

Heart TALK

Heart-healthy and Stroke-free Living with Dr. Amy L. Doneen, DNP, ARNP

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*Thoughts from
Dr. Amy*

SURPRISING FACTS AND MYTHS ABOUT CHOLESTEROL

Cholesterol is the most demonized, misunderstood and controversial substance in our bodies and our diets. To help clear up the confusion, the CDC has designated September as National Cholesterol Education Month. It's also a great time to get your lipid levels checked — and if they're too high, to work with your medical provider to reduce them. Here's a look at nine common cholesterol myths and some recent discoveries that may surprise you

MYTH: Cholesterol is inherently evil.

FACT: You couldn't survive without cholesterol. This waxy substance produced by the liver plays many essential roles in our body, from waterproofing cell membranes to helping produce vitamin D, bile acids that help you digest fat, and sex hormones, including testosterone, estrogen, and progesterone. Cholesterol is ferried through your body by molecular "submarines" called lipoproteins, such as low-density lipoprotein (LDL) and high-density lipoprotein (HDL).

MYTH: High LDL (bad) cholesterol means you could be headed for a heart attack.

FACT: Most heart attacks happen to people with "normal" levels of LDL. Life insurance companies know a surprising secret about cholesterol that most doctors never tell patients: When it comes to rating your risk for a fatal heart attack, the least important cholesterol number is your level of LDL. In fact, life insurance actuaries don't even look at LDL levels, because large studies show it's worst predictor of heart attack risk. In [a national study of about 36,000 people](#) who had been hospitalized for a heart attack, nearly 75% had LDL levels that fell

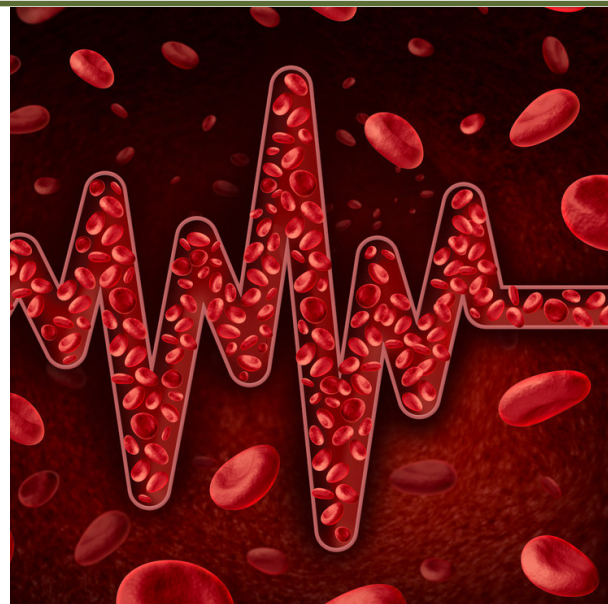
within recommended targets and close to half had "optimal" levels.

Instead, life insurance companies use a simple formula, based on two numbers that should be in everyone's medical record, to rate heart attack risk. They divide your total cholesterol by the level of HDL (good) cholesterol. The result, called the total cholesterol-to-HDL ratio (TC/HDL ratio) was found to be the best predictor of heart attack risk in the Women's Health Study. Based on evidence from multiple large studies, the BaleDoneen Method considers a TC/HDL ratio of 3.5 to a desirable target and a ratio below 3 to be optimal.

People with a ratio below 3 and [no inflammation in their arteries](#) enjoy vastly superior protection against heart attacks and strokes, compared to people with higher ratios, and are also less likely to develop arterial disease at all.

MYTH: Conventional lipid testing checks for all cholesterol abnormalities that raise risk for cardiovascular disease (CVD).

FACT: The conventional test doesn't measure a dangerous type of cholesterol that has been shown to actually cause CVD: lipoprotein (a), or Lp(a). In three large studies, high levels of Lp(a) tripled heart



attack risk. Elevated levels (a genetically influenced condition found in about 20 percent of the population) also raise risk for developing CVD at a relatively young age. In 2010, the European Atherosclerosis Society (EAS) issued a scientific statement calling for routine screening and treatment of elevated Lp(a) levels as "an important priority to reduce cardiovascular risk."

