

Vital Cardio™ – Helping Reduce the Risk of Heart Disease

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Cardiovascular disease is the undisputed number one killer in North America each year, however very few people have a clear understanding of what they can do to help prevent this threat to their health and longevity.

Recent estimates indicate that nearly seventy million people in the USA and Canada (over 20%) will experience one or more forms of cardiovascular disease (CVD) this year. These CVDs include hypertension (high blood pressure), stroke, and coronary heart disease including angina pectoris (chest pain) and myocardial infarction (heart attack).

Our bodies continue to change and as we age, the use of the cholesterol within the body diminishes as our production of estrogen, testosterone and progesterone also decreases. What is the link? It's simple. Cholesterol serves as the building block for all these hormones. Thus as we age and the levels of these hormones drop, this results in a lot more non-utilized cholesterol in our bodies. As a result, women entering menopause and men entering andropause will often notice that their cholesterol levels are moving upwards. This is one of the reasons our cholesterol begins to climb, as we age.

LDL Cholesterol (or low-density lipoprotein) is known as "the Bad Cholesterol". Readings of less than 100 are a sign that you have reached a healthy goal, over 100 suggests you still have work to do in order to protect your heart.

HDL Cholesterol (or high-density lipoprotein cholesterol) is considered "the Good Cholesterol" and a reading of over 60 is the goal. And if you are under 40 points of HDL it is time to increase this.

Elevated LDL Cholesterol can lead to increased risks of heart disease that contributes to hardening of the arteries, poor circulation, fatigue, diminished physical endurance, decreased mental clarity and an overall accelerated aging process. Needless to say, elevated LDL also increases your risk of heart attack, stroke and blood clots.

Now more than ever, watching your diet, controlling your weight and augmenting your diet with natural food derived supplements becomes a wise decision. The more natural you can keep your daily food intake and the less processed food chemicals that enter your body, the better off you are.

There is a time and place for prescription medicine - however it is very rare that an individual is born drug-deficient. To look to pharmaceuticals as a first line of defense can also lead to unnecessary exposure to potential serious side effects.

How big a problem is the battle against cholesterol? Well an interesting way to appreciate the magnitude of this war on cholesterol is to look at the marketing success of the HMG-CoA reductase inhibitors, better known as the "statin drugs". In 2003, Lipitor® alone generated Pfizer

nearly \$10 billion.[i] Yet these drugs can cost us much more than just money. We can also experience fatigue, sexual difficulty, muscle weakness and elevated liver enzymes. This is the reason for the prominent warnings provided by the statin drug providers "make sure to tell your doctor if you have muscle weakness, soreness or other symptoms and remember to come in routinely so we can monitor your liver enzymes."

For those who are serious about lowering their LDL Cholesterol and that don't believe they were born with a drug deficiency then there are some basic steps to take:

1. Weight loss for those overweight. Even losing 10 pounds of excess weight can raise HDL.
2. Suppress small LDL (a particularly harmful form of LDL, "the bad cholesterol")
3. Decrease insulin resistance
4. Eliminate consumption of trans-fats and partially hydrogenated oil
5. Decrease stress
6. Increase exercise
7. Increase fiber intake
8. Supplement your diet with a supplement designed to protect your cardiovascular health.

You can measure your success of taking charge of your health with a standard lipid panel test that will provide information about plasma concentrations of total cholesterol, triglycerides, high-density lipoprotein (HDL) cholesterol, low-density lipoprotein (LDL) cholesterol, and very low-density lipoprotein (VLDL) cholesterol. However, a score within the normal range, should be of little comfort since 'being average' in this case means a greater than 50% likelihood of dying of heart disease.

It is important to remember that cholesterol levels undergo considerable variation among individuals, with day-to-day values fluctuating by as much as 15%. Although cholesterol is no longer considered such a significant factor in CVD as it was in the past, a large amount of emphasis is still directed at reduction of cholesterol blood levels.

When it comes to supplementing the diet to help control cholesterol, the goal must be to deliver a synergistic blend of ingredients to not only mitigate elevated cholesterol readings but also helping to establish a strong and healthy heart for the years to come. It is my clinical belief that the use of perilla, which is naturally rich in the essential fatty acid omega-3, combined with the heavily researched and effective benefits of policosanol, along with soy peptides makes for a strong approach to combating LDL Cholesterol and to help protect the cardiovascular system.

Whenever taking health supportive supplements, it is important to remember that “supplements are intended to augment not substitute for a healthy diet and lifestyle.”

