

## The Cardiac Calcium Score

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February 2010

We will take a break from the stress education series for a couple of weeks so that we can concurrently pursue a series of articles evaluating vascular aging and, in this article, the appropriate screening for coronary artery disease.

A person is as old as his or her blood vessels. Nothing affects quality of life or mortality to the same extent as the aging of our blood vessels. We will discuss ways to assess cardiovascular risk in upcoming sessions; however, the leader (by far) in determining cardiovascular disease and even the risk of "all-cause" mortality is the cardiac calcium score (CCS, also known as coronary calcium and Agatson score). Although coronary artery disease (CAD) is truly an inflammatory disease of the lining of the blood vessels (known as the endothelium), this inflammation leads eventually to calcification. That calcification can be measured and quantified by today's high speed CT scans, providing you with the single best test that has ever existed for predicting your cardiovascular risk by directly determining if you have, and if so, how much, CAD in the present.

Although I am an advocate of fairly extensive blood testing that includes lipid profiles (which includes lipoprotein particle fractionation, the "inflammation test"-hsCRP, the B-vitamin assessment test-homocysteine, vitamin D), and of course routine assessment of weight, blood sugar, blood pressure, smoking status, and personal stress assessment, these risk factor analyses obviously pale in comparison to actually measuring the problem. A simple analogy: would you want your doctor to put your leg in a cast because you fell and were therefore "at risk" for a broken leg? Think of the harm we could cause by doing this to everybody at risk. Wouldn't you rather have the doctor get an x-ray and actually see if you have a broken leg first? I hope so. Because maybe a cast isn't enough and surgery is a better approach; alternatively, maybe not even a cast is required.

Whenever you take medicines for cholesterol or blood pressure without knowing your CCS, then you are blindly treating yourself. Of course, if you already have known cardiovascular disease then this score is not nearly as relevant. The CCS has been in use for at least 25 years and still everybody is treating themselves exactly as the pharmaceutical industry and the television tells them to. Not only are millions taking medicines they don't need to, millions more are not treating aggressively enough! After getting this test many of my patients are surprised to see me increase or even add to their medications! How can anyone treat a condition without first adequately determining its severity?

The CCS is a 5 minute test that is very inexpensive relative to its worth. Locally I have worked out a discounted rate for my patients with San Luis Diagnostics. A picture of any calcifications is provided and quantified. A perfect score is 0. Any other score needs discussion with your physician. Accelerated risk can be found for a score of 1-10, 11-100, 101-400, 401-1000, and >1000. Please go to PubMed (www.pubmed.gov) and find the reference article for this article "Expert Review on Coronary Calcium" by Matthew J Budoff, Vascular Health and Risk Management 2008:4(2), 315-24. This and hundreds of other articles like it make an indisputable argument for CCS as the single most important screening strategy that has ever existed for CAD. This is because cardiovascular mortality is the leading cause of death and disability in our country and no other test comes close in determining risk. Otherwise you and your physician are treating blindly.

Knowledge is power; however finding out that you have CAD can be a scary thing. So please don't get a test like this without the help of a health care professional comfortable in using the results to help you develop a therapeutic lifestyle along with a supplement and medical treatment program that can add years to your life and life to your years!

Your Journey to Health and Healing, Gary E Foresman MD

References: Upon Request

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