Why Kyolic?

The numbers stack up!

1. Kyolic® Aged Garlic Extract™ is the number one best-selling, odorless garlic supplement.
20. The number of months organically grown Kyolic is aged to enhance its nutritional value creating beneficial compounds not found in fresh or powdered garlic, but only in aged garlic extract.
40. The number of years Kyolic has been the leading garlic supplement in America.
50. The number of times Kyolic is richer than raw garlic in active beneficial compounds.
650. The number of scientific studies that prove Kyolic is America's number one Aged Garlic Extract, working to enhance your body's immune function, protect your cells from free radical damage and reduce the widest range of cardiovascular risk factors.*

Kyolic® — It adds up for your health!

Call 1-800-421-2998 and mention this Ad for a free sample!

* These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.
HEART HEALTH

by KIM ERICKSON
How HEART SMART Are You?

You’d never know it to look at me now, but just a few short years ago I found myself lying in a hospital bed in the ICU. The diagnosis? Atherosclerosis, a form a cardiovascular disease better known as clogged arteries. It turns out that years of bad habits teamed up with a family history of heart disease to severely damage the arteries that supply blood to my lower extremities.

But that was then, and this is now. Today, I eat right (at least most of the time), exercise nearly every day, and make sure to take supplements that support a healthy cardiovascular system. These take-charge tactics have made a huge difference!

The take-away message is that the health of your heart and your arteries is largely within your control. So turn the page, and let’s get heart healthy together!

Kim Erickson
Managing Editor

AMAZING wellness

Check out the latest issue of Amazing Wellness magazine at your local Vitamin Shoppe or at www.amazingwellnessmag.com

www.vitaminshoppe.com

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Here’s a sobering statistic: Every 34 seconds, someone in the United States will die from heart disease. In fact, one in four of us will die from some form of the disease, making it the number one killer in America.
That’s the bad news. The good news is that there are a number of things you can do to help lower your risk of becoming one of these statistics. Compelling scientific evidence suggests that pairing specific herbs and nutrients with healthy lifestyle choices can support a strong cardiovascular system. As a bonus, making these beneficial changes will help you live a longer, more vibrant life.

Know Thy Heart

Your heart is a complex and magnificent organ. Although it only weighs between 8 and 14 ounces, this hollow muscle is responsible for circulating blood throughout your entire body. The heart is divided into two halves, each designed to direct blood in one direction only. The right half receives the blood returning from every part of your body after the oxygen has been used by the tissues and organs. It then pumps this oxygen-deficient blood into your lungs through a vessel called the pulmonary artery. There, the blood picks up oxygen before traveling to the left half of your heart.

After this newly oxygenated blood makes its way to the left side of your heart, it is pumped into the aorta, the largest artery in your body. From there, the process starts all over again as the blood is sent to all of the other arteries in your body. During the resting period between each heartbeat, the heart also supplies blood to itself, delivering oxygen and other critical nutrients that allow it to maintain its constant pumping action. In fact, the heart needs as much as a pint of blood per minute to work properly.

One of the most important reasons the heart requires this continual blood supply is to sustain its electrical activity. Every time your heart contracts, electrical impulses pass over its surface in a rhythmic pattern. This is the same electrical energy that is detected during an electrocardiogram (EKG).

If your heart becomes stressed, it can form alternative routes to provide blood supply to the undernourished muscle by adjusting blood flow and the signals created by the nervous system.
Your heart can also grow new blood vessels. The heart’s amazing adaptability, however, depends on the health of its coronary arteries, which in turn depends on the health of each artery’s inner lining.

This inner lining is made up of tissue called the endothelium. When this tissue is healthy, it maintains the normal tone of the blood vessels through its effect on the smooth muscles in the outer part of the vessel wall. The endothelium also plays an important role in controlling the stickiness of platelets (small, colorless, irregular blood cells). Although these platelets help stop bleeding when you cut yourself, they can also cling to any tears in the endothelium and contribute to narrowed arteries.

When Things GO WRONG

Cardiovascular disease covers a variety of heart-related conditions, including arrhythmia, angina, congestive heart failure, and heart attacks. One common thread in all of these conditions is atherosclerosis, which occurs when plaque builds up and eventually narrows the arteries. Plaque is a fatty substance made up of cholesterol and other fats or lipids, calcium, and a blood-clotting material called fibrin that causes the endothelium tissue to malfunction. In response, the endothelium releases a chemical that creates a sticky surface that attracts other cells. Over time, this build-up narrows the arteries and causes blood flow to slow. Ultimately, this narrowing will prevent the heart from getting the oxygen and nutrients it needs to function properly.

A heart attack usually starts when plaque ruptures and forms a dangerous blood clot. The clot may stay put or it may travel down an artery until it hits another obstructed area. If it does travel, it may block up to 95 percent of the blood flow. There may even be a complete blockage of the artery.
Even though some of the risk factors for heart disease are beyond our control, there are many simple lifestyle changes that can significantly lower your odds. Here are the most common risk factors that can, over time, lead to cardiovascular problems.

AGE
The older we get, the less efficiently our heart works. About one in six Americans over age 65 has some type of coronary artery disease (CAD). After 65, the risk of developing CAD rises every year.

