

GET HEART *Healthy*

by Ajay Goel, PhD

Here's a startling statistic: According to the American Heart Association, cardiovascular disease claims more lives each year than all forms of cancer and COPD (think emphysema and chronic bronchitis) combined. In fact, it's the No. 1 cause of death in the United States. While a family history of cardiovascular disease can increase your risk—an early heart attack in a parent doubles the odds of heart attack in men and boosts it by 70 percent in women—the health history you inherit isn't necessarily destiny.

Understanding the many faces of cardiovascular disease and sorting through the conflicting and ever-

changing advice on how to lower your risk can be overwhelming. The latest recommendations for things like cholesterol can seem like a moving target, while the true threats to heart health are rarely discussed by most physicians. Clear the confusion by focusing on these four key areas for a healthier cardiovascular system.

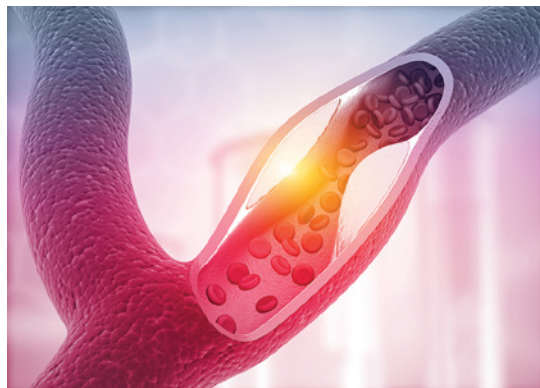
Inflammation

Studies over the past two decades have identified chronic inflammation as being an important risk factor for cardiovascular disease. This low-level inflammation silently damages the walls of your arteries, leading to

a condition called atherosclerosis. The damage occurs over many years as plaque accumulates at the site of inflammation. Chronic inflammation also weakens existing plaque, making it more vulnerable to bursting and causing a dangerous blockage. One of the best ways to determine chronic inflammation is by measuring an inflammatory marker called C-reactive protein (CRP) with a simple blood test. Levels 3 mg/L or higher are believed to be a strong predictor of a first-time heart attack.

One of the best ways to reduce inflammation is with an omega-3 supplement. Rich in two specific

omega-3 fatty acids—eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA)—a new study review by researchers at Sweden’s Karolinska Institute concluded that supplemental omega-3s can reduce inflammation and lower the risk of atherosclerosis. Because omega-3s are such powerful anti-inflammatory compounds, researchers from the University of Minnesota also report that supplementation helps prevent the buildup of plaque and stabilizes any existing plaque in arteries. However, not all omega-3 supplements are created equally. Many are produced using extreme temperatures or chemical solvents. What’s more, the heart-healthy benefits you get from an omega-3 supplement are directly related to the quality of the fish it is sourced from. For optimal benefits, look for an omega-3 supplement derived from salmon and created without heat or chemicals via a process known as vectorization. This method retains the natural phospholipids and peptides found in the fish and ensures the delivery of DHA and EPA to the body’s cells.



mineral out of the blood so it can instead be used to build healthy bones and teeth. One study involving 564 post-menopausal women showed that biologically active K2 even reverses the buildup of deadly arterial plaque. An earlier study of more than 4,800 men and women confirmed that getting enough vitamin K2 prevents aortic calcification and coronary heart disease. Check your supplement labels to ensure you’re getting vitamin K2 and not K1 as research published in the *Journal of Nutrition and Metabolism* shows that K2 is the more effective form of the nutrient for both cardiovascular health and stronger bones.

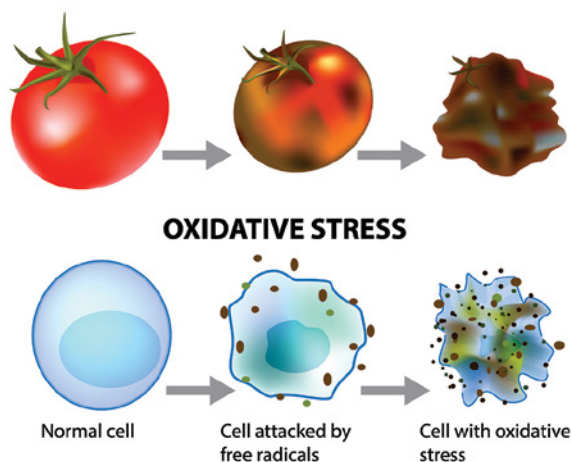
by the body’s own metabolic processes, as well as exposure to environmental toxins like pollution, pesticides, and tobacco smoke. These free-radical reactions create harmful compounds that can injure the cells that make up the endothelium and trigger changes in the artery walls.

