



Aged Garlic Extract (AGE) Slows the Progression of Coronary Artery Disease

By: Gary E. Foresman, MD

Today we focus on cardiovascular health, specifically coronary artery disease (CAD). This complex process of vascular aging combines inflammation with oxidative stress at the level of the blood vessel which evokes an autoimmune response and attempts to heal the site of vascular damage. Whether due to cigarettes, infection, hypertension, diabetes or other offense, the body activates immune cells known as macrophages, which, in the process of healing a damaged blood vessel, can collect cholesterol at high levels. As the vessel heals and inflammation subsides, calcification of these "foam cells" (macrophages that have lots of oxidized cholesterol in them) stabilizes the damaged blood vessel.

When this occurs in the coronary vessels we can easily diagnose CAD through an ultra-fast CT scan and obtain the single most important screening ever known, the Coronary Artery Calcification (CAC) score. Please note that the process of vascular aging is primarily oxidative, inflammatory, and autoimmune, and that cholesterol and calcium deposition is merely a marker of the underlying disorder. Multiple trials confirm the CAC as the single greatest predictor of cardiovascular risk (better than an angiogram) and furthermore the best predictor we know of overall mortality.

Recently a double-blind, placebo-controlled, randomized clinical trial documented the success of a specific product, commercially known as Kyolic Formula 108, in slowing the progression of CAD. In this study, 65 patients (33-AGE, 32-placebo), all with documented CAD and all taking statin medicines, were followed for one year. Serial testing was performed to measure cholesterol profiles, vascular reactivity, oxidative stress markers, and autoantibody titers to oxidized LDL as well as CAC over a 12 month period.

Please note the reason that the participants were also on statins (cholesterol lowering medicines) is so that the study could make it through what is known as an Institutional Review Board (IRB). One legitimate weakness to the study, however, is that while on treatment with a statin going into the study, the average LDL was still 104 -112. The current recommended goal of therapy while on statins in patients with documented CAD is a target LDL of less than 70. If the target goal of LDL had been reached, would the results of the study be so dramatic? We obviously don't know.

What we do know is that the CAC progressed in the placebo (statin only) group by 92 points at one year, whereas the active treatment group (AGE plus statin) had a one year increase of only 20 points! Furthermore and most uniquely, very specific changes

were found solely in the AGE group. As expected, there were reductions in LDL, triglycerides, and an increase in HDL, but dramatic reductions in oxidized LDL and autoimmune markers were specific to AGE therapy. These changes along with documented improvements in vascular function unique to the AGE group are why we see such an improvement in slowing the progression of CAD versus using statins alone. Kyolic is the AGE we are speaking of, and it is formulated by soaking sliced raw garlic in ethanol for up to 20 months at room temperature. As this study was done specifically with Kyolic, we absolutely cannot generalize the findings to any other form of garlic supplement. Due to this study and many others preceding it, I now incorporate Kyolic into my CAD and vascular aging protocols. If you have CAD or other vascular aging and don't already take some B vitamins, I would take Kyolic Formula 108 2 caps twice daily with meals or, if you already take a good multiple (see [BNP](#)), then take Kyolic Reserve, 1 cap twice daily with meals.

Your Journey to Health and Healing,
Gary E Foresman MD

References:

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3. Budoff, M Aged Garlic Extract Retards Progression of Coronary Artery Calcification The Journal of Nutrition 136 (2006) 741S-744S.

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