GENDER
Until a woman reaches menopause, men have a higher risk of heart attack. But after menopause, a woman’s risk actually triples. By the time a woman reaches the age of 65, her risk is almost equal to a man’s.

FAMILY HISTORY/GENETICS
Many people with a strong family history of heart disease have one or more other risk factors. Just as you can’t control your age or gender, you can’t control your family history.

A SEDENTARY LIFESTYLE
It’s estimated that 35 percent of deaths from CAD are due to a lack of physical activity. Because exercise has a direct influence on your cholesterol levels and blood pressure, even leisure-time activities like gardening or walking can lower your risk of heart disease. Bonus: Regular physical activity will help you maintain a healthy weight.
AN UNHEALTHY DIET
A diet that revolves around processed and refined foods not only contributes to obesity, it can play a significant role in the development of type 2 diabetes and inflammation, both of which contribute to heart disease. A poor diet full of high-fat, sugary, and salt-laden foods can also raise blood pressure and increase cholesterol levels, two well-recognized factors for heart disease.

EXCESS WEIGHT
People with extra body fat—especially around the waist—are more likely to develop heart disease, even if they have no other risk factors. Being overweight or obese raises cholesterol and triglyceride levels, increases blood pressure, triggers chronic inflammation, and sets the stage for diabetes. In some people, diabetes makes these other risk factors much worse. The danger of heart attack is especially high for these people.

SMOKING
Smokers have more than twice the risk for heart attack as nonsmokers. The chemicals in tobacco smoke harm blood cells and can damage the function of the heart, as well as the structure and function of blood vessels. Smoking also increases blood pressure, lowers HDL (good) cholesterol levels, and makes it easier for blood to clot.

STRESS
Coronary heart disease is much more common in people suffering from chronic stress. While no one knows exactly why, some researchers think stress hormones constrict blood vessels, speed up the heartbeat, and make the heart and blood vessels reactive to further stress. Others believe stress may boost the inflammation that contributes to atherosclerosis.
Modern medicine typically relies on two approaches for preventing and treating heart disease: drugs and surgery. While both can be effective for lowering certain risk factors or “fixing” damaged arteries or hearts, conventional treatment is often temporary. It does not address the underlying causes that created the problem in the first place.

For instance, a coronary artery bypass graft creates new routes around narrowed and blocked arteries, allowing sufficient blood flow to deliver oxygen and nutrients to the heart muscle. Angioplasty and strategically placed stents can open up clogged arteries. But these measures aren’t a permanent solution. Unless the patient makes fundamental lifestyle changes, the problem is likely to return.

Drugs used to reduce the risk of cardiovascular disease also have limitations. Whether it’s a statin drug for cholesterol or an ACE (angiotensin-converting enzyme) inhibitor for high blood pressure, these drugs aren’t a magic bullet. Without the support of a healthy diet and regular exercise, these drugs have limited effectiveness. And, as you’ll see in the following chapters, they also come with a laundry list of potentially dangerous side effects.

Fortunately, you may be able to sidestep heart-related pharmaceuticals and hospital stays by taking the proactive steps you’ll find in these pages. If you’ve already been diagnosed with some form of heart disease, adopting these heart-smart strategies may also help to minimize its severity.
Chapter One
The Cholesterol Connection

When most people think of heart disease, the first thing that comes to mind is cholesterol, a wax-like fatty substance that is produced in the liver. Over the past 30 years, cholesterol has gained a reputation as the primary risk factor for heart disease. But now, scientists are beginning to discover that cholesterol itself isn’t necessarily a bad thing. In fact, our bodies need some cholesterol to form cell membranes, and to make vitamin D and hormones like estrogen, testosterone, insulin, and cortisol. The trouble begins when you have too much of the wrong cholesterol, known as low-density lipoprotein or LDL cholesterol.

An overabundance of LDL cholesterol increases the odds of plaque in your arteries. But the quantity of LDL cholesterol may not be as important as the quality. Recent studies suggest that arterial plaque forms faster when LDL cholesterol becomes damaged by oxidation. One of these studies, which involved a group of elderly Belgians, found that higher levels of oxidized LDL significantly increased the risk of heart attack, regardless of overall LDL levels.

High-density lipoprotein (HDL) cholesterol, on the other hand, is often considered “good” cholesterol because it scavenges and removes LDL, transporting it to the liver, where it can be reprocessed or excreted from the body. HDL cholesterol also acts like a maintenance crew, chemically scrubbing the walls of blood vessels clean. HDL is so important that many doctors believe high levels can help offset the risk posed by elevated LDL cholesterol.
While most doctors rely on statin drugs to lower lipids, there are more natural ways to normalize your numbers. Here are several options that have good clinical evidence to support their effectiveness:

**NIACIN (as nicotinic acid).** This B vitamin prevents HDL from being removed from the blood by the liver, and that can boost your good cholesterol levels by up to 35 percent. There is also some evidence that niacin can improve your entire lipid profile. A recent investigation by researchers at the University of Western Australia discovered that taking a high dose of niacin on a long-term basis resulted in a 47 percent drop in triglyceride levels.