Perilla – Rich in Omega-3 (ALA)

Perilla frutescens is a naturally rich source of the heart healthy essential fatty acid, alpha-linolenic acid (ALA). It is this class of “essential fatty acids” called omega-3 that was shown by researchers in the 1970’s to be the oil that protected Eskimo’s from their high fat diets. Perilla seeds that are native to India, Burma, Japan, and China provide a rich source of oil composed of 50-60% alpha-linolenic acid. These have been consumed for thousands of years in Asia. ALA has been shown to be helpful in preventing heart disease, strokes, and arthritis, and that perilla oil may also help reduce the risk of colon cancer, breast cancer, colitis, obesity, and asthma.[ii]

The human body is not able to produce essential fatty acids, so it is imperative to consume sufficient quantities on an ongoing basis to support health and life. It is estimated by nutritional experts that only 1 of every 6 North Americans have sufficient amounts in their diets without supplementation.[iii] Essential fatty acids serve as critical raw materials for the production, maintenance and function of the 50-100 trillion living cells that comprise the human body. Just like essential amino acids, without sufficient essential fatty acids, human life can not be sustained. . Perilla is a rich source of omega-3 essential fatty acids. (Other sources of omega-3 include eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), commonly referred to as fish oil, plus alpha-linolenic acid (ALA) found in vegetables and oils).

When omega-3 (ALA) is assimilated into the body a portion is converted into EPA, DHA, while other portions are incorporated into cell membranes.[iv] [v] Additional ALA has been shown to help control inflammation, decrease platelet stickiness that otherwise can lead to blood clots and also assist in suppressing the certain tumor cell growth.[vi]

Omega-3 (ALA) and Cardiovascular Disease

Without question when it comes to maintaining a heart healthy diet the gold standard is the Mediterranean diet that is naturally high in ALA. Thus a diet rich in ALA and supplemented with natural sources of ALA such as perilla has been linked to reduced risk of coronary artery disease, heart attacks and strokes. A good portion of the protective effects of the Mediterranean diet, according to research studies, are linked to its’ high levels of ALA.[vii] [viii] [ix]

Emphasizing that it is never too late to impact ones health the Lyon Study demonstrated that the ALA-rich Mediterranean diet was more efficient at preventing second heart attacks than the standard healthy-heart diets recommended to heart patients.[x] This includes that

omega-3 fatty acids appear to help protect against an irregular heartbeat, in particular ventricular fibrillation, [xi] [xii] help maintain healthy blood vessel tone,[xiii] while helping to prevent the stickiness of platelets and the formation blood clots.[xiv]

Additional benefits of consuming omega-3 rich foods and supplements like perilla is its role in helping mitigate the damaging effects of C-Reactive protein (CRP). There is strong evidence linking the effects of long-term inflammation in the body with damage to the cardiovascular system and increased prevalence of heart attacks. It doesn’t appear that the source of the inflammation is as important as the sheer amount of inflammation, so whether it is sinusitis, arthritis or prostatitis, it appears that not only the affected part of the body but the entire circulatory system is negatively impacted. In 2002, researchers studied 76 men suffering from elevated blood cholesterol (dyslipidemia) to see whether omega-3 could reduce their inflammation.[xv] The men with an average age of 51 consumed the typical Greek diet and were randomly given omega-3 rich oil or omega-3 non-rich oil everyday. After three months, blood samples were collected and checked for C-reactive protein and other indicators of inflammation and fat content. The conclusion was simple and powerful: ALA rich oil significantly reduced inflammatory markers. It is important to note that this study also points out that diet alone did not provide optimal results and supplementation was necessary to achieve lowered inflammation levels.

Just as with keeping a close eye on cholesterol levels, monitoring C-reactive protein (CRP) is essential. Even with a great cholesterol reading, CRP is an independent risk factor that damages your blood vessels and further contributes to the damage caused by cholesterol. If you have an overt or a hidden non-detected source of inflammation in your body, your CRP increase in response to that source of inflammation that can have a ripple effect throughout your body. In seemingly healthy individuals, elevated CRP indicates an increased risk of atherosclerotic disease and reflects a chronic inflammatory process of the cardiovascular system. It is interrelated with risk factors such as age, obesity, tobacco use, blood pressure, and dyslipidemia.

