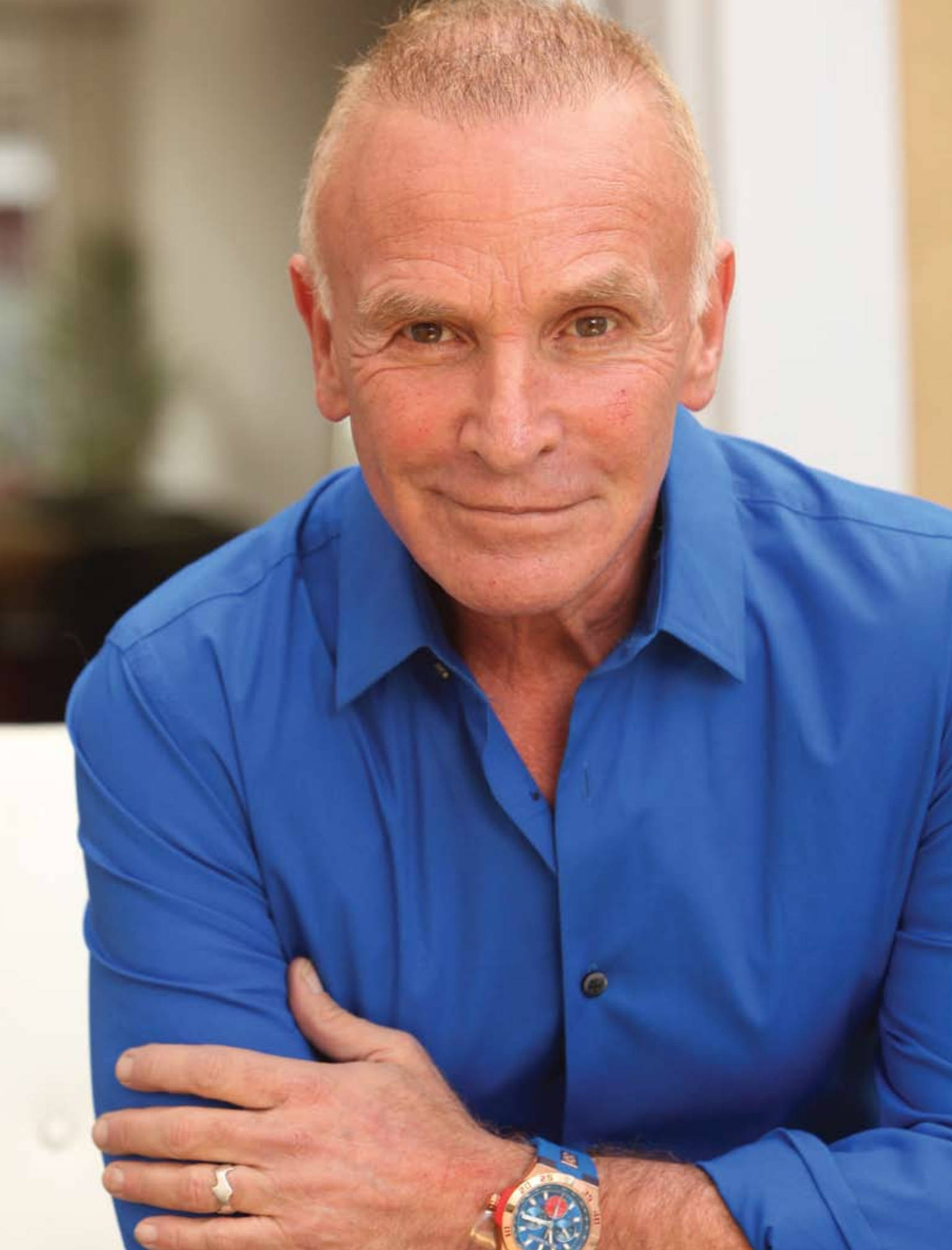

The Great Cholesterol Myth

Trying to prevent heart disease by lowering cholesterol is like trying to prevent obesity by cutting out lettuce. Surprised? Read on.

JONNY BOWDEN, PHD, CNS, aka "THE ROGUE NUTRITIONIST"

Last year, cardiologist Stephen Sinatra and I came together to write a book, *The Great Cholesterol Myth: Why Lowering Cholesterol Won't Prevent Heart Disease and the Statin-Free Plan That Will.* We believe that a weird mixture of misinformation, scientifically questionable studies, corporate greed, and deceptive marketing has conspired to create one of the most indestructible and damaging myths in medical history: that cholesterol causes heart disease.

The real tragedy is that by putting all our attention on cholesterol, we've virtually ignored the *real* causes of heart disease: inflammation, oxidative damage, stress, and sugar. These are things we can actually *do* something about with food, supplements, and lifestyle changes, none of which have the costs or side effects of drugs.