But improving your cholesterol isn’t the only way niacin benefits heart health. The Australian trial,

<table>
<thead>
<tr>
<th>Cracking The Cholesterol Code</th>
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</thead>
</table>

Since an unhealthy cholesterol profile has no symptoms, men age 35 and older and women age 45 and older should have their cholesterol checked yearly. Here’s what the numbers mean:

<table>
<thead>
<tr>
<th>Total Cholesterol</th>
<th>Best</th>
<th>Borderline high</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than 200 milligrams per deciliter (mg/dL)</td>
<td>200 to 239</td>
<td>240 or above</td>
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</table>

<table>
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<tr>
<th>LDL (Bad) Cholesterol</th>
<th>Optimal</th>
<th>Good</th>
<th>Borderline high</th>
<th>High</th>
<th>Very high</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Below 100 mg/dL</td>
<td>100 to 129</td>
<td>130 to 159</td>
<td>160 to 189</td>
<td>190 and above</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HDL (Good) Cholesterol</th>
<th>Best</th>
<th>Good</th>
<th>Bad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60 mg/dL or higher</td>
<td>40 and above</td>
<td>40 or below</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Triglycerides</th>
<th>Borderline high</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>152 to 199 mg/dL</td>
<td>200 or above</td>
</tr>
</tbody>
</table>

Source: Mayo Clinic
The Scoop on Statins

Designed to help you maintain healthy cholesterol levels, statin drugs like Lipitor and Zocor are the most widely prescribed medications in America. Statins block HMG-CoA reductase, an enzyme that causes the liver to produce cholesterol. This effectively prevents excess amounts of cholesterol from entering the bloodstream.

While statins can aggressively lower LDL levels, they come with a host of side effects, such as muscle pain and weakness, nerve damage, liver damage, heart failure, and rhabdomyolysis—the breakdown of muscle tissue that can lead to potentially fatal kidney failure. Recent research in the *Journal of the American Medical Association* also suggests that high-dose statin therapy may increase the odds of developing type 2 diabetes.

Another drawback to statin therapy is that it robs the body of coenzyme Q10. As you’ll learn in Chapter Three, CoQ10 is essential for providing energy to cells, especially the cells in the heart, and low levels of this critical nutrient are linked to nearly every form of cardiovascular disease, including angina, hypertension, cardiomyopathy, and congestive heart failure.
as well as a growing number of U.S. studies, are finding that niacin improves the function of arteries and helps prevent the development of atherosclerosis. Some research, like a recent study in the *Journal of the American College of Cardiology*, even suggests that niacin may prevent the progression of atherosclerosis in those already suffering from the condition.

**PLANT STEROLS.** Similar in structure to cholesterol, plant sterols (also known as phytosterols) benefit the heart by preventing the absorption of food-based cholesterol. As a result, less cholesterol is absorbed into the bloodstream. Instead, both the phytosterols and the cholesterol are excreted out of the body.

A number of clinical trials have confirmed that phytosterol-enriched foods can effectively lower both total and LDL cholesterol levels without affecting HDL. One review in the *Journal of the American College of Nutrition* compared six clinical trials and found that margarine providing 2 to 2.5 grams of phytosterols daily effectively reduced total cholesterol levels up to 11 percent and LDL cholesterol by as much as 15 percent. Yet, unlike statin drugs, phytosterols won't cause any adverse side effects. In fact, they are so safe that Italian researchers have tested them in children with elevated cholesterol levels with no ill effects.

**RED YEAST RICE.** For those who can’t tolerate a statin drug, red yeast rice can be a very effective alternative. It is created when a specific type of yeast called *Monascus purpureus* is grown on rice. The resulting product

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**Nifty Niacin**

If you want to give niacin a try, there are a few things you need to know before you begin:

1. **For the most benefit, take a regular niacin (nicotinic acid) supplement.** Non-flushing and extended-release forms aren’t as effective.

2. **Start with a low dose** (50 to 100 mg) and gradually increase the amount to give your body a chance to adjust to the niacin.

3. **Have a meal or a snack** shortly before taking your dose.

4. **To help prevent flushing,** take your niacin supplement with a dose of uncoated aspirin or stinging nettles.

5. **Keep your doctor in the loop.** Niacin can impact your liver, so it’s smart to take this supplement under a doctor’s supervision and have your liver function monitored regularly, especially if you take higher doses (1,000 mg or more per day).

Source: Kaiser Permanente
contains several compounds, collectively known as monacolins, that inhibit the synthesis of cholesterol. One of these, monacolin K, blocks the formation of HMG-CoA reductase in the same basic way a statin drug does.

In one study of 42 patients with high cholesterol, those taking red yeast rice saw their LDL levels drop by 23 percent and their total cholesterol levels fall by more than 15 percent compared to the participants taking a placebo. Even better results were seen in a recent trial conducted at the University of Pennsylvania that compared red yeast rice to pravastatin (Pravachol). Those taking 2,400 mg of red yeast rice twice a day experienced a 30 percent decrease in LDL cholesterol compared to a 27 percent drop in the statin group, suggesting that red yeast rice is just as effective as a statin drug. An earlier head-to-head study of the supplement and simvastatin (Zocor) found that those taking 2,400 mg of red yeast rice combined with 1,200 mg of fish oil experienced a reduction in their LDL levels comparable to the statin.

