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Natural Methods to Reverse Heart Disease 2008

L-Arginine and the NO connection-Literature review

Dr. R. Jay Shetlin, Dr. Mark A. Snow; West Valley City, UT; September, 2008 [Part II]

In part I of this article we discussed the latest non-invasive procedures used to measure the health of an individual's cardiovascular system.

Now lets discuss the natural products and services available to actually treat with documented research of reversing cardiovascular disease, arterial plaquing (arteriosclerosis), and reducing Blood pressure.

Research shows L-Arginine combined with the right antioxidants maximize NO production and cellular healing. Chiropractic too has a direct affect on blood pressure.

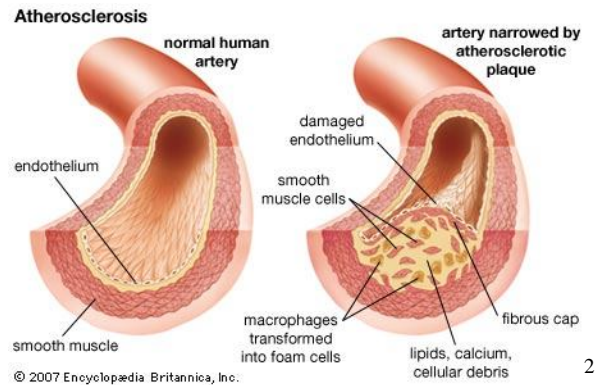
THE PROBLEM

“Cardiovascular disease is any of a number of specific diseases that affect the heart itself and/or the blood vessel system, especially the veins and arteries leading to and from the heart. Research on disease dimorphism suggests that women who suffer with cardiovascular disease usually suffer from forms that affect the blood vessels while men usually suffer from forms that affect the heart muscle itself. Known or associated causes of cardiovascular disease include [diabetes mellitus](#), [hypertension](#), [hyperhomocysteinemia](#) and [hypercholesterolemia](#).”¹

As we discussed in the Part I of this article, ONE out of THREE people in America die of a cardiovascular related problem In recent years it has grown to ONE out of TWO! Commonly, diet and lifestyle choices lead to

¹ http://en.wikipedia.org/wiki/Heart_disease

arterial plaque build-up in ridged arteries or directly cause ridged arteries which increase blood pressure as well as increase our chance of heart attack or stroke.



REJUVINATING THE CARDIOVASCULAR SYSTEM

What if there were little known molecules that were created in the body, naturally, that could prevent plaque build up and open or dilate arteries wider thus reducing blockage?

Would that be worth researching?

Would you want to know about it?

You guessed it, there is. Dr. Louis J. Ignarro, the 1998 Nobel Prize winner for Medical findings, has written a book titled, “NO more heart disease,” that

² 2007 Encyclopedia Britannica

<http://media-2.web.britannica.com/eb-media/83/98483-004-FD45DAA5.jpg>

ARTICLE QUOTES

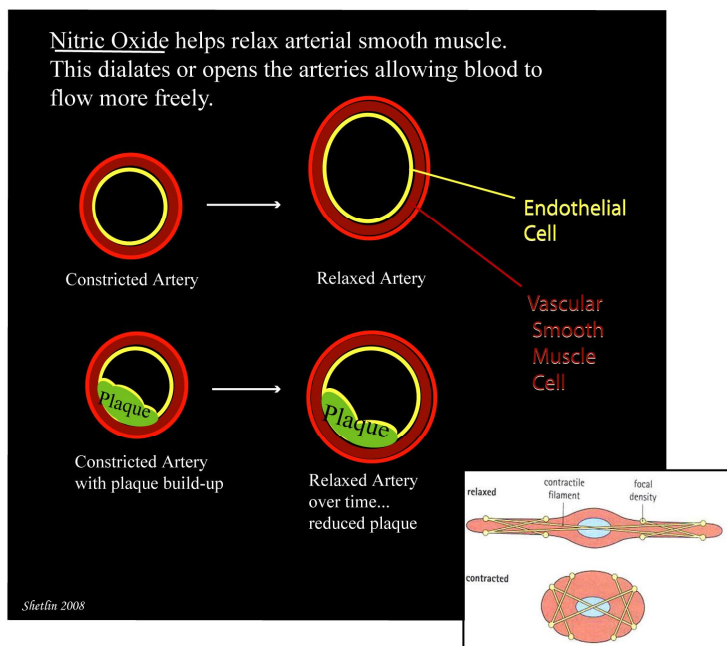
clearly points out his years of research with L-arginine, L-citrulline, and antioxidants. These natural dietary components have a profound effect on the human body causing increased natural production of NO (nitric Oxide). NO has a surprisingly powerful effect on the prevention of plaque build-up, as well as, stimulating the smooth muscles of the arterial walls to relax thus increasing the diameter of arteries.

