

SLIMJOHN'S SUPPLEMENT AND PRODUCTS LIST (75% CORONARY ARTERY REGRESSION, 2007-2016)

Here is a list of supplements I have taken over the last nine years. This list is provided in response to requests for information on supplements and products I take. Supplements and products listed are what I take and are not intended to be a subject of debate or discussion here. If you take different supplements or products, that is fine and such discussions should be the topic of new threads. Of course, if you have questions about the supplements I take, ask away. I just don't want this thread to go off topic.

QUICK SUMMARY LIST is provided and for those new to HLT and others wanting additional information I provided a DETAILED LIST with brief commentaries and links. It is not intended to be exhaustive. Many of the supplements have other benefits but I focused on those effected atherosclerosis. Some supplements may not be suitable for some people (e.g., sulfur-based supplements like NAC may not be suitable for people with CBS SNPs). Moreover, some supplements may not be suitable if taking certain drugs (always check cytochrome P450 interactions).

QUICK SUMMARY LIST

1a. Omega-3 Fish Oil, EPA:DHA, 2:1 ratio

2- teaspoons Carlson's Norwegian The Very Finest Fish Oil, lemon-flavored

1- capsule Nordic Natural EPA Xtra

1b. Smude's High Oleic Virgin Sunflower Oil (Omega-9)

2-4 teaspoons (14g/tsp)

2a. BodyBio PC, Phospholipid Liposomal Complex

1- capsule

2b. Nutricology NT Factor EnergyLipids Powder.

1/2 teaspoon mixed in drink

3a. Jarrow Formulas Ubiquinol OH-aborb (CoQ10, 200 mg)

Morning: 1- capsule

Evening: 1- capsule

3b. Doctor's Best PureWay-C Sustained Release Vitamin C (500 mg)

Morning: 1- tablet

Evening: 1- tablet

3c. Healthy Origins Natural Astaxanthin, 12 mg capsule

Morning: 1- capsule

Evening: 1- capsule

3d. Jarrow Formulas Gamma Tocopherol Gamma E, 300mg capsule

Morning: 1- capsule

3e. Nutricology Delta Fraction Tocotrienols, 125 mg

Evening: 1- capsule

3f. AST Sports Sciencee R(+)-Alpha Lipoic Acid, 200 mg

1- capsule

3g. Jarrow Formulas N-A-C (N-Acetyl-Cysteine) Sustain, 600 mg

1- capsule, alternate days

4a. Life Extension Pomegranate Complete, ~537 mg

Morning: 1- capsule

Evening: 1- capsule

4b. Vitacost 5-LOXIN Boswellia Serrata Extract, 150 mg [std. to 30% AKBA, 45 mg)

1- capsule

4c. Kyolic Aged Garlic Extract Extra Strength Reserve Cardiovascular, 600 mg

Morning: 2- capsules

Evening: 2- capsules

5a. Healthy Origins Natural Active Trans Resveratrol w/Red Wine Extract, 300 mg

1- capsule

5b. Now Brand CurcuBrain Longvida Curcumin, 400 mg

1- capsule

5c. Pomi-T Polyphenol Rich Whole Food Supplement, 480 mg

Morning: 1- capsule

Evening: 1- capsule

5d. Red Apples

1- apple/day

6a. Healthy Origins Vitamin D3, 5,000 IU + Carlson Vitamin D3, 2,000 IU (75-85 ng/mL)

1- 5,000 IU capsule

1- 2,000 IU capsule

6b. Vitamin K Complex

Morning:

1- Vitamin K2, Mk-4/Mk-7

1- Mk-7/MenaQ7

Evening:

1- Vitamin K2, Mk-4/Mk-7

6c. Nature's Way Vitamin A (retinol), 10,000 IU

1- capsule, 10,000 IU

6d. Doctor's Best High Absorption 100% Chelated Magnesium, 100 mg

Morning: 2- tablets

Mid-day: 2- tablets

Evening: 2- tablets

7a. Arginine/Citrulline and Endothelial Function

Morning: 1-capsule Arginine & Citrulline Complex

Mid-Day: 1- capsule Sustained Release Arginine

Evening: 1-capsule Arginine & Citrulline Complex

7b. SJ's EndoPowerizer Mix

One glass in the morning, one glass in the evening.

8. Niacin and TMG

4- niacin caps, 2000 mg

3- TMG tablets, 3000 mg

9a. Life Extension One-Per-Day Tablets

1- tablet

9b. Metabolic Maintenance B-Complex PHosphorylated

1- capsule

9c. Source Naturals Taurine 1000, 1000 mg

Morning: 1 capsule

Mid-Day: 1 capsule

Evening: 1 capsule

DETAILED LIST

1a. Omega-3 Fish Oil, EPA:DHA, 2:1 ratio

2- teaspoons Carlson's Norwegian The Very Finest Fish Oil, lemon-flavored

1- capsule Nordic Natural EPA Xtra

Fish Oil (2 tsps): EPA Xtra (1 cap):

EPA: 1600 mg EPA: 1060 mg

DHA: 1000 mg DHA: 300 mg

TOTAL EPA:DHA (2:1)

EPA: 2660 mg

DHA: 1300 mg

TOTAL EPA+DHA: 3960 mg

1b. Smude's High Oleic Virgin Sunflower Oil (Omega-9)

2-4 teaspoons (14g/tsp)

Purpose: plaque stability; reduce arachidonic acid (inflammation).