But because red yeast rice’s mechanism of action is so similar to statin drugs, it’s important to have your doctor periodically check your liver function. It’s also wise to take a CoQ10 supplement to avoid a deficiency.

Tame Your Triglycerides

Cholesterol isn’t the only type of lipid you need to watch. Triglycerides also matter. High levels of triglycerides in the blood can damage the arteries and increase your risk of atherosclerosis. People with high triglycerides often have high LDL and low HDL levels—a combination that is particularly dangerous.

Elevated triglyceride levels can be caused by low thyroid function, poorly controlled diabetes, or kidney problems. But generally, unhealthy levels are often a sign of a lifestyle in desperate need of an overhaul—and that’s something you can change.

If you’re overweight, any weight loss or increase in physical activity will help reduce your triglycerides. For example, a 10 percent weight loss has been shown to reduce triglyceride levels by an impressive 22 percent. It’s also important to cut down on the amount of sugar and simple carbohydrates in your diet, since these foods can elevate triglycerides by as much as 32 percent. But one of the easiest ways to reign in unhealthy triglycerides is with a fish oil supplement. A study in the *Journal of the American College of Nutrition* found that people already diagnosed with cardiovascular disease who had triglycerides greater than 200 experienced a significant reduction when they supplemented with fish oil.
Chapter Two

When The Pressure’s On

High blood pressure, also known as hypertension, is often called the “silent disease” because there are no symptoms—and unless you get regular check-ups, you may not even know you are at risk. Yet high blood pressure can be deadly. In fact, it’s the leading cause of heart attack and stroke.

**Blood Pressure** is the amount of force (pressure) that blood exerts on the walls of the blood vessels as it passes through them. When the pressure in your blood vessels becomes too great, the arterial walls may narrow or thicken, putting an extra burden on the heart. There are two types of pressure you need to be familiar with:

**Systolic pressure** (the first number in your reading) represents the pressure while the heart is beating.

**Diastolic pressure** (the second number in your reading) represents the pressure between beats when the heart is relaxed.
### Are You Under Too Much Pressure?

<table>
<thead>
<tr>
<th>Blood Pressure Range</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 120/80</td>
<td>Normal</td>
</tr>
<tr>
<td>120/80 to 139/89</td>
<td>Prehypertensive</td>
</tr>
<tr>
<td>140/90 to 159/99</td>
<td>Stage 1 Hypertension</td>
</tr>
<tr>
<td>160/100 and above</td>
<td>Stage 2 Hypertension</td>
</tr>
<tr>
<td>180/110 and above</td>
<td>Hypertension Crisis</td>
</tr>
</tbody>
</table>

Adapted from the American Heart Association
Findings from the second Nurses’ Health Study show that making just a few simple changes can help reduce the risk of high blood pressure by up to 80 percent. These changes include keeping your weight in check, getting 30 minutes of vigorous exercise every day, and consuming alcohol in moderation (if at all).

It’s also smart to watch your sodium intake. Since most Americans consume 7 to 15 times more sodium than our bodies require, the National Heart, Lung, and Blood Institute developed a low-sodium diet called Dietary Approaches to Stop Hypertension (DASH). The DASH diet isn’t just low in sodium, it is also high in potassium, a mineral with blood pressure–lowering effects. The DASH diet is based on whole foods, and includes lots of whole grains, fruits, vegetables, low-fat dairy, fish, poultry, and legumes. While adopting this healthy eating plan can, over time, help to reduce your blood pressure by 8 to 14 points, the following supplements can help lower your readings even more.

**GARLIC.** This pungent herb may have gained notoriety for its supposed ability to ward off vampires, but garlic’s true claim to fame comes from the wide array of benefits it confers on the heart. According to research conducted at the Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center, garlic improves the elasticity of blood vessel walls, reduces cholesterol, enhances blood flow, clears the arteries of deposits, and acts as a natural blood thinner. But new evidence suggests that garlic can add yet another cardiac-specific benefit to its already impressive resume—the ability to reduce blood pressure.

After reviewing 10 clinical trials, researchers at Hartford Hospital in Hartford, Connecticut, discovered that garlic reduced systolic blood pressure by 16.3 mm HG and diastolic pressure by 9.3 mm Hg compared to a placebo. But as heart healthy as garlic may be, aged garlic extract (AGE) appears to be even better. In one recent study, 50 patients with uncontrolled hypertension were given either AGE or a placebo each day for 12 weeks. At the end of the study, those in the AGE group had an average drop in their systolic blood pressure of 10.2 mm Hg compared to the placebo group. This led the researchers to conclude that AGE offered benefits similar to first-line medication used to treat uncontrolled hypertension.
To ensure you are getting these blood pressure—lowering effects, look for an AGE supplement that is standardized with S-allylcysteine. This lets you know that the product is not only safe and effective, but that it is uniquely bioavailable compared to ordinary garlic supplements.

**NATTOKINASE.** Nattokinase is an enzyme from fermented soybeans that can literally dissolve blood clots. This makes nattokinase extremely useful in preventing or treating heart attacks, strokes, angina, and blood-vessel blockages. But nattokinase’s heart-healthy benefits don’t stop there. In the mid 1990s, Japanese researchers at Miyazaki Medical College and Kurashiki University began to investigate nattokinase’s affect on blood pressure. Through their experiments, they found that nattokinase naturally inhibits the body’s angiotensin-converting enzyme (ACE), which has the ability to lower blood pressure. Early trials suggested that nattokinase could lower systolic blood pressure by up to 10.9 percent and diastolic blood pressure by 9.7 percent.