The body defends itself against free-radical damage by producing antioxidants such as glutathione, superoxide dismutase (SOD), and catalase. But when free-radical levels overwhelm the body’s ability to prevent this damage, taking a supplemental antioxidant can help offer protection. One of the most effective supplemental antioxidants is French grape seed extract. This multi-tasking nutrient has been found to not only reduce oxidation, but to also increase vasodilation and decrease inflammation within the arteries. Taken together, these actions can lower the risk of atherosclerosis. But to get the most from your supplement, check the label to make sure it contains a proprietary form of grape seed extract called VX1, which is standardized to a low molecular weight and is tannin-free to ensure optimal absorption and bioavailability.

Coronary Artery Calcification

The buildup of calcium deposits, technically called coronary arterial calcification (CAC), contributes to the accumulation of plaque that can narrow arteries. This reduces blood flow, causes your arteries to become stiff, and eventually increases your risk of a heart attack or stroke. Studies have found that arterial calcification also sets you up for other cardiovascular problems including high blood pressure, aortic stenosis (where the heart’s aortic valve narrows), cardiac hypertrophy (a thickening of the heart muscle), and congestive heart failure.

One of the easiest ways to prevent CAC is with vitamin K2. Research shows that K2 discourages the formation of calcium deposits by escorting the



Oxidation

While cholesterol has been painted as a major risk factor for heart disease, recent studies suggest that it’s actually *oxidized* LDL cholesterol that poses the biggest threat. This oxidation is a direct result of free-radical damage triggered

Blood Pressure

Clinically known as hypertension, high blood pressure affects about 27 percent of all Americans. Often called the “silent killer” because it has no symptoms, high blood pressure occurs when the pressure inside your large arteries is too high—and it’s a leading cause of heart attack and stroke. What’s considered too high? Blood pressure that reaches 130/80 or above on a consistent basis.

The top number, or systolic pressure (pronounced sis-tah-lick), represents the peak pressure generated in your arteries when your heart beats. The bottom number, or diastolic pressure (pronounced die-as-tah-lick), indicates the pressure when your heart is at rest between heartbeats.

6 Lifestyle Factors that compromise **CARDIOVASCULAR HEALTH**

**Alcohol
overindulgence**

**A diet
high in
processed
foods**

**Being
overweight
or obese**

**Chronic
stress**

**Physical
inactivity**

**Smoking or
exposure to
second-hand
smoke**

High blood pressure does not discriminate. It affects every social class, every race, and every age. However, certain groups are especially vulnerable to hypertension, according to the National Heart, Lung, and Blood Institute:

- Men over the age of 45 and women over 55 face a higher risk than younger people.
- Men are more susceptible to hypertension than women.
- African Americans are more likely to experience high blood pressure.
- People with diabetes face a higher risk of hypertension.
- Overweight people are more vulnerable to develop high blood pressure.

Several recent studies have found that, along with reducing oxidation, French grape seed extract also helps lower



blood pressure. In one meta-analysis involving 810 people with hypertension, researchers found that those taking grape seed extract experienced an average 6.08 mmHg drop in systolic blood pressure and a 2.8 mmHg reduction in their diastolic pressure. The study, which appeared in the journal *Medicine*, also noted that people under the age of 50 who were obese or had metabolic disorders showed the greatest improvements. Another small study in the *British Journal of Nutrition* found that taking a daily dose of grape seed extract lowered systolic blood pressure by 5.6 percent and diastolic blood pressure by 4.7 percent after six weeks. And one recent clinical study of pre-hypertensive men published in the *Journal of Medicinal Food* found that taking a grape seed extract supplement prior to intense exercise minimized the risk of heart attack or other cardiovascular event.

Adding magnesium to the equation can also help keep your blood pressure in check. This was shown in a meta-analysis of 34 studies totaling more than 2,000 patients. All of

the studies were randomized, double-blind, placebo-controlled trials. The researchers found that taking 300 mg of supplemental magnesium daily for three months reduced systolic blood pressure by an average of 2 mmHg and lowered diastolic blood pressure by an average of 1.8 mmHg. But to get the most benefit from your magnesium supplement, look for magnesium glycinate. This form of the mineral is readily absorbed by the body and won't cause the gastrointestinal side effects common in other forms of magnesium.

Since one in four American adults will be diagnosed with some form of heart disease, taking proactive measures to maintain a healthy cardiovascular system is essential. Focusing on these four key areas of heart health through smart supplementation and healthy lifestyle changes can help you keep the beat for a lifetime. ■



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