Imagine being stuck in a 2 lane freeway traffic jam (vasoconstriction= high blood pressure)...when suddenly the freeway opens up from 2 lanes to 4 lanes! Wouldn't that relieve some serious traffic congestion?

Nitric Oxide does something similar to our arteries by helping the smooth muscles to relax thus increasing the diameter of the arteries. This can lower blood pressure and "relieves the traffic" of the blood stream.

Lately, Dr. Snow and I have been reading numerous articles regarding this subject and the findings are astonishing!

However, since nutrition is a process of **helping the body help it self** (rather than chasing a symptom) it does take time. The standard protocol is to TEST the cardiovascular system, TREAT for 90 days or longer, then TEST again to measure the results.



There is too much emphasis put on *LDL cholesterol*. Yes, high cholesterol is not a good thing but "Reduction of LDL cholesterol alone failed to reverse endothelial (arterial smooth muscle) dysfunction in coronary arteries.³ But the impairment was significantly improved when antioxidant therapy was added to the regimen."⁴

"Long-term oral L-arginine supplementation for months in humans improves coronary small-vessel endothelial function in association with a significant improvement in symptoms... This study proposes a role for L-arginine as a therapeutic option for patients with coronary endothelial dysfunction and non-obstructive coronary artery disease."⁵

"**Hypercholesterolemia.** L-Arginine improves endothelial function in hypercholesterolemia patients... 21g/day of oral L-arginine over 4 weeks improved flow mediated vasodilatation of the brachial artery."⁶

"...long-term administration of L-arginine (9g/day) on 26 patients with angina pectoris and mild non-obstructive coronary atherosclerosis. After 6 months of treatment, patients randomized to L-

³ Anderson TJ, Meredith IT, Yeung AC, Frei J, Selwyn AP, Ganz P: The effect of cholesterol-lowering and antioxidant therapy on endothelium-dependent coronary vasomotion. *N Engl J Med* 1995;332:488-493

⁴ John P. Cooke, MD, PhD: Therapeutic Interventions in Endothelial Dysfunction; *Clin. Cardiol.* Vol 20 1997

⁵ Amir Lerman, MD; John C Burnett, Jr, MD; Stuart T. Higano, MD; Linda J. M Kinley, RN; David R. Holmes, Jr, MD: Long-term L-Arginine supplementation improves small-vessel coronary endothelial function in humans; 1998 American heart Association, inc.

⁶ Clarkson, P., Adams, M.R., Powe... (1996): Oral L-arginine improves endothelium-dependent dilation in hypercholesterolemia young adults. *J. Clin. Invest.* 97:1989-1994

arginine, but not to placebo, had a markedly improved coronary vasodilator response to acetylcholine. (and increased coronary blood flow).”⁷

Several studies show the positive effect of L-arginine on *erectile dysfunction*. It is important to note that there is more than just one factor at play that can cause erectile dysfunction but the leading cause is a vascular problem. According to Dr. Ignarro, it is research with L-arginine that actually lead to pharmaceutical research and the production of Viagra®.

Point number one on erectile dysfunction: vascular problems in the lower tree of the abdominal aorta and more specifically the Corpora Caverosa, may become blocked or not dilate properly. This can lead to ED.

Point number two on erectile dysfunction: “Doctors now recognize that the penis functions as an exquisitely simple gauge for detecting impending heart problems.”⁸ Men with ED may have underlying cardiovascular challenges and should not simply take a pill to treat a symptom. A person with ED should visit with their doctor and take a global health approach.

CALL TO ACTION

I don’t want this paper to be misunderstood as pointing to a “cure-all.” But individuals with diabetes, heart disease, athlerosclerosis, high blood pressure and other cardiovascular challenges, should be supplementing with L-arginine and antioxidants. Those that don’t should be supplementing with these on a “prevention” basis.

⁷ Lerman, A., Burnett, J.C., Higano, S., McKinley, L (1998): Long-term L-arginine supplementation improves small vessel coronary endothelial function in humans. *Circulation* 97: 2123-2128

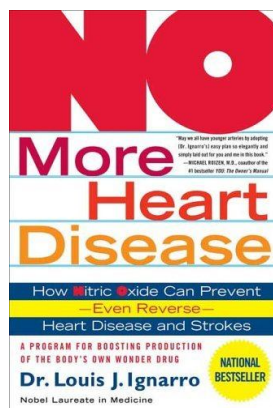
⁸ US NEWS & WORLD REPORT; 9/15/2008

As the saying goes, “An ounce of preventions is worth a pound of cure.”

The cost of good supplements and some lifestyle changes are far less than the cost of a heart attack, a lost limb, or diabetic blindness.

“Warning: Don’t Be Fooled By Impostors!”