The idea behind the 2:1 ratio fish oil and high oleic oil (omega-9) is to have more of these fatty acids in the cell membrane reducing the available area for omega-6 fatty acids. Note: curcumin also inhibits release of arachidonic acid. An increase in insulin overrides this protocol and promotes release of arachidonic acid.

Search HLT: Barry Sears, eicosanoids, prostaglandins, leukotrienes

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&t=27186#post49360>

See: <http://www.ncbi.nlm.nih.gov/pubmed/12583947>

See: <http://www.zonediet.com/blog/how-to-eliminate-50-percent-of-all-coronary-events/>

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&t=1493#post6695>

See: <http://www.reuters.com/article/idUSnCCN7xJhXV+1cb+MKW20151109>

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&t=1493#post6695>

2a. BodyBio PC, Phospholipid Liposomal Complex (phosphatidylcholine, phosphatidylethanolamine, phosphatidylinositol, proprietary blend)

1- capsule, 650 mg

2b. Nutricology NT Factor EnergyLipids Powder. Phosphatidyl nutrients, researched and blended to optimize cellular uptake and membrane utilization (Phosphatidylcholine, Phosphatidic acid, Phosphatidyl-ethanolamine, Phosphatidyl-glycerol, Phosphatidyl-inositol, Phosphatidyl-serine, etc.).

1/2 teaspoon mixed in drink

Purpose: PC is major structural component of cell membranes; improve cell structure and integrity for improve nutrient influx and waste efflux; facilitates transport across cells; reduces oxidative stress; improved HDL (preferentially incorporated into HDL fraction).

The PC in the cell membrane deteriorates with age leaving stiff, inflexible membrane with solid fats and cholesterol that contributes to cell aging and dysfunction. Supplementing with PC reverses the process.

See: <http://www.heartlifetalk.com/forums/default.aspx?g=posts&m=70636#post70636>

See: <http://www.life-enhancement.com/magazine/article/1575-the-power-of-essential-phospholipids>

3a. Jarrow Formulas Ubiquinol OH-aborb (CoQ10, 200 mg)

CoQ10 is a super antioxidant that protects the electron transfer chain of mitochondria. CoQ10 is needed for basic cell function. Vitamin C and vitamin E antioxidant capabilities can become depleted causing them to become pro-oxidant; CoQ10 plays a role in restoring and recycling vitamin E and vitamin C to full antioxidant function.

CoQ10 levels decrease with age and may be low in people with cancer, certain genetic disorders, diabetes, heart conditions -- and some drugs (statins) deplete CoQ10. The heart and blood vessels are rich with mitochondria, and that requires highly effective and efficient use of energy in those tissues.

Morning: 1- 200 mg capsule

Evening: 1- 200 mg capsule

My first experience using CoQ10 was long before I even knew I had any kind of atherosclerosis problem. I had been taking a beta-blocker (Toprol) which really added an energy drag to my exercise. I learned that beta-blockers interferes and depletes CoQ10. I began taking CoQ10 and I was able to exercise with full energy. I have been taking CoQ10 for at least 15 years.

Note: CoQ10 plus aged garlic extract, another supplement known to improve endothelial function and slow atherosclerosis, reduced blood vessel stiffness and slowed arterial calcium accumulation (see Budoff study below).

See: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4277702/pdf/nihms650130.pdf>

See: <http://www.ncbi.nlm.nih.gov/pubmed/21684136>

See: <http://www.drstinatra.com/improved-energy-one-of-the-top-benefits-of-coq10/>

3b. Doctor's Best PureWay-C Sustained Release Vitamin C (500 mg)

PureWay-C is a clinically proven and patent pending new form of vitamin C that contains vitamin C-lipid metabolites and bioflavonoids. Pureway-C is more rapidly absorbed and leads to higher plasma and cellular levels, having faster and more beneficial effects than ascorbic acid and other ascorbate brands. These benefits include better stimulation of neurite outgrowth, increased fibroblast wound healing activities, increased protection of the immune system from xenobiotic induced inflammatory mechanisms, and greater reduction of plasma levels of C-reactive protein and oxidized LDL, as well as more potent antioxidant and higher free radical scavenging capabilities.

