. Losing weight, getting adequate sleep and improving your insulin sensitivity can improve your leptin resistance.

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Low vitamin D: Low levels of vitamin D increase your risk of stroke, high blood pressure, heart failure, and heart disease. You may be low on D because of a lack of sunlight, absorption problems, sunscreen, certain medications, or genetics. Your D levels can be increased by spending a bit more time in the sun and taking a vitamin D supplement.

Omega 3 and omega 6 fatty acid imbalance: Your levels of omega 3 fatty acids and omega 6 fatty acids—as well as their ratio—are linked to your cardiovascular risk. Omega 3 fatty acids naturally thin your blood, help with normal heart rhythm, and reduce inflammation. Excessive omega 6 fatty acids (found in meat, dairy products, vegetable oils and soy) contribute to inflammation and blood clots. You can improve your ratio of these two fatty acids by eating more omega 3 rich foods (as found in cold water fish, green leafy vegetables, beans, flaxseeds and flaxseed oils) and by supplementing with omega 3 rich oils.

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The last category of cardiovascular markers that standard testing ignores are referred to as cardiopathology. These tests can reveal hidden disease in your cardiovascular organs.

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Article Citations:

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In other words, well over half the people who are at risk for this deadly disease are heading home thinking they're in the clear.[4] Yet, for over 15 years, the medical

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