First, let's start with some surprising facts.

- Cholesterol is a minor player in heart disease
- Cholesterol levels are a poor predictor of heart attacks
- Half of heart attacks happen to people with normal cholesterol
- Half the people with elevated cholesterol have healthy hearts
- Lowering cholesterol has an extremely limited benefit

I haven't come to these conclusions lightly, and I wouldn't expect you to take them at face value. The case against cholesterol as a cause of heart disease (or even as an important marker for it) has been crumbling steadily for decades, but getting the information out there is difficult. (The two top cholesterol lowering medications, Lipitor and Zocor, together bring in roughly 34 billion dollars a year for their makers, who have a strong vested interest in keeping the cholesterol theory alive. And they're hardly the only ones who do.)

But if you're willing to break with conventional thinking for a minute, consider the following study, just one of the many we discuss in the book.

The Lyon Diet-Heart Study

In the 1990s, French researchers decided to run an experiment known as the Lyon Diet-Heart Study to test the effect of different diets on heart disease.

They took two groups of men who had every imaginable risk factor for heart disease. All of them had survived a heart attack. They had high cholesterol, they smoked, they didn't exercise, and they had high levels of stress. Half the men were advised to eat the American Heart Association "prudent diet" (low saturated fat and cholesterol), while the other half were advised to eat a Mediterranean diet high in fish, omega-3s, vegetables, and monounsaturated fat like olive oil.

The study was stopped midway because the reduction in heart attacks in the Mediterranean group was so pronounced—70 percent!—that researchers decided it was unethical to continue.

So what do you think happened to the cholesterol levels in the men who ate the Mediterranean diet and had a 70 percent reduction in deaths? You'd think they must have

dropped like a rock, right?

Think again. Their cholesterol levels didn't budge, and were just as high when the study was stopped as they were when the study began. The men just stopped dying. Cholesterol had nothing to do with it.

So if cholesterol *isn't* the cause of heart disease, what is?

The real cause of heart disease

The primary causes of heart disease are *inflammation* and *oxidative damage,* which feed on each other in a chicken-and-egg scenario. It starts with small injuries to the vascular wall (inflammation) that can be caused by anything from high blood pressure to toxins. Then, oxidized (damaged) LDL-b particles take up residence in the neighborhood: the immune system sends inflammatory cytokines to the area, creating even more inflammation which creates more oxidative damage in a vicious cycle that eventually results in plaque and an increased risk for heart disease. If there was no inflammation, there would be no plaque.

The other two major promoters of heart disease are stress and sugar. Stress releases hormones which harm the artery walls and increase blood pressure. (Stress may be the explanation for why 40 percent of atherosclerotic patients have no other risk factors.)

Sugar—a far worse dietary danger than fat—is inflammatory on its own, but also contributes to insulin resistance and fat gain. Again, it's a vicious circle. Sugar causes insulin resistance which causes you to accumulate more fat, and more fat equals more inflammation. Fat cells are literally tiny hormone factories, spitting out inflammatory cytokines and increasing overall inflammation and arterial damage.

The following is my seven-point program for reducing the risk of heart disease. Note that lowering cholesterol isn't on it. (Note also that managing stress is.) Pay attention to these seven action items, and you just may find that you don't need to worry quite so much about cholesterol after all.

Jonny's 7-point *program* to reduce *the* risk *of* heart disease

1. **Eat an anti-inflammatory diet.**
2. **Reduce grains, starches, sugar, and omega-6s.**
3. **Manage your stress.**
4. **Exercise.**
5. **Drink only in moderation.**
6. **Don't smoke.**
7. **Supplement with antioxidants, vitamin C, coenzyme Q10, omega-3s.**

Speaking of supplements …

Ask your typical mainstream doctor about nutritional supplements and the first thing you're likely to hear is this: "There's no good research showing they work." I have heard this refrain time and time again when I discuss nutritional medicine with my more conservative colleagues.

It's not true.

You or your doctor can go online to the National Institute of Medicine's library, pubmed.com, and put into the search box virtually any vitamin or herb you can think of. Depending on what you choose, hundreds to thousands of citations will pop up. So the problem isn't an absence of research.

The problem is twofold. One, the conventional training of medical doctors in this country is highly biased toward pharmaceuticals. And two, much of the research on vitamins flies beneath the radar. Your overworked doctor barely has time to scan the abstracts of the *New England Journal of Medicine* every month, let alone dig deeply into the hundreds of studies that are published every year on vitamins and nutrients in journals like the *American Journal of Clinical Nutrition*. The vast majority of doctors in this country get no training whatsoever in nutrition, and those who do receive only the most rudimentary and superficial introduction to the subject. Put this together with the built-in medical school bias in favor of patent medicines and it's easy to see why doctors often fail to think of natural substances as legitimate tools that can help keep people healthy.