Morning: 1- 500 mg tablet

Evening: 1- 500 mg tablet

Regardless the dosage level, the absorption rate is fairly constant -- 150-200mg -- and the half-life is about 30 minutes with full depletion in 1-1/2 hours. *Once ascorbic acid has been depleted, peroxidation rapidly proceeds.* [Source: Ascorbic Acid: Biochemistry and Biomedical Cell Biology, p. 352]

200mg/d has been suggested as optimal for most healthy people. At about 400 mg/d, a homeostatic state is reached with maximal plasma steady-state concentrations of 60-90 umol/L and intracellular

concentration ranging from 0.5 to 10 mmol/L. So, the 500 mg/d -- released over a 12-14 hour period -- may be optimal. Vitamin C alone is not a good thing (can quickly become pro-oxidant). Vitamin C does recycle vitamin E that has become pro-oxidant but vitamin C is also susceptible to becoming pro-oxidant. CoQ10, astaxanthin, and vitamin E seem to work in a complementary way to recycle C and E plus inhibit lipid peroxidation.

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&t=28207#post50450>

See: <http://www.drbitamins.com/products/pureway-c-sustained-release-vitamin-c/drbit-00191>

See: <http://www.innlabs.com/purewayc.html>

3c. Healthy Origins Natural Astaxanthin, 12 mg capsule

Astaxanthin is powerful antioxidant and anti-inflammatory carotenoid that protects against oxidant stress, inflammation, lipid glycation, mitochondrial dysfunction, and boosts immune function. Astaxanthin incorporates itself perfectly into and across the cell membrane, where it acts as a powerful inhibitor of lipid oxidation.

Morning: 1- 12 mg capsule

Evening: 1- 12 mg capsule

Astaxanthin also protects phosphatidylcholine (cell membrane) from destructive oxidation. Phosphatidylcholine supplement helps with intestinal absorption of astaxanthin. Take astaxanthin with meals that contain the most fat -- can increase absorption 12x -- or take with phosphatidylcholine supplement!

Other benefits: Astaxanthin can rejuvenate the skin! Astaxanthin reduces crow's feet wrinkles, water loss, skin sagging, and age spot size while enhancing moisture content, elasticity, and skin texture in both men and women

See: <http://www.nutrex-hawaii.com/what-is-astaxanthin>

See: <http://www.lifeextension.com/magazine/2013/4/Astaxanthin-Provides-Broad-Spectrum-Protection/Page-01>

See: <http://www.altmedrev.com/publications/16/4/355.pdf>

3d. Jarrow Formulas Gamma Tocopherol Gamma E, 300mg capsule

There are four forms of tocopherols -- alpha, beta, gamma, and delta. Gamma tocopherol is most common and is thought to be superior and more potent, especially to alpha tocopherol.

Morning: 1- 300mg capsule

Research has shown (see below) that gamma tocopherol is superior to alpha tocopherol in preventing formation of lipid peroxides, counteracting the effect of RNS and oxidative stress in the pathophysiology of atherosclerosis. Gamma tocopherol plays an important role in preserving endothelial function by protecting degradation of BH4, a key cofactor in the synthesis of NO.

A 2012 study results indicated that both alpha tocopherols and gamma tocopherols "tocopherols became incorporated into VLDL, LDL and HDL, which protected VLDL and LDL against oxidation. However and surprisingly, the incorporation into HDL demonstrated pro-oxidant properties."

See: [http://www.jnutbio.com/article/S0955-2863\(11\)00136-7/abstract](http://www.jnutbio.com/article/S0955-2863(11)00136-7/abstract)

However, there is no indication that CoQ10, astaxanthin, vitamin C, alpha-lipoic acid or other antioxidant recycling agents were included in the study. The takeaway lesson is never to take a vitamin E supplement without recycling agents such as CoQ10, astaxanthin, vitamin C, or alpha-lipoic acid.

See: <http://onlinelibrary.wiley.com/doi/10.1002/clc.22422/pdf>

See: <http://www.lifeextension.com/magazine/2011/1/critical-importance-of-gamma-e-tocopherol-continues-to-be-overlooked/page-01>

See: http://www.lifeextension.com/magazine/2006/4/report_gamma/Page-01

See: http://www.bcn4life.com/Vit_E_Tocotrienols.html

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&t=193#post386>

3e. Nutricology Delta Fraction Tocotrienols, 125 mg

There are four tocotrienols - alpha, beta, gamma and delta. However, it is the delta fraction that has the most significant properties for cardiovascular and circulatory health.

Evening: 1- 125mg capsule

See: <http://www.lifeextension.com/magazine/2014/8/the-little-known-benefits-of-tocotrienols/page-01>

See: http://www.bcn4life.com/Vit_E_Tocotrienols.html

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&t=193#post386>

3f. AST Sports Science R(+)-Alpha Lipoic Acid, 200 mg

Alpha Lipoic Acid scavenges free radicals, fights inflammation, protects against LDL oxidation and slows the aging process. ALA seems to help improve insulin sensitivity and might also offer protection against metabolic syndrome — a term given to a cluster of conditions like high blood pressure, cholesterol and body weight. Some evidence also shows that it can help lower blood sugar levels.