Do not let yourself be confused by the growing number of products on the market that simply promise to deliver “nitric oxide.” They are by and large scientifically questionable attempts to boost your NO without accurately applying my Nobel Prize-winning discoveries. These products often contain L-arginine, which is indeed the amino acid that is converted by your body into NO. Unfortunately, most of them do not deliver sufficient quantities of L-arginine to catalyze significant NO production...



Besides, it is the synergy between the L-arginine, the L-citrulline, and the key antioxidants that creates dramatic increases in your body’s nitric oxide production. Without the proper combination of these nutrients which so many other programs lack, you will receive little or no benefit from NO therapy.”⁹ -Dr. Louis J. Ignarro

There are many more research articles I could quote. Dr. Ignarro’s book is also full of fantastic information and well worth a read.

It is my understanding that L-citrulline can actually be converted into L-arginine in the cells thus ‘turbo-boosting’ the production of NO. (see image next page)

⁹ Dr. Louis J. Ignarro: NO More Heart Disease, 2005

HOW MUCH L-ARGININE IS TOO MUCH?

Actual daily amounts should be discussed with your physician. Preventative portions are typically 4-6 g/day.

Portions in an effort to treat or reverse cardiovascular problems range from 9 to 20 g/day. Again, discuss and monitor with your physician.

Note: Larger doses may cause diarrhea.

SUMMARY

High blood pressure, arterial sclerosis and other cardiovascular diseases are serious. Prevention is the key. Don't wait till you have a heart attack to change your lifestyle. What do we do? Invest in "Health Insurance" over "Disease Insurance." What do I mean by that?

1. Keep that *nerve power* turned on! Your nervous system controls everything in your body; it is the "blueprint" for an optimally functioning body. Does it help with high blood pressure too? Yes. Check out this [WebMD article](#) on how chiropractic can be more powerful to help High Blood Pressure than taking two blood pressure medications simultaneously."¹⁰ (Chiropractic: \$43-\$120/mo)
2. *Exercise*. Your body loves to be physically challenged. Walk, run, bike, circuit train, push-ups, sit-ups, tae-bo, whatever floats your boat...but do something daily. Even 10 minutes is better than no exercise at all. (Gym fee \$25/mo. Walking FREE)
3. *Check your cardiovascular system* with the Pulse wave device so you know where you are. Having a bench-mark is

¹⁰ <http://www.webmd.com/hypertension-high-blood-pressure/news/20070316/chiropractic-cuts-blood-pressure>

powerful. (FREE right now. \$39 after December 2008)

4. *Supplement*. The buzz is true. We are not getting the nutrients we need in today's daily diet. We need **Greens** for basic cellular building blocks. **Antioxidants** so we build healthier cells to replace our dying cells AND to improve the health of our current cells. **Pro-Arginine** for cardiovascular health. The combination of these three is key so we do not become one of the bad statistics... "1 out of 2 Americans are dying of a cardiovascular system failure. (Supplements \$120-\$170/mo.)

Some say these four basics I call "Health Insurance" are simply too expensive. Not only do they drastically improve the quality of your life, they are cheap compared to the cost of a heart-attack or other cardiovascular "breakdown." Even if you have "Disease Insurance" to offset some of the expense...

Heart attack = 50/50 shot of Living

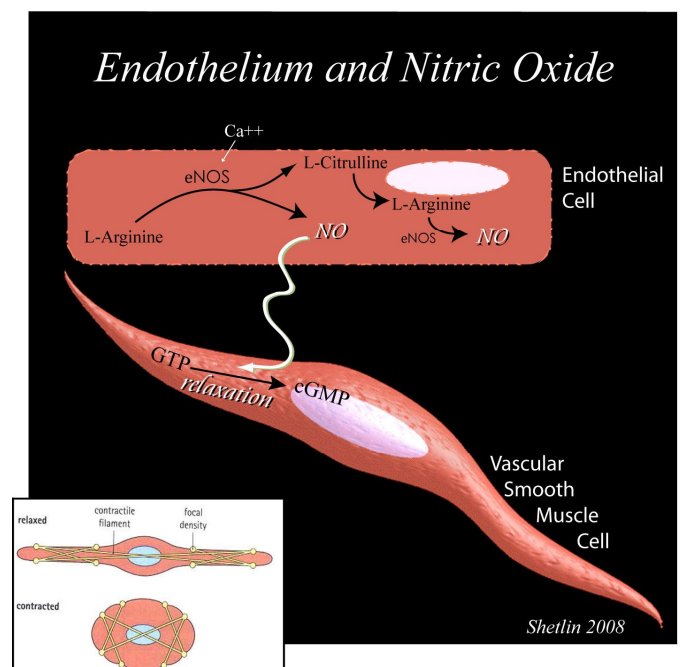
5-10 days in Hospital = \$15K to \$25K

Stint or other procedure = \$27K

Post Surgery Hospital stay 4-6 weeks = \$20K-\$40K

Death = \$15K to \$25K for services

Bottom line...It Pays to Prevent!



Shetlin 2008