More than a decade later, another group of scientists—this time from South Korea—retested the effects of this fermented soy product. In a trial of 73 individuals with borderline hypertension, they confirmed that nattokinase reduced both systolic blood pressure and diastolic blood pressure—and it did so in just eight weeks.

If you suffer from high blood pressure or are at risk of a heart attack or stroke, you may want to consider keeping nattokinase on hand to help tame your risk factors. But since this novel enzyme acts like a blood thinner, check with your doctor if you are taking an anticoagulant like warfarin or aspirin.

**L-THEANINE.** Best know for its ability to calm the mind, this amino acid found in green tea can also help calm hypertension. Japanese researchers have shown that l-theanine reduces blood pressure in a dose-dependent manner in rats with elevated blood pressure. It’s interesting to note, however, that when rats with normal blood pressure were given l-theanine, they didn’t experience any change in their blood pressure. This led the researchers to conclude that l-theanine may not have a blood pressure—lowering effect in normal individuals, but instead affects blood pressure only when a problem already exists.

While these results are preliminary, they are very promising. But even if you like green tea, you would have to drink copious amounts to get these potential benefits. Fortunately, l-theanine can be found in supplemental form, which makes calming both your brain and your blood pressure as easy as popping a pill.
Long before consumers were aware of garlic’s health benefits, visionary scientist Eugene Schnell teamed up with banker Manji Wakunaga to create a novel garlic supplement for the citizens of post-World War II Japan. Using a unique aging extraction process that enhances garlic’s beneficial compounds, Kyolic Aged Garlic Extract was introduced in 1960 as a natural way to improve people’s health and vitality.

In 1972, Wakunaga turned his attention to the West, bringing the Kyolic brand to the United States. Today, Kyolic Aged Garlic Extract provides a wide range of health benefits to consumers in 46 countries. More than 650 peer-reviewed studies have confirmed these benefits.

“Even though the company has experienced tremendous growth, we have continued to honor the time-tested tradition of creating our uniquely beneficial Aged Garlic Extract using the same natural process developed by Dr. Schnell half a century ago,” says Ken Nakamura, president of Wakunaga of America.

This process begins with organically grown garlic, which is cultivated to enhance its beneficial constituents. Once harvested, the garlic is cleaned and sliced before being stored in stainless steel tanks where it is naturally aged, without heating, for up to 20 months. Through this unique process, the harsh and unstable organosulfur compounds are converted into mild and effective compounds, including the sulfur-containing amino acids that are responsible for Kyolic’s unique health benefits. This conversion also eliminates odor-causing components, resulting in an odorless Aged Garlic Extract.

Currently, Wakunaga uses Kyolic Aged Garlic Extract in 35 different formulations designed to support a wide range of health concerns, from immunity to cognition. More than a dozen of these products target cardiovascular health. To learn more about Kyolic Aged Garlic Extract, visit www.kyolic.com.
Chapter Three

What You Don’t Know About Heart Disease

If you think cholesterol and blood pressure are the only things you have to worry about, think again. Over the past decade, researchers have discovered several other risk factors like chronic low-level inflammation, free-radical damage, and homocysteine that can also increase your odds of developing heart disease.

Inflammation Nation

Inflammation is now recognized as an important contributing factor for atherosclerosis and heart disease. While short bouts help the body heal itself from injury or infection, chronic low-level inflammation damages the walls of blood vessels by blocking a critical “protector” protein and inhibiting nitric oxide, a substance involved in the regulation of vascular smooth muscle tone. In addition, plaque is naturally drawn to the site of inflammation and, as the years pass, layer after layer is deposited inside the artery. Chronic inflammation also weakens existing plaque, making it more vulnerable to bursting and causing a dangerous blockage.

One of the best ways to determine inflammation is by measuring C-reactive protein, or CRP. CRP is produced in the liver and is a strong predictor of a first-time heart attack, even in cases where cholesterol levels are normal. In one study, Harvard researchers reviewed the data from 1,086 men participating in the Physicians’ Health Study—half of whom had experienced a heart attack, stroke, or blood clot in a major vessel, and half who had not. After analyzing the data, the Harvard team found that the men with the highest CRP levels were three times more likely to suffer a heart attack and twice as likely to have a stroke than the subjects with normal levels.

Since obesity is directly linked to increased inflammation, losing weight is one of the best things you can do to lower CRP. Adopting an anti-inflammatory diet can bring levels down even further. Studies show that a diet rich in fruits, vegetables, and omega-3-rich fish can substantially reduce CRP. Don’t like fish? Taking supplemental fish oil is an exceptionally effective way to keep a lid on artery-damaging inflammation.
Go Fish

When it comes to heart health, omega-3-rich fish oil is hard to beat. It’s so effective that the American Heart Association (AHA) urges all Americans to eat foods rich in omega-3 fatty acids at least twice a week. For those with heart disease or high triglyceride levels, the AHA advises taking fish oil supplements. The U.S. Food and Drug Administration also points out that “consumption of omega-3 fatty acids may reduce the risk of coronary heart disease.”