1- 200mg capsule

When ALA is combined with vitamin C and vitamin E antioxidants, the body's ability to fight free radicals is greatly increased. "ALA has been shown to be involved in the recycling of other antioxidants in the body including vitamins C and E and glutathione. Not only have the antioxidant qualities of this molecule been studied, but there are also several reports pertaining to its blood lipid modulating characteristics, protection against LDL oxidation and modulation of hypertension. Therefore, ALA represents a possible protective agent against risk factors of cardiovascular disease (CVD).

See: <http://jn.nutrition.org/content/133/11/3327.full.pdf>

Note: Recent research indicates ALA (not to be confused with alpha linolenic acid) plays a significant role in mitochondrial metabolism and structure and ALA *significantly attenuates Pi (inorganic phosphorous) induced vascular smooth muscle cell calcification* (phosphates tend to increase calcification). Take (R)+ alpha lipoic acid.

See: <http://onlinelibrary.wiley.com/doi/10.1111/j.1582-4934.2011.01294.x/pdf>

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&m=27436#post27436>

See: <http://www.ncbi.nlm.nih.gov/pubmed/21362131>

See: http://www.lifeextension.com/magazine/2007/10/nu_lipoic_acid/page-01

See: <http://umm.edu/health/medical/altmed/supplement/alphalipoic-acid>

See: <http://www.ncbi.nlm.nih.gov/pubmed/22607646>

See: <http://www.life-enhancement.com/magazine/article/102-lipoic-acid-update-the-ideal-antioxidant-gets-even-better>

See: <http://www.lifeextension.com/magazine/2011/8/Lipoic-Acid-Reverses-Mitochondrial-Decay/Page-01>

CoQ10, Vitamin C, Vitamin E, astaxanthin, and alpha lipoic acid work optimally together and should be considered an indivisible powerful cellular antioxidant unit.

3g. Jarrow Formulas N-A-C (N-Acetyl-Cysteine) Sustain, 600 mg

Antioxidant and precursor of critical endogenous antioxidant glutathione -- and all its benefits arise from its ability to boost a person's glutathione with major impact on the immune system and cardiovascular health. NAC prevents oxidation of LDL, lowers homocysteine, and lowers Lp(a). NAC inhibit biofilms (made up of fungus/bacteria) on stents and probably other installed appliances that extend into bloodstream (pacemaker leads). Bacteria on installed appliances are a common cause of sepsis.

1- capsule, 600 mg, alternate days

See: <http://www.lifeextension.com/magazine/2010/5/n-acetyl-cysteine/Page-01>

4a. Life Extension Pomegranate Complete, ~537 mg

Pomegranate juice contains powerful antioxidant polyphenols called ellagitannins and ellagic acid. Each capsule provides polyphenols equivalent to 12.3 ounces of pomegranate juice concentrate (or 30 pomegranates), plus a proprietary blend of seed oil and flower extract. Pomegranate enhances nitric oxide and improves endothelial function. Animal studies show pomegranate's ability to significantly reduce atherosclerotic lesions.

Morning: 1- capsule

Evening: 1- capsule

Early animal and human studies established that pomegranate juice consumption reduces oxidative stress, low-density lipoprotein (LDL) aggregation and oxidation, and platelet clumping associated with atherosclerosis. Pomegranate extract increases PON1 that increases the antioxidant capability of HDL cholesterol; PON1 also slows macrophage activity.

See: <http://www.lifeextension.com/magazine/2009/11/pomegranate-favorably-modulates-gene-expression/page-01>

See: <http://www.lifeextension.com/magazine/2012/6/fight-heart-disease-activating-protect-enzyme/page-01>

See: <http://www.comilac.com.tr/uploads/pdf/11pomgt.pdf>

See: <http://www.ncbi.nlm.nih.gov/pubmed/15781875>

4b. Vitacost 5-LOXIN Boswellia Serrata Extract, 150 mg [std. to 30% AKBA, 45 mg]

Boswellia inhibits pro-inflammatory 5-LOX enzyme and blocks biosynthesis of inflammatory leukotrienes that may promote vascular permeability and low-density lipoprotein (LDL) oxidation. These combined effects may promote the development of atherosclerotic plaques in the arteries.

1- capsule, 150 mg (45 mg AKBA)

"Oxidation of the LDL cholesterol involves the Lipoxygenase pathway which can be inhibited by Boswellia. Boswellia works by suppressing inflammation by inhibiting an enzyme called 5-lipoxygenase (5 L-OX) and its by products called leukotrienes. This pathway is important in chronic inflammatory diseases such as arthritis, colitis, asthma, allergies, osteoporosis, eczema and psoriasis. Boswellia is also useful in preventing the inflammation inside the arterial tree associated with atherosclerotic plaque formation." [Note: Dr. Dach recommends True Botanica Boswellia 3K that is std. to 90% AKBA BUT offers 54mg of AKBA per capsule! Vitacost has 45 mg AKBA.]

