

# Atherosclerosis

We are only born with pristine arteries.

Childhood is when atherosclerosis actually begins. The sooner the public understands and accepts this scientific fact, the more likely adults will be motivated to get their children into good eating habits in their formative years—where eating behavior is learned, and for the most part, ingrained. Replacing unhealthy habits with healthy new ones creates new neural pathways as we attempt to change eating behavior. In adulthood, however, when changes in eating behavior are attempted through “dieting,” which implies a temporary change in eating behavior until a particular weight or health goal is reached, most people fail to sustain it. It’s just plain hard. It’s not surprising the recidivism on any diet or weight loss plan is more than 90 percent. Because atherosclerosis starts in childhood, it’s time to listen up and make some critical decisions to bring about lasting changes in eating behavior, not just embark on another diet.

Atherosclerosis, a form of arteriosclerosis, involves the thickening and narrowing of arterial walls beginning with fatty streaks. The oxidization of LDL sets the stage for plaque derived from fibrotic debris and calcification. Essentially, the early lesions that form the bed for plaque deposition are the result of macrophages and lymphocytes—cells involved in the inflammatory response—along with the proliferation of smooth muscle cells. Atherosclerosis advances to coronary artery disease (CAD) when it involves the network of blood vessels surrounding and serving the heart. This is a process that, beginning in childhood, takes decades and is the No. 1 killer of American men and women.

Angioplasties and bypass operations have become as commonplace as dental work. But guess what? Atherosclerosis continues to happen even after these successful procedures have, thankfully, negotiated some extra years back into your life. (That’s really what they do.) However, the underlying biochemical abnormalities that propagate inflammation, which is at the core of atherosclerosis, are not addressed. You are handed prescriptions for the usual statins and anticoagulant medications but at what cost? Not to mention the “cardiac prudent diet” still mandatory in most hospitals whose Food Guide Pyramid ideology continues to demonize healthy dietary fats in favor of pro-inflammatory vegetable oils and refined, grain-based carbohydrates. And don’t forget the juice! (Or Ensure!) Given the reams of recent scientific evidence that conclusively state this way of eating is incorrect, this continues to be an outdated paradigm that just won’t die. Hopefully it won’t claim too many more victims before it does.

To date, too much emphasis is being placed on cholesterol even though people with healthy cholesterol levels are having heart attacks. There are other critically important clinical markers to investigate, such as high-sensitivity C reactive protein (hs-CRP), lipoprotein (a), insulin and blood sugar, fibrinogen, C-peptide, homocysteine, white blood cell (WBC) counts, the all-important triglycerides and the VAP test, which evaluates if cholesterol subclass patterns are mostly atherogenic (small dense particles) or less atherogenic (large fluffy particles). Our chosen fuel—deficiencies to over-indulgences—indeed, our eating behavior itself, translates to abnormalities in these clinical markers for heart disease.

We must first address our fuel: the food we choose. Only nutritional and lifestyle modifications truly target the underlying causes of atherosclerosis: inflammation and the ensuing free radical damage that contributes to plaque formation. Where to start: Always choose whole, unprocessed, no-sugar-added foods, eliminating refined carbohydrates and deleterious factory-made trans fats. Choose lean meats, poultry,

fish, eggs, mostly non-starchy vegetables, nuts and seeds, low glycemic fruits such as berries, plums and grapefruit, and occasional whole grains.

It is imperative to address the clinical abnormalities in subclinical or diagnosed atherosclerosis as well as the primary prevention of heart disease. The following supplements help to achieve just that.

- EPA/DHA to re-balance the ratio of omega-6 to omega-3 fats to reduce inflammation. Also important are the antioxidants for quenching free radicals that promote inflammation such as EGCG, quercetin, phytoguard, Pycnogenol, curcumin, kyolic, NAC, and vitamins C and E. Vitamin C also protects arteries by helping to maintain elasticity and enhancing the action of vitamin E. Chromium plays a very important role in promoting the stabilization of insulin and blood sugar levels, which promote inflammation when unstable.
- To maintain heart health and prevent arrhythmias, orthomega, magnesium, taurine, CoQ10 and GPLC.
- The B vitamins, particularly vitamins B6, B12 and folate for promoting healthy homocysteine levels. Trimethylglycine also is critical in that it acts as a methyl donor to homocysteine, safely converting it to methionine. High homocysteine levels are an independent risk factor for heart disease.
- For healthy circulation, orthomega, Padma 28 and resveratrol. Perfusia and hawthorn are known for their important vasodilating effects.
- To break down unhealthy coagulation in the blood, nattokinase and vascuzyme.
- For healthy cholesterol levels, policosanol and niacin. With krill oil's unique ability in delivering EPA and DHA, ultra Trienols is a star in the maintenance of cardiovascular health.
- Along with these important supplements, vitamin D, now known for its important role in preventing chronic diseases such as heart disease, and vitamin K2 help to keep the vascular system healthy.

Along with this regimen, get at least 30 minutes of exercise five days a week. Find a physical activity you like—even remotely—then fall in love with it.

If you smoke, quit. Now.

At the Hoffman Center, the "Cardiac IV," which contains important micronutrients such as L-arginine, L-taurine, B vitamins, magnesium and vitamin C, is alternated with IV chelation therapy, which is undergoing research at the National Institutes of Health for atherosclerosis reversal.

Finally, decide that you're not going on yet another diet but are choosing to change your lifestyle and eating behavior for good. This intellectual decision, somewhere along the line, will take the elevator down from your head to your heart (no pun, really) where your new eating behavior will become instinctual rather than conscious.