Heart Healthy Properties of Garlic Found in Its Ability to Fight Inflammation

By Greg Arnold, DC, CSCS, February 27, 2006, abstracted from “The influence of garlic (Allium sativum) extract on interleukin 1á-induced expression of endothelial intercellular adhesion molecule-1 and vascular cell adhesion molecule-1” in the March 2006 issue of Phytomedicine

As a slow, progressive disease that is the building block for heart disease, stroke and peripheral artery disease, atherosclerosis affects the arteries of the brain, heart, kidneys, arms and legs by causing the buildup of either hard or soft plaque on the inside walls of the arteries. While hard plaque causes artery walls to thicken and harden, soft plaque can break apart from the walls, enter the bloodstream and cause a blood clot.¹

Research has started to show that inflammation plays a crucial role in the onset of atherosclerosis. Inflammation contributes to atherosclerosis by causing cells to "stick" to the lining of blood vessel walls (²,³) while proteins called cell adhesion molecules (CAMs) help these cells migrate into the walls of blood vessels and facilitate the progression of atherosclerosis. (⁴,⁵)

Because of this research, a focus on preventing inflammation may also hold the key to preventing atherosclerosis. Now a new study⁶ has found that this inflammatory process may be stopped by an age old heart-healthy food: Garlic.

As a food known to promote healing for over 5,000 years,⁷ garlic contains a tremendous amount of antioxidants⁸ and possesses anti-bacterial properties that have been shown to help prevent amoebic dysentery⁹ and gangrene.¹⁰ Garlic is such a healthy food that even its odor is good for you.¹¹

In the study, researchers exposed human heart artery cells to garlic extract at various concentrations (0.25–4.0 mg/ml). After this exposure the cells were exposed to an inflammatory protein called human interleukin-1a for 1 day. Researchers measured garlic's effect on inflammation by looking at levels of inflammation and the ability of cells to migrate into the lining of blood vessels.

Researchers found that the garlic extract "significantly decreased" this cell migration into the lining of blood vessels and "significantly inhibited" the sticking of cells to the human heart artery cells. For the researchers, "These results indicate that garlic extract [decreases] the [migration of cells into blood vessel walls], thus potentially contributing to the beneficial effects traditionally attributed to garlic."

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Reference:
¹ "What Is Atherosclerosis?" posted on the National Heart, Lung, and Blood Institute Website www.nhlbi.nih.gov/health/dci/Diseases/Atherosclerosis/Atherosclerosis_WhatsIt.html

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3 Richter, F. Circulating vascular cell adhesion molecules VCAM-1, ICAM-1, and E-selectin on dependence on aging, Gerontology 49 (2003), pp. 293–300

4 V. Richter. Effect of extracorporeal low-density lipoprotein elimination on circulating cell adhesion molecules in patients with hypercholesterolemia, Am. J. Cardiol. 87 (2001), pp. 111–113


11 Bautista DM. Pungent products from garlic activate the sensory ion channel TRPA1. Published online August 15, 2005 in the Proceedings of the National Academy of Sciences