The secret to fish oil’s heart-healthy benefits lies in two specific omega-3 fatty acids: eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Studies show that people with low DHA and EPA levels have higher CRP levels, indicating ongoing inflammation. But when these same people were given supplemental omega-3s, their CRP and triglyceride levels dropped significantly. An earlier study showed that women with high levels of EPA and DHA fatty acids in their blood had 56 percent lower CRP. Reducing this inflammatory marker helps prevent endothelial damage and slows plaque buildup in the arteries. This, in turn, may help prevent the development and progression of atherosclerosis.

But subduing inflammation isn’t the only way fish oil benefits cardiovascular health. A 2010 study published in Clinical Nutrition showed that when participants ate a meal that was supplemented with both of these omega-3s, their arteries were less stiff. Numerous other studies have demonstrated that DHA and EPA help reduce the overall risk of heart disease, lower cholesterol and triglyceride levels, reduce blood pressure, and decrease the risk of blood clots. Supplemental fish oil may also help prevent arrhythmias, heart attack, sudden cardiac death, and even heart failure.

You may already be taking fish oil supplements as a way to protect your heart. But many of the products on the market today aren’t optimally utilized by the body. During a recent study conducted at the University of Copenhagen comparing the various ways fish oil supplements are processed, Danish researchers found that omega-3s in their natural triglyceride form were up to 70 percent more bioavailable than omega-3s in the more common ethyl ester form. To ensure you’re getting all of the heart-healthy benefits fish oil has to offer, look for a supplement that contains fish oil in triglyceride form.
FOCUS ON Nordic Naturals

The concept of Nordic Naturals originated in Arctic Norway, where founder Joar Opheim grew up and where fish oil is a part of everyday life. When Opheim moved from his native Norway to California in the 1980s, he discovered that he couldn’t find the high-quality fish oil he had relied on to manage old joint injuries from his days as a gymnast.

Knowing how important a superior source of fish oil was to optimal health, and driven by his Norwegian heritage and a love of science, Opheim was inspired to bring pure, fresh, high-potency fish oil to the United States—and in 1995, he formed Nordic Naturals.

In the years since its creation, Nordic Naturals has developed several patented fish-oil technologies for improving freshness, purity, taste, delivery, and processing. While most fish oils are created in the ethyl ester form (a “new-to-nature” fat without a proven track record), all Nordic Naturals formulas are produced in the natural triglyceride form, which ensures optimal absorption and utilization by the body. What's more, each formula uses only wild-caught Artic cod, Pacific sardines, Peruvian anchovies, or Alaskan pink and sockeye salmon.

Because of Nordic Naturals’ commitment to quality and effectiveness, its products are regularly chosen for use in independent studies by institutions such as the National Institutes of Health and universities like Harvard, Columbia, Stanford, Duke, and UCLA. To date, 13 published scientific studies feature Nordic Naturals fish oils, and more than 30 are currently underway.

Nordic Naturals not only promotes human health, but the health of the planet as well—especially that of the oceans. The company’s environmental stewardship includes sustainable fishing, habitat protection, and the prevention of marine contamination. As a worldwide industry leader and innovator, Nordic Naturals strives to help people achieve better health while maintaining a deep respect for the Earth’s ecosystems. For more information, visit www.nordicnaturals.com.
Free Radicals

While cholesterol has been painted as the bad guy when it comes to 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 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 compounds that can injure the cells that make up the endothelium and trigger changes in the artery walls.

The body defends itself against this free-radical damage by producing enzymes such as glutathione, superoxide dismutases (SOD), and catalase. But when free-radical levels overwhelm the body’s ability to keep these enzymes in check, you need the power of antioxidants. An antioxidant is a molecule stable enough to donate an electron to a free radical and neutralize it. While there are a wide variety of antioxidants, the following have proven highly effective for protecting the cardiovascular system against free-radical damage. Think of them as the “Fab Four” for heart health.

Quell The Swell With This Curry Spice

Turmeric, the spice that gives curry its golden color, contains curcuminoids that can reduce inflammation, prevent atherosclerosis, and may help to lower total cholesterol. Not a fan of Indian food? Take a turmeric supplement that is standardized to 90 percent or more curcuminoids.
**ALPHA LIPOIC ACID.** Often called the universal nutrient because it is soluble in both fat and water, preliminary evidence suggests that this vitamin-like antioxidant can inhibit the formation of lesions on artery walls by up to 55 percent. Alpha lipoic acid can also re-activate other heart-healthy antioxidants, including glutathione and vitamin C. But that may just be the tip of the iceberg when it comes to this nutrient’s ability to keep your arteries healthy. According to scientists from Oregon State University and the University of Washington, alpha lipoic acid also helps to extinguish inflammation, discourages the development of plaque in blood vessels, and lowers triglycerides.

