

# **Heart Smart Nutrients**

**By Dr. Harry Elwardt, N.D., Ph.D.**

There is a world of new information regarding key nutrients that have a powerful effect on cardiovascular health. These nutrients combine science based, evidenced backed, nutrients like L-Arginine, L-Citrulline, vitamin D3, and antioxidants. In just a few seconds each day, you can give your body a powerful dose of science-based nutrition. Let's look at some of these powerful nutrients.

## **L-Arginine**

Arginine is a semi-essential amino acid that has shown promise in the prevention of atherosclerosis (blockage of the arteries). L-Arginine is pure 100% free form Arginine and is the precursor for endothelium-derived nitric oxide (EDNO). Three scientists were awarded the *Nobel Prize in Medicine* in 1998 for discovering nitric oxide's role as a vasodilator. In a healthy endothelium (inner wall of a blood vessel), nitric oxide (NO) will keep vessels pliable and elastic, dilate (open up) blood vessels keeping blood flowing smoothly, relax blood vessels, keep platelets and white blood cells calm and prevent them from sticking to the vessel wall, prevent oxidation, slow plaque growth, suppress atherosclerosis and melt away plaque that already exists.

After Arginine is consumed in foods and in supplements, it makes its way into the bloodstream and circulates throughout the body. As it enters the endothelial cells that line the smooth muscle walls of blood vessels, an enzymatic reaction occurs that converts Arginine to nitric oxide. As the levels of Arginine rise in the body, so does your production of nitric oxide, which in turn can have a dramatic and positive effect on your cardiovascular health.

There are over 85,000 medically published clinical studies attesting to the fact that Arginine will help lower blood, lower cholesterol and triglycerides, improve

diabetes, improve sexual function, reduce blood clots and strokes, improve congestive heart failure, improve wound healing, improve liver and kidney function, improve memory and cognitive functions, increase human growth hormone (HGH), improve muscle growth and performance, and much more.

An important question I get asked all the time is, *“What type of Arginine do you recommend and how much should I take?”*

- First of all, there are many formulas of Arginine on the market today. I recommend looking for the free-form of arginine. This is Arginine in its purest state...100% pure Arginine with no additives. Free-form amino acids need no digestion and are absorbed directly into the blood stream. If it just says Arginine on the label, chances are it is Arginine Hydrochloride or Arginine HCL, which is 73% Arginine and 27% Hydrochloride. The question is, if the label says 5 grams of Arginine HCL, does it really mean 3.65 grams of Arginine and 1.35 grams of Hydrochloride? Then there is a barrage of other forms of Arginine like Arginine Pyroglutamate or Arginine Aspartate. These are formulas that contain only 50% Arginine and 50% of the other ingredient, so you are not really getting the full dose of Arginine you may be looking for.
- Second, Arginine can be purchased in tablet, capsule, powder or liquid form. Always look for Arginine in either a liquid form or a powder form, which becomes a liquid once it is dissolved in water. Liquid always provides the best absorption of Arginine. It is a lot easier swallowing an ounce or two of a liquid arginine, than swallowing a handful of pills. And the pills must pass the digestion process and according to the *Physicians' Desk Reference* are only 15-30% absorbed at best. When purchasing a powder, make sure that it dissolves properly and you are not throwing some of it down the drain. When purchasing a liquid, be aware that it needs to be refrigerated once the seal is broken on the bottle, which can be an inconvenience to a traveler.

- Next, make sure the formula you pick has a combination of L-Citrulline and antioxidants. When arginine converts to nitric oxide in the blood stream, the NO gas created is very oxidizing and can be damaging to cells. But with proper antioxidants mixed in the formula, this oxidizing effect is averted. Citrulline is the only other amino acid that works synergistically with arginine. Beware of other formulas that contain other amino acids because they will block the absorption of arginine.
- Next, because of the bitterness of Arginine, a formula must contain sweeteners or the consumer would never take the product. Most formulas on the market today contain artificial sweeteners like Aspartame or Sucralose. As a naturopathic doctor, I cannot recommend any formula that contains these man-made chemicals. They are toxic to our bodies and there is plenty of evidence on the internet documenting this fact. Instead, look for natural sweeteners like, Stevia, Xylitol or BeFlora.
- Finally, I recommend finding a product that contains at least 5 grams of arginine per serving. According to Dr. Louis Ignarro, author of the best seller, *Say NO To Heart Disease*, anything less than 5 grams is a waste of time and money. Dosage may vary from 5 to 25 grams per day depending on your health condition and your budget, but should always be broken-up into 2 to 3 servings each day. Best taken first thing in the morning, 30 minutes before a work out or right before bedtime. Make sure not to eat any protein rich foods or drinks within an hour before or after taking the arginine.