Many supplements are particularly important for heart health. Here's a short guide to the most important ones. If you're not taking these, perhaps you should be.

OMEGA-3S: THE WELLNESS MOLECULE

Omega-3s are among the most anti-inflammatory substances on the planet and should be part of everyone's heart-healthy supplement program.

COENZYME Q10: FUEL FOR THE HEART

Coenzyme Q10 is needed to make cel-

lular energy, and organs that require a lot of energy—like the heart—need the most. It's made in every cell in the body, your ability to make it diminishes with age, and it's virtually unavailable in any meaningful amount from food. (It's also depleted by cholesterol-lowering medications, so if you're on one of those you simply must supplement with coenzyme Q10 on a daily basis!)

D-RIBOSE: THE ENERGY MAKER

D-Ribose is a five-carbon sugar and is one of the components of ATP, the energy molecule the body uses to power all activities. Without D-ribose, there is no ATP. Without ATP, there is no energy.

L-CARNITINE: THE ENERGY TRANSPORT SYSTEM

Carnitine acts as a kind of shuttle bus, loading up fatty acids and transporting them into tiny structures within the cell called the *mitochondria* where they can be burned for energy. Because the heart gets 60 percent of its energy from fat, it's very important that the body have enough L-carnitine to shuttle the fatty acids into the heart's muscle cells.

MAGNESIUM: THE GREAT RELAXER

Magnesium lowers blood pressure, helps control blood sugar, and relaxes the lining of the blood vessels. Magnesium also inhibits platelet aggregation, which is helpful in preventing the development of clots. Almost all dietary surveys show that Americans aren't getting nearly enough magnesium.

PANTETHINE: YOUR SECRET WEAPON

Pantethine is a metabolically active (and somewhat more expensive) form of vitamin B_5 (pantothenic acid). Pantethine reduces the oxidation of LDL. No fewer than twenty-eight clinical trials in humans have shown that pantethine produces significant positive changes in triglycerides, LDL cholesterol, and HDL cholesterol.

VITAMIN C: POWERFUL ANTIOXIDANT

Vitamin C is one of the most powerful antioxidants in the world, and because

heart disease is initiated by damage caused by free radicals (oxidative damage), any help you can get in the antioxidant department is a good thing indeed.

And it's not just theoretical: a large 2011 study in the *American Heart Journal* found that the lower the level of vitamin C in the blood, the higher the risk for heart failure.

CURCUMIN: THE NEW SUPERSTAR OF SUPPLEMENTS

This extract from the Indian spice turmeric has multiple benefits, not the least of which is that it's highly anti-inflammatory. Scientific research has demonstrated its anti-inflammatory, antioxidant, antithrombotic, and cardiovascular-protective effects. It also reduces oxidized LDL cholesterol. Curcumin is not generally well-absorbed, so source is important. One particularly well-absorbed form is called BCM-95 curcumin, and it's available in supplements like Terry Naturally.

RESVERATROL: NOT JUST FOR ANTI-AGING

Resveratrol is the ingredient in red wine that's best known for its "anti-aging" activity. It helps protect the arteries, improves their elasticity, inhibits blood clots, and lowers both oxidized LDL and blood pressure. Not a bad résumé!

It's both a strong antioxidant and a strong anti-inflammatory, inhibiting a number of inflammatory enzymes that can contribute to heart disease. The recommended dose is at least 250 mg a day of trans-resveratrol, the active component of resveratrol. Read labels carefully: many won't tell you how much resveratrol is of the trans- variety. One brand I particularly like is Reservera-age, which comes in two strengths and provides either 250 mg or 500 mg of the trans- form in every capsule.

COCOA FLAVANOLS: NITRIC OXIDE BOOSTER

Plant chemicals in cocoa known as flavanols help the body synthesize a compound called *nitric oxide,* which is critical for healthy blood flow and healthy blood pressure. Nitric oxide also improves platelet function, making your blood less sticky. It also makes the lining of the arteries less attractive for white blood cells to attach to and stick around. You can get these heart-healthy flavanols in dark chocolate containing at least 60 percent cocoa. One manufacturer, CocoaWell, provides cocoa flavanols in several excellent formulas, including one that incorporates 100 mg of coenzyme Q10.

The bottom line

Lowering *cholesterol* and lowering the risk of *heart disease* are very far from the same thing.

The latter is important.

The former is almost irrelevant.

Jonny Bowden, PhD, CNS, *also known as "The Rogue Nutritionist", is a board-certified nutritionist and the best-selling author of 13 books on health including* The 150 Healthiest Foods On Earth *and* Living Low Carb. *This article is adapted from his latest book,* The Great Cholesterol Myth, *co-written with cardiologist Stephen Sinatra, MD.*