**COQ10.** Boasting anti-inflammatory and antioxidant properties, coenzyme Q10 is essential to a healthy heart. This critical nutrient is found in the mitochondria of every cell in the body and is needed to produce adenosine triphosphate (ATP), the energy molecule that powers the cell. Since the cells in the heart require a huge amount of energy, it’s especially important to maintain adequate CoQ10 levels for optimal cardiovascular health. Yet as we age, our body’s ability to make CoQ10 declines. Making matters worse, statin drugs deplete stores of this critical nutrient, making it an indispensable supplement for anyone taking these medications.

But low CoQ10 levels don’t just affect cellular energy. As an antioxidant, CoQ10 protects the mitochondria against free radicals. In fact, new research involving 51 patients with coronary artery disease showed that taking supplemental CoQ10 reduced a marker of free-radical-induced oxidation by as much as 29 percent. This may help protect LDL cholesterol from oxidative damage. In addition, CoQ10 helps the waste-management units in cells, technically known as lysosomes, clean up debris. This allows the cells to function more effectively. Preliminary studies also suggest that CoQ10 exerts potent anti-inflammatory effects on the arteries. It’s no wonder that low levels of this multi-tasking nutrient are implicated in virtually all cardiovascular diseases.

**QUERCETIN.** Studies have found that people with high intakes of this flavonoid have lower rates of heart disease. One reason is that quercetin has the ability to dilate blood vessels and reduce plaque formation by slowing the series of chemical reactions that cause large macrophages (a type of white blood cell) to cluster on artery walls. In one study, quercetin reduced the size of atherosclerotic lesions by 46 percent and LDL oxidation by 48 percent.
RESVERATROL. Found in red wine and in the skin, seeds, and vines of grapes, research suggests that resveratrol has a direct effect on the health of the cells lining blood vessels. This powerful antioxidant also triggers the release of nitric oxide, which plays a key role in the relaxation of blood vessels. If that weren’t enough, resveratrol helps lower LDL cholesterol and prevents blood platelets from clumping together inside blood vessels. Taken together, this strongly suggests that resveratrol can significantly improve vascular function as it helps prevent atherosclerosis.

The H Factor

Homocysteine is an amino acid found naturally in the blood. While it can be used to create cysteine and other beneficial compounds, researchers have found a link between high homocysteine levels and damage to the arteries, increasing the odds of atherosclerosis and the formation of blood clots.

Luckily, there’s a simple (and natural) fix. Since most people with high homocysteine levels don’t get enough folic acid, vitamin B6, or B12 in their diet, some studies suggest that supplementing with these vitamins may help return homocysteine to normal levels. As an added benefit, two recent clinical trials found that long-term supplementation with folic acid and B12 significantly improved coronary blood flow (the amount of blood that travels through the arteries).
Chapter Four
Living A Heart-Healthy Life

No matter how many supplements you take, you won’t be getting the full measure of their heart-protective benefits unless you pair them with a healthy lifestyle. This was recently verified by two large studies conducted at Northwestern University Feinberg School of Medicine in Chicago. The researchers confirmed that cardiovascular health is primarily due to your habits and healthy behavior, even if you have a family history of heart disease or are genetically predisposed for risk factors. Which behaviors have the biggest impact? Diet, exercise, smoking, sleep, and how well you handle stress. Let’s take a closer look at these critical lifestyle choices.

Eat Your Heart Healthy
Of all the foods in the grocery store, antioxidant-rich fruits and vegetables are best for a healthy heart. Pile your plate with colorful produce at every meal to shield and nourish your heart.

Beans and whole grains are also heart-smart foods because the fiber they contain binds to excess cholesterol in the digestive tract so it can be eliminated from the body. As if that wasn’t enough, research shows that people who eat 10 to 25 grams of soluble fiber daily also have lower levels of CRP.

Saturated fat from red meat and dairy products, and trans fatty acids from processed foods contribute to unhealthy cholesterol levels. Overindulging in omega-6 fats like those in many vegetable oils can foster chronic inflammation. Instead, opt for extra virgin olive oil which contains powerful anti-inflammatory compounds.

Don’t skimp on protein. Research shows that eating adequate amounts of lean protein may lower heart disease risk by as much as 26 percent. Good sources include fatty fish, organic chicken, and eggs.
Put the “Cardio” in Cardiovascular Health

In a world of remote controls, desk jobs, and drive-throughs, it’s easy to become a couch potato. Yet physical activity plays a powerful and effective role in the prevention and treatment of heart disease. Exercise lowers both total and LDL cholesterol while increasing healthy HDL cholesterol. It also helps to reduce inflammation inside blood vessels. It’s so effective that a

How Much?

The Centers for Disease Control and Prevention recommend getting at least 30 minutes of exercise a day. But if you’re new to exercise, start slowly. Try 5 minutes on an exercise bike followed by 10 minutes of muscle-strengthening activities. Then increase the time you spend on each activity by a few minutes each day until you are getting at least a half hour of exercise daily.
study by the University of Pennsylvania’s Institute for Medicine and Engineering found that regular exercise acts like a drug on your blood vessels, reducing inflammation in a way similar to high doses of steroids. Aerobic exercise is particularly good for your cardiovascular system because it helps strengthen the heart muscle, allowing more blood to be pumped with each heartbeat. It also improves your blood vessels by increasing the nitric oxide that causes them to relax and expand.