See: http://www.drdach.com/Heart_Disease_Two.html

See: http://www.lifeextension.com/magazine/2007/3/report_boswellia/page-01

4c. Kyolic Aged Garlic Extract Extra Strength Reserve Cardiovascular, 600 mg

Reduces atherosclerotic plaque, improves blood pressure, reduces oxidation of LDL, improves endothelial function, improves cholesterol, LDL, triglycerides and homocysteine, improves cognitive function, improves immune function, inhibit platelet aggregation & adhesion, increases cellular glutathione (cell's major endogenous antioxidant).

Morning: 2- 600 mg capsules

Evening: 2- 600 mg capsules

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&m=45749#post45749>

See: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4277702/pdf/nihms650130.pdf>

See: <http://jn.nutrition.org/content/136/3/741S.full.pdf>

See: <http://www.life-enhancement.com/magazine/article/368-garlic-helps-reduce-arterial-plaque>

See: <http://www.ncbi.nlm.nih.gov/pubmed/26764322> (2016!)

See: <http://www.ncbi.nlm.nih.gov/pubmed/10381297>

See: <http://www.preparemd.com/supplements-vitamins-categories-information/garlic-heart-attacks/>

5a. Healthy Origins Natural Active Trans Resveratrol w/Red Wine Extract, 300 mg

Trans Resveratrol has been shown to decrease oxidative stress and acutely increase insulin sensitivity and heart health. For general health benefits for cardiovascular health, insulin sensitivity, and longevity, dosages between 150-445mg have been used.

1- capsule, 300mg

Resveratrol is a polyphenol that belongs to a class of polyphenolic compounds called stilbenes. Two randomized, placebo-controlled trials reported that one-year consumption of a supplement containing 8 mg/day of resveratrol improved inflammatory and atherogenic status in subjects at risk for cardiovascular disease, as well as in patients with established coronary heart disease.

When taken orally, resveratrol is well absorbed by humans, but its bioavailability is relatively low because it is rapidly metabolized and eliminated. Nevertheless, repeated doses of trans-resveratrol could yield higher plasma concentrations. The co-administration of quercetin (another polyphenol) may improve bioavailability. The half-life of the resveratrol molecule is in the range of 1-3 hours; it can be extended for another 2-5 hours with multiple doses.

See: <http://lpi.oregonstate.edu/mic/dietary-factors/phytochemicals/resveratrol>.

"One salient feature of Resveratrol resides in its ability to activate sirtuins, phylogenetically conserved deacetylases that senses the NAD⁺/NADH ratio, which in turn are prominent mediators of lifespan extension by calorie restriction." Source: Gottlieb, Roberta A., Autophagy in Health and Disease, Academic Press, 2013, page 202.

See: <https://examine.com/supplements/resveratrol/>

See: http://www.lifeextension.com/magazine/2007/3/report_resveratrol/Page-01

See: <http://www.lmreview.com/articles/view/resveratrol-niacin-nicotinamide-ribose-key-players-in-activating-sirtuins-to-mimic-calorie-restriction-extend-lifespan-part-i/>

See: <http://www.lmreview.com/articles/view/resveratrol-niacin-nicotinamide-ribose-key-players-in-activating-sirtuins-to-mimic-calorie-restriction-extend-lifespan-part-ii/>

Consider Pterostilbene as alternative to or co-supplement with Resveratrol.

Source Naturals Pterostilbene, 50 mg, 120 Capsules or Life Extension, Resveratrol with Pterostilbene, 100 mg, 60 Veggie Caps

Pterostilbene is a powerful antioxidant, four times more bioavailable than Resveratrol, and reduces cortisol for sleep, stress, weight loss.

See: <http://www.pterostilbene.com/pterostilbene-potent-sirt1-activator/>

5b. Now Brand CurcuBrain Longvida Curcumin, 400 mg

Curcumin Product Bioavailability vs natural curcumin:

BCM-95: 8x

Meriva Phytosome: 20x

Now Brand CurcuBrain Longvida: 65x

Curcumin is a strong antioxidant and anti-inflammatory compound. Curcumin dose-dependently suppresses oxLDL. Research suggests that curcumin reduces the expression of MMP-9, MMP-13 and EMMPRIN. The high expression of MMP-9 (matrix metalloproteinase-9), MMP-13 (matrix metalloproteinase-13) and EMMPRIN (extracellular matrix metalloproteinase induce) in

monocyte/macrophage results in the plaque progression and plaque destabilization.

1- capsule, 400 mg

See: <http://link.springer.com/article/10.1186%2Fs12967-014-0266-2>

See: <http://www.ncbi.nlm.nih.gov/pubmed/19549571>

5c. Pomi-T Polyphenol Rich Whole Food Supplement, 480 mg

4-in 1. Each capsule contains extracts of Broccoli (sulforaphane source), 150 mg; Tumeric, 150 mg; Pomegranate, 150mg; and Green Tea, 30 mg.