Fibrinogen is independently, consistently and vigorously associated with risk of cardiovascular disease, based on multiple prospective epidemiological studies and clinical observations.²⁶

Health Bonus with Perilla The benefits of perilla are not limited to cardiovascular disease. Since it is rich in omega-3 that is also helps to modulate immune function. Researchers have examined how perilla oil affects colon cancer in laboratory animals and have preliminary evidence that even small amounts of perilla oil can help suppresses the development of aberrant crypt foci and thus may serve

as a preventive tool in the early stages of colon carcinogenesis.” [xvi] Additional animal studies support the concept that perilla oil can help reduce the risks of colon cancer.[xvii] [xviii] Note that this is not to say if you take perilla that you are fully protected, yet the initial research shows promise that a protective role is present. Evidence also exists that perilla oil may reduce the damage to the colon seen with colitis, and may be more effective than either EPA or DHA.¹⁷

A study comparing perilla seed oil supplements to corn oil supplements in a small group of people with asthma showed results indicating that perilla oil helped control certain biochemical processes associated with the disease and may be worth incorporating into a healthcare provider created comprehensive protocol.[xix] Clinically, perilla also can help with controlling symptoms of airway irritation and hay-fever symptoms.

In the pursuit of improved cardiovascular health the evidence is clear that maintaining a healthy lean body weight is important. Evidence is growing that essential fatty acids such as perilla can help prevent excessive fatty tissue growth as well.[xx]

Policosanol

Policosanol is a naturally and potent extract from sugar cane that can help normalize cholesterol as well or better than most drugs, without side effects.[xxi] The effectiveness and safety of policosanol has been demonstrated in numerous clinical trials and has been used by millions of heart savvy consumers in other countries.

Research has shown that policosanol can lower LDL cholesterol as much as 20% and raise protective HDL cholesterol by 10% without the known side effects of drug therapy such as liver enzyme elevation and muscle damage. This is unlike statin drugs that inhibit HMG-CoA that also can lead to the lowering of your body’s life sustaining CoQ10 levels.

A meta-analysis of the medical literature leads to a powerful and significant conclusion as reported in the journal *Pharmacotherapy*, 2005. Here is a summary of what the researchers found. There have been 52 meaningful studies that have involved a total of 4,596 patients. The lowering of LDL “the bad cholesterol” was most significant with policosanol compared to other plant sterols and stanols, thus indicating the dominance that policosanol possesses when it comes to cholesterol control and regulation.

Policosanol affected total cholesterol, high-density lipoprotein cholesterol (HDL), and triglyceride levels more favorably than plant sterols and stanols. Policosanol caused a clinically significant decrease in the LDL to HDL ratio, thus reflecting cardio-protective properties. The researchers of this massive review of the current medical literature concluded that plant sterols and stanols and policosanol are well tolerated and safe; however, policosanol is more

effective than plant sterols and stanols for LDL level reduction and more favorably alters the lipid profile, approaching antilipemic drug efficacy.[xxii] When directly compared to statin drugs, LDL and total cholesterol lowering is similar, with policosanol performing better on elevating HDL. In a side-by-side comparison study 10 mg of policosanol reduced LDL 24% compared with 22% for lovastatin (Mevacor) at 20 mg, and 15% for simvastatin (Zocor) at 10 mg. This is similar to findings in other studies.[xxiii]

In studies on people with high cholesterol at high risk of heart disease, policosanol lowered LDL cholesterol 20% in 6 to 12 weeks at 10 mg/day. Total cholesterol was reduced 15%, and HDL increased 7%-28%. Taking 20 mg/day reduced LDL about 28%, total cholesterol about 20%, and elevated HDL 7%-10%. Triglycerides don’t respond to policosanol.

Evidence has shown that like the statin drugs, policosanol helps stop the formation of artery damage.[xxiv] In a study of rabbits, among those treated with policosanol there were no atherosclerotic lesions and less foam cells.[xxv]

Beyond merely lowering cholesterol, policosanol helps inhibit the oxidation of LDL thus protecting blood vessels from destructive inflammatory damage.[xxvi] By lessening the amount of oxidized LDL the amount of metalloproteinase enzymes (MPE) can be diminished.[xxvii] If uncontrolled, MPE promotes blood vessel destruction, in part due to its interference of HDL’s protective effect. Studies have shown that animals treated with policosanol have fewer foam cells indicating less inflammatory response and less blood vessel destruction.[xxviii] [xxix]

Policosanol has also been shown to help prevent cell proliferation within arteries thus conferring protection from arterial narrowing.[xxx] The research points to the conclusion that policosanol’s ability to stop cell overgrowth is similar to the effects reported for lipid-lowering drugs, such as most statins.[xxxi]

Policosanol also inhibits the formation of clots and when combined with aspirin work better than either alone.[xxxii] [xxxiii] Thromboxane a blood vessel-constricting substance produced by platelets was significantly reduced in human research after 2 weeks of taking policosanol.[xxxiv]

Policosanol Benefits

1. Elevates HDL “good cholesterol” better than most “statin drugs”
2. Lowers overall cholesterol and LDL
3. Helps lessen LDL oxidation
4. Reduces inflammatory thromboxane
5. Decreases artery damage
6. Exercise enhancement

The chemical composition of policosanol is made of numerous substances including octacosanol and several

other—stanols hence the term “poli-cosanol, (many – cosanols).