## **L-Citrulline**

An amino acid which promotes energy, stimulates the immune system, and detoxifies ammonia, which damages living cells. Citrulline is closely related to Arginine and is found in many of the same protein-rich foods. In your body, Citrulline is converted into Arginine, which in turn increases the production of nitric oxide. This “turbo-charging” effect of the Citrulline /Arginine recycling pathway can, in fact, substantially increase nitric oxide production. The real

power of Citrulline is it slows down the creation of Arginine into nitric oxide. This process which normally would take a matter of seconds now becomes a time release so you can now enjoy a much longer NO effect.

### **Vitamin D3**

Vitamin D, calciferol, is a fat-soluble vitamin. Vitamin D3 is normally produced in the skin by the action of sunlight, but is also obtained from certain foods. Dietary sources are limited however, according to the American researchers. A glass of milk, for instance, contains only 100 units of the vitamin.

The major biologic function of vitamin D is to maintain normal blood levels of calcium and phosphorus. Vitamin D aids in the absorption of calcium, helping to form and maintain strong bones. It promotes bone mineralization in concert with a number of other vitamins, minerals, and hormones.

Without vitamin D, bones can become thin, brittle, soft, or misshapen. Vitamin D prevents rickets in children and osteomalacia in adults, which are skeletal diseases that result in defects that weaken bones.

Researchers found the "natural" form of the vitamin, known as D3, can dramatically reduce the chances of developing breast, ovarian and colon cancer, as well as others. Taking 1000 international units of the vitamin daily could lower an individual's cancer risk by 50-per cent, they said.

A new study has linked a lack of sunshine, the body's most natural source of vitamin D, to the prevalence of cardiovascular disease, especially among people of color.

Factors that affect sunlight, and therefore vitamin D production, are tied to a patient's cardiovascular risks. In other words, the more sunlight you get, the

better your cardiovascular health will be. These factors can include time of year, altitude, and geographical location.

There are a number of physiological mechanisms triggered by vitamin D production through sunlight exposure that act to fight heart disease, according to the study:

- An increase in the body's natural anti-inflammatory cytokines.
- The suppression of vascular calcification.
- The inhibition of vascular smooth muscle growth.

Getting the right amount of vitamin D treats and prevents a variety of ailments and diseases including:

- Protection against multiple sclerosis (MS)
- Prevention of diabetes
- Signals colon, breast and prostate cells to stop growing and eventually succumb to programmed cell death
- Prevents hip and knee arthritis
- Infertility and PMS
- Fatigue, depression, obesity
- Autoimmune Disorders – Multiple Sclerosis, Sjogren's Syndrome, Rheumatoid Arthritis, Thyroiditis and Cohn's Disease

I recommend 5000 IUs of vitamin D3 every day. That might sound like a lot, but remember vitamin D3 is non-toxic and the average American is about 50,000 IUs deficient in vitamin D, especially during fall and winter months and especially people of color.

## **Antioxidants**

Because they neutralize free radicals, antioxidants are considered nitric oxide's watchdogs, stabilizing and protecting nitric oxide during its brief existence (nitric oxide only has a life span of a couple of seconds)—even extending its life!

Vitamin C and vitamin E are good antioxidants but I recommend finding a formula that contains OPCs.

Oligomeric proanthocyanidins (OPCs) are naturally occurring substances found throughout plant life; however, the two main sources are pine bark extract (Pycnogenol) and grape seed extract. They are unique flavonols that have powerful antioxidant capabilities and excellent bioavailability. Clinical tests suggest that OPCs may be 50 times more potent than vitamin E and 20 times more potent than vitamin C in terms of bio-available antioxidant activity. In addition to their antioxidant activity, they strengthen and repair connective tissue, including that of the cardiovascular system, as they moderate allergic and inflammatory responses by reducing histamine production.

## **Conclusion**

I know of no other nutrients that have the power to reverse the aging process like the ones I have detailed in this report. These essential nutrients are a must for anyone who wishes to keep *"Father Time"* at bay. These components have a tremendous impact on cardiovascular health and overall health. I highly recommend these supplements to every man and woman who is concerned about their wellness and wants to look great, feel great and age gracefully into their sunset years.

About the Author:

Dr. Harry Elwardt is a Naturopathic Doctor, Master Herbalist, Certified Nutritional Counselor and has a Ph.D. in Health & Nutrition. Dr. Elwardt has been working in the alternative medicine field for 15 years and is passionate about helping people through naturopathic therapies. Dr. Elwardt is author of the book *"Let's STOP The #1 Killer Of Americans TODAY,"* a natural approach to

preventing and reversing heart disease. Dr. Elwardt also has served on the Medical Advisory Boards for *Nutrition & Kids*, *Life Mission International*, *The Bahamas Health Institute*, *Ark World International*, *ForMor International* and *Pro Global Exports*.