Morning: 1- capsule, 480 mg

Evening: 1- capsule, 480 mg

Once offered exclusively by LEF but now by Pomi-T direct. There are many other products (Zyflamend, Inflama-Care, and the over-hyped, multi-level marketing product, Protandim) but Pomi-T is best and very reasonably priced. <http://www.pomi-t.com/>

See: <http://www.pomi-t.com/usa/>

5d. Red Apples

Source of high procyanidins content. Apples are natural inhibitors of LOX-1. Inhibition of LOX-1 has been shown to improve cellular function, significantly lower oxLDL, and reduces atherosclerotic lesion formation.

1- apple/day

See: <http://www.heartlifetalk.com/forums/default.aspx?g=posts&t=30509#post72999>

See: <http://www.heartlifetalk.com/forums/default.aspx?g=posts&t=29386#post61397>

6a. Healthy Origins Vitamin D3, 5,000 IU + Carlson Vitamin D3, 2,000 IU (75-85 ng/mL)

Vitamin D3, the sunshine vitamin, regulates calcium homeostasis, promotes teeth and bone health, immune system function, muscle health, healthy cardiovascular system, and calcium absorption. Vitamin D3 plays an important role in the synthesis of matrix Gla protein (MGP) in VSMCs (vascular smooth muscle cells). MGP functions to prevent calcification and to protect vascular vessel walls -- but must be activated (carboxylated) in order to be protective. Vitamin K activates (carboxylates) MGP.

I get plenty of sunshine exposure. I get 25(OH)D test semi-annually. 7,000 IU Vitamin D3 allow me to achieve 75-85 ng/mL:

1- 5,000 IU capsule

1- 2,000 IU capsule

6b. Vitamin K Complex

Previously, I had taken 2x Life Extension Super K with Advanced K2 Complex, Vitacost Ultra Vitamin K Complex, and Vitacost Vitamin K2 (Mk-7). Unfortunately, we recently learned that these formulations have roughly 50% trans form. This could result in UNDERcarboxylation of MPG due to insufficient Mk-4/Mk-7. I am of the opinion that we should always ensure that we have high levels of Mk-4/Mk-7, 24/7 to ensure carboxylation of MPG. NEVER accept any vitamin K product that does not provide trans form of Mk-4 and Mk-7.

Current Vitamin K Complex:

RELENTLESS IMPROVEMENTS "Vitamin K2, Mk-4/Mk-7"

Source: Kappa Bioscience

Each capsule contains:

trans Mk-4: 15 mg

trans Mk-7: 60 mcg

Interesting: take 3/day and you have values used in research.

DOCTOR'S BEST "Natural Vitamin K2, Mk-7 with MenaQ7"

Source: MenaQ7

Each capsule contains:

trans Mk-7 100 mcg

Morning:

1- Relentless Improvements Vitamin K2, Mk-4/Mk-7

1- Doctor's Best Natural Vitamin K2, Mk-7/MenaQ7

Evening:

1- Relentless Improvements Vitamin K2, Mk-4/Mk-7

Daily total:

Mk-4: 30 mg

Mk-7: 220 mcg

To date, the science favors long-chain menaquinones, mainly Mk-7, as more potent than Mk-4 in inhibiting coronary calcification. In terms of the chemistry involved (something called Michaelis constant), the reason that long chain Mk-7 is preferential cofactor is that it requires less material for an effective reaction (carboxylation) vs Mk-4. In other words, it takes a lot of Mk-4 to do what Mk-7 does with less. :-)

Often overlooked is the body's production of matrix Gla protein (MGP) -- Vitamin D3 promotes secretion or release of MGP into vessels: 1) without MGP, or if low levels, calcification proceeds rapidly or 2) if sufficient, it arrives uncarboxylated which leads to calcification unless activated (carboxylated) by vitamin K. So, we need sufficient MGP to protect the arteries but MGP must be activated by K to provide the protection and prevent calcification.

6c. Nature's Way Vitamin A (retinol), 10,000 IU

Vitamin A (retinol) also serves as a modulating factor with Vitamin D3. It is important to know that Vitamin A (retinol) plays an extremely important role vis-a-vis Vitamin D3 production of inactive or uncarboxylated Matrix Gla Protein.

1- capsule, 10,000 IU

There is serious concern that higher levels of Vitamin D3 (>40ng/mL) may produce varying concentrations of MGP in excess of what Vitamin K complex can activate, leading to significant inactive MGP on artery walls. Add to this the variation of Vitamin D3 throughout the day (sun exposure, when supplement taken, individual variations, etc.) and MGP concentrations can be significant.

The question is how much Vitamin A (retinol) to Vitamin D3. There are some general guidelines that Masterjohn describes, but, as he says, it may be years before research directly tackles this and until then we use what is known from research and good judgment. The suggestions range from 3:1 to 5:1, A:D3.