**Stop Smoking!**

Smoking is one of the biggest threats to your cardiovascular system. Inhal- ing tobacco smoke causes several immediate responses in the heart and blood vessels. Within just one minute of taking that first puff, your heart rate rises and can increase by as much as 30 percent. The nicotine in cigarettes raises blood pressure, while the carbon monoxide in tobacco smoke exerts a negative effect on the heart by reducing the blood’s ability to carry oxygen. Smoking also tends to increase cholesterol levels. Over time, smoking damages the endothelium, which puts you at risk for atherosclerosis.

Becoming smoke free can be extremely hard. But there are numerous aids that can help you quit. If the first thing you try doesn’t work, try something else. Eventually, you will find a way to quit for good.

**Relax**

Even short bouts of stress can damage the heart. Not only does stress make your heart race, it slows the body’s ability to clear triglycerides from the blood, increases LDL levels, and may even cause the walls of the arteries to become rigid. But a growing number of studies suggest that relaxation tech- niques can help reduce the detrimental effects of stress on your heart. Take a yoga class. Learn meditation. Have a good belly laugh.

You can also keep calm with supplemental magnesium. Magnesium is criti- cal when you are stressed out because it helps muscles relax, calms excited cells, and helps you get a good night’s sleep. According to Carolyn Dean, MD, ND, author of *The Magnesium Miracle*, the mineral also has a direct impact on cardiovascular function, relaxing blood vessels, supporting healthy cholesterol levels, and preventing blood clots. But because taking too much magne- sium too quickly can have a laxative effect, it’s important to build your levels gradually. “Start with a lower dose of 150 to 200 mg and build up to 400 mg once or twice a day,” notes Dean.
Putting It All Together

Reining in unhealthy behavior not only benefits your heart, it will set you on a path toward optimum health. Fortunately, because heart disease develops over a long period of time, we have many opportunities throughout our lives to make positive changes. Adopting the following cardio-smart habits paired with heart-healthy supplementation can help give your heart the protection it needs to keep beating strong for a lifetime.
YOUR Heart Healthy ACTION PLAN

Incorporate at least one tip from each category into your routine for better cardiovascular health, starting today!

DIET
- Add at least one serving of fruits or vegetables to every meal.
- Trade in your regular cooking oil for heart-healthy extra virgin olive oil.
- Swap out that greasy burger for omega-3-rich wild salmon.
- Add soluble fiber to smoothies and protein shakes.
- Practice portion control.

EXERCISE
- Take a 30-minute walk at lunchtime.
- Participate in a sport, hit the links or check out your local tennis court or soccer field.
- Join a gym and make a commitment to go at least three times a week.
- Try a step aerobics or Zumba class.
- Always check with your doctor before beginning any type of exercise program.
Stop and breathe deeply when life gets hectic.

Listen to soothing music.

Counteract stress with a dose of relaxing magnesium. Dubbed the “anti-stress drink,” Natural Calm by Natural Vitality provides 325 mg of magnesium in a delicious drink mix to soothe your mind and your muscles. Plus, it’s naturally sweetened with organic stevia.

Discover the heart-healthy benefits of a high-quality fish oil supplement like Nordic Naturals Ultimate Omega. Because it’s double the strength of most omega-3 supplements, Ultimate Omega provides a heart-healthy dose of DHA and EPA in fewer capsules.

Promote healthy blood pressure with Kyolic Formula 109. This blend of Aged Garlic Extract, nattokinase, and l-theanine is clinically shown to support healthy blood pressure levels.

Energize your heart with CoQ10.

Manage homocysteine levels with the targeted B-vitamins in Kyolic Formula 108. As a bonus, this comprehensive supplement also boasts heart healthy Aged Garlic Extract and L-arginine.

Support healthy cholesterol levels with plant sterols. Take them with your two largest meals of the day for best results.

Increase your body’s free-radical-fighting power with Enzymatic Therapy’s Resveratrol-Forte. This high-potency, heart-smart supplement provides 175 mg of trans-resveratrol in an easy-to-swallow, once-a-day softgel.
Selected References


At Nordic Naturals, we believe that omega oils are essential to an extraordinary life. That’s why we’re committed to delivering the world’s safest, most effective omega oils, so you can do more of what you love with those you love. What’s essential to us is proven purity, leading freshness, and great taste. It’s sustainability from boat to bottle, so you can feel as good about your fish oil as you do about your health. What’s essential to Nordic Naturals is simple. It’s what’s essential to you.

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Research shows that firefighters are two to four times more vulnerable for heart attack or other cardiac events on the job compared to the rest of us. But here’s the good news: a recent UCLA clinical study on firefighters suggests that taking Kyolic Formula 110 may help improve heart health in a variety of ways.*

Firefighters put their lives on the line every day. Along with the obvious dangers they face, on-the-job stress takes a toll on their cardiovascular system. But you don’t need to be a firefighter to be at risk. Living a high stress lifestyle can boost anyone’s odds of developing heart disease.*

**Kyolic® Formula 110** is a unique blend of Aged Garlic Extract™ and Coenzyme Q10, two powerhouse nutrients that can help protect your heart by supporting healthy cholesterol, circulation, blood pressure and arterial health.*

If the nutrients in **Kyolic Formula 110** can help guard firefighters from effects of stress, just think of what it can do for you.*

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