Yet in the U.S., it's still not the standard of care to treat — or even measure — this dangerous form of cholesterol that is found at elevated levels in up to one-third of heart attack survivors. The BaleDoneen Method recommends that everyone get the Lp(a) blood test, which can be performed at the same time as conventional cholesterol testing, at a cost of about \$20.

Unlike LDL (bad) cholesterol, Lp(a) isn't affected by lifestyle nor can it be effectively treated with cholesterol-lowering statin drugs if it's elevated, according to [a new study published in Circulation](#). The study also found that aspirin has little, if any, effect on Lp(a) levels. Instead, the best treatment is niacin (vitamin B3), which should only be taken under medical supervision. The EAS reports that niacin therapy can lower Lp(a) by up to 40% — a poten-

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"I Beat the Heart Attack Gene!"

At age 40, Dwayne Nill considered himself to be in perfect health — until he applied for life insurance. "They did a blood test, and when I showed the results to my doctor, he was astounded that I qualified for the policy because my cholesterol was through the roof," he recalls. Further testing at the Heart Attack & Stroke Prevention Center, performed in 2002, showed that Dwayne had metabolic syndrome, a cluster of disorders that triples risk for heart attack and stroke and quadruples it for type 2 diabetes. This condition affects nearly 50 million Americans, many of whom are undiagnosed and unaware of their peril.

The tests also showed that he had cardiovascular disease (CVD) and high levels of inflammation, the "fire" in the arteries that can spark a heart attack or stroke in people with CVD. "Finding this out was scary because my mom had a long battle with cardiovascular problems, including high cholesterol and a stroke — and passed away at age 64," says Dwayne, who turned out to be a carrier of the 9P21 "heart attack gene." However, he was relieved to learn that with the optimal medical care advised by the BaleDoneen Method and certain lifestyle changes, all of his disorders were highly treatable, despite his genetic risk.

The Habit Helps Beat the Heart Attack Gene

As discussed more fully in the BaleDoneen book, [Beat the Heart Attack Gene](#), about 50% of Americans carry genes that raise their risk for heart attacks and strokes, such as the 9P21 gene. About 25% of the U.S. population, including Dwayne, is homozygous for this gene, meaning that they have inherited it from both their mother and father. Large studies show that this genetic profile doubles risk for suffering a heart attack or developing coronary artery disease (CAD) at an early age, compared to non-carriers of this gene.

The good news, [as we recently reported](#), is that people with genetic risk for heart attacks and CAD (the leading killer of Americans) can slash it by about 50% if they are physically fit, according to a study of nearly 500,000 people. Another new study found that regular exercise helps prevent or manage more than 40 other diseases, including cancer, diabetes, depression, arthritis and obesity. The researchers also reported that physical inactivity kills 5.3 million people prematurely each year — more than the toll from smoking!

Keeping fit used to be a challenge for Dwayne. "For 15 years," he says, "I was a truck driver, sitting all day, and didn't get a whole lot of exercise." Despite his efforts to eat a healthy diet on the road, and to increase his physical activity, his weight climbed to 285 pounds on his 5'11" frame. Like nearly

40% of Americans — about 100 million people — Dwayne was obese (defined as a body mass index, or BMI, of 30 or higher), further magnifying his risk for heart attacks, as well as diabetes, several forms of cancer and a host of other chronic or life-threatening conditions.

A Dangerous Gang of 5 Cardiovascular Thugs

Eighty-five percent of Americans have never heard of [metabolic syndrome](#) and only 0.6% think they have it themselves, a national health survey reported. In reality, this cluster of five cardiovascular risk factors that often strike in tandem affects 26% of US adults, multiplying their risk for heart attacks, strokes and type 2 diabetes. It's so easy to tell if you have this prediabetic disorder that you can even diagnose yourself, using a few basic numbers every patient should know. To qualify for this diagnosis, you must have three or more of the disorders listed below:

- High triglycerides (a level of 150 mg/dL or above)
- High blood pressure (130/90 or above)
- Low HDL "good" cholesterol (below 40 mg/dL for a man or below 50 mg/dL for a woman)
- A large waist (above 40 inches for a man or above 35 inches for a woman)
- High fasting blood sugar (a level of 100 mg/dL or above)

Although Dwayne's level of heart-protective HDL was in the healthy range, he was under attack by the other four of these cardiovascular villains. Like everyone else with metabolic syndrome, he also had [insulin resistance](#), the root cause of 70% of [heart attacks](#) and almost all cases of type 2 diabetes. "During my initial evaluation with the BaleDoneen Method, my level of triglycerides was so high [412 mg/dL] that it sounded like more fat than blood was flowing through my arteries," he recalls.