MY OPINION & APPROACH: While Masterjohn makes a good case for MGP levels in excess of what vitamin K2 can activate and the need for Vitamin A Retinol to moderate excretion of MGP, this assumes that vitamin k2 levels are RDA levels and not high dosage Mk-4 and Mk-7. I intend to ensure I have more than sufficient levels of Mk-4 and Mk-7 to carboxylate MGP and, as a safety firewall, I now only take 10,000 IU vitamin A retinol.

6d. Doctor's Best High Absorption 100% Chelated Magnesium, 100 mg

Magnesium prevents mineralization or formation of calcium phosphate.

NOTE: Niacin lowers serum phosphate by inhibiting calcium-phosphate binding (blocks receptors). This is different than magnesium preventing mineralization. In soft tissues, excess magnesium is thought to inhibit excess calcium-promoted mineralization mediated by MGP (matrix Gla Protein) thereby suppressing calcium-phosphate deposition. In the soft tissue it is not a phosphate binding process but an inhibition of mineralization formation (calcium phosphate).

See: <http://cjasn.asnjournals.org/content/2/6/1249.full.pdf>

Morning: 2- tablets (200 mg elemental Mg)

Mid-day: 2- tablets (200 mg elemental Mg)

Evening: 2- tablets (200 mg elemental Mg)

During summer days, especially when I am outdoors doing yard work or doing interval trots, I reduce intake of magnesium tablets and take Natural Vitality Natural Calm magnesium drink

Natural Vitality Natural Calm is magnesium carbonate powder w/citrus that when made into a drink breaks (molecular dissociation) the magnesium carbonate bonds, leaving ionic magnesium that is more easily absorbed. I prepare 400-500mg in 1.5 liter bottle and sip throughout the day; I get fluids and magnesium!

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&m=30856#post30856>

See: <http://naturalvitality.com/natural-calm/>

See: <http://cjasn.asnjournals.org/content/2/6/1249.full.pdf>

7a. Arginine/Citrulline and Endothelial Function

Endothelial dysfunction is another way of saying atherosclerosis. If you have endothelial dysfunction you HAVE atherosclerosis! The endothelium cell to cell binding weakens and becomes less flexible due to loss of ability to product nitric oxide and as a result oxLDL to enter between the cells -- the beginning of atherosclerosis. The inability to produce adequate nitric oxide for vascular flexibility is due to the decoupling of the eNOS enzyme, generally caused by a loss or reduction in one or more of its cofactors. Arginine and citrulline play big roles in eNOS function and restoration. See the links below for full explanations.

Source Naturals L-Arginine & L-Citrulline Complex

750 mg L-Arginine

250 mg L-Citrulline

Doctor's Best Sustained plus Immediate Release L-Arginine

500 mg immediate release

500 mg sustained release

Morning: 1-capsule Arginine & Citrulline Complex

Mid-Day: 1- capsule Sustained Release Arginine

Evening: 1-capsule Arginine & Citrulline Complex

7b. SJ's EndoPowerizer Mix

I developed an alternative to various commercial products to support and restore endothelium function. The formulation has changed somewhat over the years as new information enlightenment. :-) This mixture is based on the latest research studies and commercial products Tri-Flow, ArginCor, and Neo40. The Neo40 product takes an interesting approach to supporting cellular BH4. While Tri-Flow® and ArginCor™ uses Folate to support BH4 cellular production (similar molecules), Neo40 uses vitamin B12 (methylcobalamin) to support the methylation pathway to NOS and BH4 cycle. Endothelial dysfunction due to eNOS decoupling is closely linked the Methylation Cycle dysfunction.

1. Arginine: 1 tsp: 2g

2. Citrulline-Malate; 2:1 ratio: (2 tsp) 5g yielding: ~3 g citrulline [Bulk Supplements, Amazon.com]

3. Beet Root powder (1 tsp): 3g [Eclectic Institute Beet Juice Powder, freeze-dried]

4. Xylitol (artificial sweetener); Ultima Replenisher (balanced electrolyte formula) that contains Xylitol. ~2g (adjust to taste). Great red raspberry taste.

Add to a cold glass of water (8-16 oz) and stir. One glass in the morning, one glass in the evening. I sip 16 oz glass in the morning and sip 16 oz glass late evening.

I prefer citrulline-malate in 2:1 ratio because malate supports ATP (energy) via Krebs cycle. I retained a modest amount of arginine to support endothelial NO function and inhibits ADMA per Arginine:ADMA ratio test. Additional separate supporting supplements are essential, especially anti-oxidants (many in this list).