Octacosanol has shown its ability to enhance endurance and oxygen use during exercise. The clinical research has demonstrated that octacosanol is taken up by muscles. [xxxv] It appears that muscles store octacosanol and convert it into energy. Upon starting with octacosanol much of it goes to the liver, then around the three day mark after consumption, it starts accumulating in muscle.[xxxvi] Animal studies have shown that octacosanol caused rats to be more active and exercise for longer with greater endurance. Human studies have also concluded that when people with heart disease are given 10 mg/day of policosanol, aerobic capacity and oxygen uptake increase, and ischemia decreases. Improvement on treadmill exercise-ECG tests occurs after treatment with policosanol.

Soy Polypeptide

In 1999, the FDA authorized the use of health claims for soy when it comes to reducing the risk of coronary heart disease (CHD) on labeling of foods containing soy protein. The conclusion was based on the principal that when soy was incorporated into a diet low in saturated fat and cholesterol it would help reduce the risk of CHD by lowering blood cholesterol levels.

The evidence that allowed for this powerful FDA decision as based on clinical trials that demonstrated that consumption of soy protein compared to other proteins such as those from milk or meat, can lower total and LDL-cholesterol levels.

Anderson and the research team examined the relation between soy protein consumption and serum lipid concentrations in humans in his meta-analysis of 38 controlled clinical trials, involving more than 730 volunteers.[xxxvii] Replacing animal protein with soy protein reduced cholesterol by 9.3%. Volunteers on the soy diet had their LDL cholesterol levels dropped on average by 12.3%. The HDL cholesterol increased by 2.4% in volunteers on soy-containing diets.

In addition to incorporating soy into your diet, additional recommendations have been made by the American Heart Association (AHA) that has identified other controllable risk factors including tobacco smoking, high blood cholesterol, high blood pressure, physical inactivity, obesity/overweight, and diabetes as modifiable risk factors for heart disease. Other negative risk factors identified by the AHA as contributory to heart disease include stress levels and response, sex hormones, birth control pills and excessive alcohol intake. . 3

Tests to have Performed Annually

Equally important as the above described cholesterol readings and CRP levels, another key factor known as homocysteine needs to be closely monitored. Elevated plasma levels of the amino acid homocysteine are affected by genetic, physiologic, and nutritional factors. Increased homocysteine levels are considered an independent predictor for atherosclerosis and thromboembolism, and are correlated with significant risk of coronary artery disease, myocardial infarction, peripheral vascular occlusive disease, cerebral vascular occlusive disease, and retinal vascular disease. An increase in plasma homocysteine precedes the onset of cardiovascular disease.

New insights into CVD indicate the need for new forms of testing in addition to standard cholesterol profiles. Testing for homocysteine, C-reactive protein, and fibrinogen place new emphasis on cardiovascular risk parameters. Whether you are using a natural medicine approach or drug-chemical consumption in an attempt to support a “healthier you” getting a routine check-up and aggressive testing to monitor your success is critical.

Conclusion:

This year alone, CVD will kill over one million North Americans, comprising about 40% of all deaths, and 170,000 of these deaths occurred in people under age 65.

Coronary heart disease will cause the most deaths in people suffering from CVD, taking the lives of an estimated 600,000. And over 250,000 people die each year from sudden myocardial infarction, without ever being hospitalized. Individually, over fifty million people have hypertension (high blood pressure), over eight million suffered from acute myocardial infarction (heart attack), over seven million experience angina pectoris (chest pain), and over five million will have cerebral vascular accidents (stroke).

The combination of ALA from perilla, plus policosanol and soy peptides provides a supplemental tool that when combined with a healthier diet and lifestyle can support achieving not only healthy cholesterol levels but also helping to control numerous other risk factors that otherwise increase morbidity and mortality statistics when it comes to cardiovascular disease. In-action is the active and conscious process of doing nothing. It is this fateful choice of in-action that has led to the statistics that 70 percent of all Americans will die prematurely of heart disease.

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease. For medical advice, please consult a healthcare professional.

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