Moreover, along with struggling with his weight, he had a long history of high blood pressure, the leading risk factor for stroke. "I'd always passed the Department of Transportation physical, which says the top number [systolic pressure] has to be below 160, so I didn't see it as a big issue," he recalls. Actually, even mildly elevated blood pressure has been shown to double risk for fatal cardiovascular disease and triple it for heart attack, compared to pressure in the normal range, defined as below 120/80 in [new blood pressure guidelines](#).

An Astonishing Health Turnaround

Now 65 and retired, Dwayne has dramatically changed his lifestyle. Three years ago, he started exercising daily, while also following [a diet based on his DNA](#), as advised by the Bale-

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• *September Recipe* •

No-cook Asian Chicken Lettuce Wraps with Dipping Sauce



Ready in just minutes with no cooking, this zesty, Asian-inspired recipe is sure to become a family favorite. It's perfect if you're following a low-carb or gluten-free diet, or watching your weight, because the wraps are low in calories but rich in flavor. Studies suggest that people who eat chicken regularly tend to weigh less and may also have lower blood pressure. The American Heart Association recommends eating chicken or fish instead of red meat to reduce your risk for developing high cholesterol and heart disease. This recipe is also packed with heart-healthy fiber and vitamins.

INGREDIENTS

- 2 green onions
- 1 store-roasted chicken, meat removed and shredded
- 1/2 cup shredded carrots
- 1/2 cup shredded cabbage
- 1/2 cup chopped water chestnuts
- 1/4 teaspoon ground black pepper
- 3 tablespoons rice vinegar, divided
- 1 tablespoon olive or sesame oil
- 2 tablespoons low-sodium, gluten-free soy sauce
- 2 tablespoons water
- 1/4 teaspoon crushed red pepper flakes, or to taste
- 1 large head of Boston or Bibb lettuce (leaves only)

PREPARATION

FOR THE CHICKEN WRAPS: Trim off and discard root ends of green onions. Slice green tops and set aside. Slice the white parts of the onions and combine in a large bowl with the shredded chicken, carrots, water chestnuts, black pepper, 1 tablespoon of the rice vinegar and the oil. Toss to combine, then spoon the mixture into lettuce leaves and roll up. If desired, slice each wrap in half.

FOR THE DIPPING SAUCE: Combine the sliced green onion tops, the remaining two tablespoons of rice vinegar, the soy sauce and the water. Divide the dipping sauce into four small serving containers. Serve with the lettuce wraps and enjoy! *Serves four.*

Adapted from Allrecipes.com and Bhg.com.



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for the latest news on heart health and wellness.



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Doneen Method. "I was inspired by my doctor, Amy Doneen, DNP, because she runs marathons, and I thought, 'If she can do it, I can certainly go to the gym every day.' I work out for 35 to 45 minutes a day, running on the treadmill, lifting weights, boxing and using the elliptical machine.

"I used to love barbecued ribs, but I've cut out red meat, simple carbs like rice and potatoes, and all sweets and desserts completely," adds the grandfather of three. Instead, he eats a low-carb diet that's high in fruits, vegetables, nuts and fish with moderate amounts of healthy fats, such as olive oil. Thanks to these lifestyle changes, he's lost 45 pounds. "When I went to have my Department of Transportation physical this year," he says, "I was in such good shape that the doctor told me that physically, I was like a 55-year-old man — ten years younger than my actual age!"

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tially life-saving benefit. Decreasing Lp(a) was shown to reduce risk for cardiovascular events by about 75% in a recent study published in *Circulation*, highlighting the value of getting tested and treated if your levels are elevated.

MYTH: Triglycerides cause heart disease.

FACT: Triglycerides (TG), a type of blood fat, don't invade the artery wall and form plaque. However, high triglycerides mark another huge problem: insulin resistance, a pre-diabetic condition that is the root cause of 70 percent of heart attacks. High TG levels are also one of the warning signs of [metabolic syndrome](#), a cluster of abnormalities that multiple your risk for heart disease, stroke, and type 2 diabetes.