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&m=45733#post45733>

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&m=37730#post37730>

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&m=52607#post52607>

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&m=37699#post37699>

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&t=276#post623>

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&t=383#post1202>

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&t=863#post3738>

See: <http://www.heartlifetalk.com/forums/default.aspx?q=posts&t=5043#post12150>

8. Niacin and TMG

TwinLab Niacin (B-30 Caps, Crystalline Pure, 500 mg

NOW TMG tablets, 1000 mg

Niacin's effect is dose-dependent (%) and has been shown to:

- Reducing LDL and Total Cholesterol (5-25%)
- Increasing HDL Cholesterol (15-35%)
- Decreasing Triglycerides (20-50%)
- Increase in Apolipoprotein A1
- Decrease in Apolipoprotein B
- Shift to larger (less atherogenic) LDL particles
- Reduction in Lipoprotein (a)

I have taken niacin as Slo-Niacin for almost all of the nine years. I recently changed to nicotinic acid (immediate release) niacin. I took 2000 mg/day for most of those years. I now take 2000 mg IR niacin. Niacin played a huge role in lipid management.

Niacin depletes methyl groups, especially high-dose niacin! This can lead to problems with methylation and cause increase in homocysteine. I discovered that research shows that consuming equal amount of TMG and niacin solves the problem. TMG provides sufficient methyl groups for niacin and for S-adenosylmethionine (SAMe), etc. TMG may actually prevent elevated liver enzymes that some people experience when taking high-dose niacin.

4- niacin caps, 2000 mg

3- TMG tablets, 3000 mg

See Niacin: A Critical Component to the Management of Atherosclerosis

<http://www.baledoneen.com/LiteratureRetrieve.aspx?ID=212270>

9a. Life Extension One-Per-Day Tablets

Multivitamin & Mineral Supplement

Provides vitamins and minerals that otherwise would have to be purchased separately (e.g., selenium, boron)

1- tablet

9b. Metabolic Maintenance B-Complex PHosphorylated

Provides basic methylation support along with LEF One-Per-Day

1- capsule

9c. Source Naturals Taurine 1000, 1000 mg

Taurine is an amino acid that reduces oxidative stress, decreases LDL, improves endothelial function, and lowers cortisol.

Amazing relaxing and calming effect (for me) and solves some minor issues related to COMT SNPs.

Taurine is a sulfur-containing amino acid and may not be suitable for people with CBS SNPs.

Morning: 1 capsule, 1000 mg

Mid-Day: 1 capsule, 1000 mg

Evening: 1 capsule, 1000 mg

See: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2586397/pdf/ecc13057.pdf>

Which supplements do I think contributed the most to the regression?

While I am sure all played a role but some stand out: 1) fish oil EPA:DHA 2:1 supplementation, 2) Aged Garlic supplementation, and 3) MGP carboxylation by Vitamin K2 (Mk-4, Mk-7). I don't have any evidence but I think that Kyolic Aged Garlic (1200 mg am & pm) played a significant role. Overall, all supplements played a role and were consistently applied for years. A few supplements were added the last couple of years and may have influenced the results to some degree. It is all cumulative over nine years.

The whole process of atherosclerosis is extremely complex and there is no guarantee that much of what we do will "cure" the disease. However, I believe it takes much, much more than the typical programs we see that are based on hope! In my opinion, those programs are a good beginning but does not go much beyond the basic lipid management fundamentals and is woefully lacking and out-of-date with the last 3-5 years of proven research (endothelial dysfunction, calcification, etc.). The best we can do is apply what medical science and research tell us, each of us, n=1.

My own view is that when we have increased calcification scores often times we tend to go back to adjust lipids and then find that calcification scores increased again and -- being thrust into the abyss and unknown -- we do the same thing and manipulate lipids. Calcification, while important, is residue of on-going atherosclerosis. Time to get off that merry-go-round and take a different, research-based approach. There is no guarantee, of course, but far better than out-of-date information or guess and by-golly. We may be able to slow things down and may even stop some things -- and in some cases actually reverse the disease's damage. We will have a direction and some idea what may be needed to improve outcomes. The approach is a two sides of the same coin: 1) major emphasis: inhibit, regress vulnerable, atheromatous plaque formation and 2) inhibit, regress coronary calcification mineralization.

Finally, my experience shows that it IS possible to achieve regression. The only thing I did consistently, religiously, is take the supplements for nine years (assisted by a little obsessive-compulsive COMT+/+ characteristics). I was not as consistent with my diet or even my exercise but did try to keep on the rails. The good news is that this means many others here who have been in this battle for years may well be regressing plaque as well. I think so.

Now for the monkey in the room question: Are not these supplements expensive? That is akin to saying the price is high, right? Price without value is meaningless. So, in terms of value outcome over nine years, it's a bargain!

One other comment on price-value. Certainly, supplements are expensive. I wish it were not so. I have always tried to select the best supplement based on value. Anything less was cheap price with accompanying poor value. This is not something you can cheap your way out of -- the outcome may be disappointing.

"The bitterness of poor quality remains long after the sweetness of low price is forgotten" – Benjamin Franklin

This exclusive list is proprietary. It may be copied in its entirety only for personal use. A pdf file is provided. Posting to other websites or distribution to other media is permitted only if the entire list is used and the following credit included:

"Courtesy www.heartlifetalk.com: Slimjohn's Supplement and Products List (75% coronary artery regression, 2007-2016)"