

Cooling the Flames

Reducing Chronic Inflammation Can Decrease Your Risk of Heart Disease

[WRITTEN BY HILDA J. BRUCKER]

Heart disease remains the No. 1 killer of Americans, despite the fact we're bombarded with plenty of information about heart-healthy living: eat a balanced diet, stay active, lose that tummy bulge, and don't even think about smoking, say the experts. Keeping a close eye on cholesterol levels in particular has been a major strategy for fending off heart attacks and strokes. Now, however, emerging research shows it may also be important to lower inflammation levels within your body.

Inflammation is the body's natural defense against injuries or the microbes that cause disease. When the immune system goes to work at the site of an injury or infection, the result can be fever, redness, swelling or pain — all classic signs of inflammation. As healing occurs, the immune response diminishes, inflammation goes away and the body functions normally again. It's only when the immune system is working overtime that inflammation becomes chronic and potentially dangerous.

Doctors have known for a long time that people with inflammatory illnesses like diabetes or rheumatoid arthritis have an extremely high risk of cardiovascular disease (CVD). Yet even seemingly healthy people may

have widespread inflammation they're not even aware of, and, if left unchecked, this inflammation can become a risk factor for heart disease. "What we're talking about is a chronic, but very low level of inflammation that wouldn't even cause you to have pain anywhere," explained Dr. Gina Lundberg, cardiologist and founder of the Women's Heart Health Center at Northside Hospital in Atlanta. This low-grade inflammation can be detected with a simple blood test that measures a protein called C-reactive protein, or CRP. Numerous studies have shown that higher CRP levels are correlated with a higher risk of heart disease and lower levels with a lower risk.





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The Roots of Cardiovascular Disease

The underlying cause of heart disease is usually atherosclerosis, meaning a narrowing of the arteries that supply blood to the heart. But what causes atherosclerosis? For decades, cholesterol has been considered the prime culprit. In the past, doctors sometimes used a “clogged pipe” analogy to describe how LDL cholesterol — the so-called “bad” cholesterol — accumulates and forms unhealthy deposits of plaque on the artery walls.

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This arterial plaque can wreak havoc: decreasing blood flow, blocking an artery entirely, or rupturing and causing a clot to form. These events can ultimately result in a heart attack or stroke.

But according to Lundberg, cholesterol is now known to be only one component of a complex process. “Arterial plaques are not the Crisco-like deposits of pure cholesterol that people imagine. It’s really more like scar tissue — it contains a lot of different kinds of cells,” she pointed out. Since scar tissue is the result of inflammation, this could help explain its link to heart disease. Researchers theorize that when LDL cholesterol gets stuck in artery walls, the immune system goes to work to combat this foreign invader and the artery walls become inflamed. It’s the cellular by-products of this inflammation, and not just LDL, that build up to cause the life-threatening plaques.

“It makes sense that if the atherosclerotic plaque contains inflammatory tissue, then inflammatory markers like CRP would help indicate who has atherosclerosis,” Lundberg said. Yet the medical community is still divided over how useful CRP testing may be in screening people for this precursor to heart disease. Some see it as a rather limited tool, while others believe CRP may someday prove to be a more powerful predictor of heart attacks than cholesterol testing.



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To Test or Not to Test?

Although the CRP test is not new, it's coming under more and more scrutiny as the media reports on research that explores its link to inflammation and heart disease. "People actually walk into my office now and ask for the CRP test, because they think it's the ultimate measure of cardiac risk," Lundberg said. "And really it's no more important than other factors like having elevated cholesterol or high blood pressure. You don't need this test if you're already known to be at high risk."

On the other hand, roughly half the people who have a first heart attack don't have any known risk factors at all — they're relatively fit, don't smoke, and have low cholesterol. This means it's likely there are risk factors out there that have yet to be identified — and chronic inflammation is the latest suspect. So while routine CRP testing is not yet recommended for everyone, some doctors do feel it's a useful tool when a patient's risk of cardiovascular disease is unclear. "There are some groups of people for whom the information from the CRP biomarker may be helpful," said Dr. Viola Vaccarino, a cardiologist, researcher and professor at the Emory University School of Medicine. "And those are the people who are in the intermediate zone — their risk is neither low nor high. In these cases, to have the additional information from CRP may be helpful, but right now the incremental information we get from this new biomarker is relatively limited."

The bottom line? Cholesterol and blood pressure testing are still considered the first line of defense for healthy adults to gauge their risk of future heart disease.

Eating to Reduce Inflammation

Certain lifestyle factors are known to affect inflammation. Smoking promotes the inflammatory process, not just in the lungs but throughout the body. And mild to moderate exercise has been shown to reduce CRP levels in clinical studies — one more reason to get up and move around. Diet is also key. Research has shown that certain foods contain compounds that fight inflammation by blocking the enzymes that fuel it, working much the same way that prescription and over-the-counter anti-inflammatory drugs do, but without unwanted side effects, according to Dr. William Meggs, a researcher at East Carolina University's medical school and author of "The Inflammation Cure."

Cooling the flames of inflammation may be as much within your grasp as your refrigerator door, if you keep the following guidelines in mind.

Opt for fish. Many studies have shown that the omega-3 fatty acids known as DHA and EPA, found in oily fish, are the compounds that work best at suppressing inflammation. The American Heart Association recommends having two to three servings a week of salmon, herring or sardines; with mackerel and swordfish as occasional alternative choices. And if fish is just not palatable to you, the experts are in agreement that taking fish oil capsules daily is the best way to get your omega-3s.

Choose healthy fats. According to Meggs, saturated and trans fats can actually promote inflammation. On the other hand, olive oil and canola oil are known to combat it, so stick with the Mediterranean diet and substitute these for butter or margarine on bread and while cooking. (For more information, see Olive Oil story on page 116).

Snack on seeds and nuts. Many of these contain a plant-based version of an omega-3 that's less potent as an anti-inflammatory than the fish-based oils but can help supplement them. In fact, many

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cardiologists are recommending that their patients eat one handful of unsalted, unroasted almonds or walnuts each day. Flaxseed is also highly rated; eat it whole or grind it in a coffee grinder and sprinkle it on steamed vegetables or breakfast cereal.

Get colorful. The pigments that give many fruits and vegetables their bright colors often indicate the presence of powerful antioxidants that can reverse inflammation. Blueberries in particular have been shown to have many healthful benefits; a good reason to keep a big bag in your freezer. Other purple to dark red foods (grapes, purple cabbage, red onions) are also a smart choice. And of course, yellow to orange foods are high in vitamins A and C, so in the produce aisle, think apricots, carrots, mangoes, yams, yellow peppers and squash. (Nutritionists and doctors recommend you get the antioxidant vitamins from food rather than supplements.)

Learn about lutein. Long linked to heart health, this nutrient has recently been shown to have anti-inflammatory properties. The best sources for it are dark green, leafy vegetables like kale, spinach, romaine lettuce, and that perennial Southern favorite, collard greens.

Spice it up. Spices like ginger, curry and turmeric have long been used in Eastern medicine to fight a variety of ills, and research has shown that they are indeed mildly anti-inflammatory. Look for new recipes that incorporate these spices, or experiment by adding a pinch to your old favorites. **PN**

FOR MORE INFORMATION

For general info and heart-healthy diet advice, please visit the American Heart Association's Web site at www.americanheart.org. To calculate your risk of future heart attack, visit www.reynoldsriskscore.org.