To be diagnosed with metabolic syndrome, you must have three or more of the following disorders: high blood pressure, high blood sugar, a large waistline, high triglycerides, and low HDL. This dangerous cluster of risk factors affects 26% of adults — nearly 50 million Americans — yet often goes undiagnosed. The good news is that it's highly treatable, typically with lifestyle changes that include weight loss and increasing physical activity. Always consult your medical provider before starting a new workout to make sure it's appropriate for you.

MYTH: The higher your level of HDL, the safer you are from heart disease.

FACT: While HDL is regarded as the "good" cholesterol because it usually helps reduce the risk of plaque buildup in the arteries, a new study of nearly 6,000 older adults found that people with very

"The BaleDoneen Method Saved My Life!"

Recent tests at the Heart Attack & Stroke Prevention Center confirm that Dwayne's hard work to turn his health around has paid off. His triglycerides levels, which were nearly triple the normal number in 2002, are now in the healthy range, as are all of his cholesterol numbers. His blood pressure has improved so much that he's gone from needing three medications to control it to just one, and inflammation testing revealed that his arteries are no longer on fire.

"There's no doubt in my mind that without the BaleDoneen Method, I wouldn't be here today, given my genetic predisposition for heart attacks and strokes," says Dwayne. "I found out what was killing me and got the guidance I needed to take action that has saved my life. Instead

low or very high levels of HDL had a higher risk for death from cardiovascular causes. These findings were presented at the European Society of Cardiology conference in August and are considered preliminary until they are published in a peer-reviewed journal.

One theory is that very high levels of HDL may represent "dysfunctional HDL" that promotes rather than protects against arterial disease, one of the study authors [explained in a statement](#), adding that, "One thing is certain: The mantra of HDL cholesterol as the 'good' cholesterol may no longer be the case for everyone." Earlier this year, [a very large study published in European Heart Journal](#) also linked very high levels of HDL to increase risk for heart disease and all-cause mortality, a finding that the researchers themselves called "paradoxical."

MYTH: All LDL particles are equally dangerous.

FACT: The size of the particles matters. Think of beach balls and bullets. Some LDL particles are small and dense, making it easier for them to penetrate the arterial lining and form plaque, while others are big and fluffy, so they tend to bounce off the artery walls. People who mostly have small, dense LDL cholesterol are up to three times more likely to have heart attacks than those with big, fluffy particles.

MYTH: Americans have the world's highest cholesterol levels.

FACT: Contrary to the stereotype that most of us are just a few Big Macs away from a heart attack, US men rank 83rd in the world in average total cholesterol and



Dr. Amy Doneen congratulates Dwayne Nill on working out daily to get fit and heart healthy.

of being a heart attack or stroke waiting to happen, I can walk into a room with other 65-year-olds and feel confident that nobody else is in as great shape as I am."

US women 81st, according to the World Health Organization. For both sexes, the average is 197 mg/dL, slightly below the borderline high range (200 to 239 mg/dL).

In Colombia, men average a whopping 244 mg/dL — a level that doubles heart-disease risk — while Israeli, Libyan, Norwegian, and Uruguayan women are in a four-way tie for the highest average with 232.

MYTH: Eggs clogs up arteries.

FACT: It's true that eggs are high in dietary cholesterol, with upwards of 200 mg., mainly in the yolk. [Research shows](#), however, that eating three or more eggs a day boosts blood concentrations of both good and bad cholesterol. The LDL particles tend to be the light, fluffy ones that are least likely to enter the arterial wall, while the increased HDL helps keep the arteries clean, suggesting that most people's bodies handle cholesterol from eggs in a way that's unlikely to harm the heart. The researchers say that their findings add to growing evidence that eggs are not "a dietary evil."

MYTH: There are no visible symptoms of high cholesterol.

FACT: Some people with high cholesterol develop yellowish-red bumps called xanthomas that can occur on eyelids, joints, hands or other parts of the body. People with diabetes or an inherited condition called familial hypercholesterolemia are more likely to have xanthomas. The best way to tell if your cholesterol is too high is to have it checked every three years, starting at age 20, or more often, if advised by your healthcare provider.