



## Atherosclerosis

The coronary arteries provide the primary blood supply to the heart muscle, and coronary heart disease occurs when the arteries become blocked by a buildup of calcium, cholesterol, and other blood factors. This fatty buildup is medically referred to as atherosclerosis, and these deposits cause the arteries to narrow and stiffen. A sudden block of the blood supply to any area of the heart muscle can cause heart attack and death.

### **Aim of the Study**

The objective of this study was to determine the effect of a defined nutritional supplement program and specific nutrient synergy on the natural progression of coronary artery disease in 55 patients (50 men and 5 women) between the ages of 44-67 with coronary artery disease as documented by Ultrafast Computed Tomography.

### **Study Design**

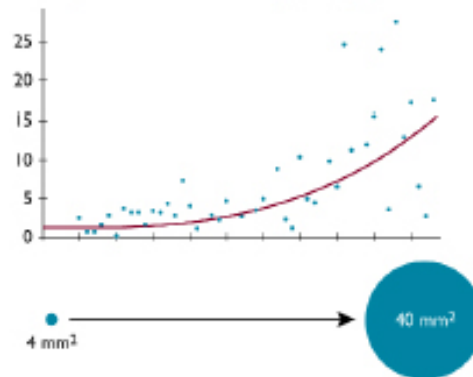
The study focused directly on the key problem - the atherosclerotic deposit inside the walls of the coronary arteries. For this study, Ultrafast Computed Tomography (UCT) was used. UCT is a modern technique that allows the measurement of the size of coronary deposits non-invasively. The computer automatically calculates a deposit's size by determining the Coronary Artery Scan (CAS) score. The higher the CAS score, the more calcium has accumulated, which indicates more advanced coronary heart disease. Changes in the size of the coronary artery calcifications in each patient were measured over an average period of one year without vitamin supplementation followed by one year with the vitamin program. In this way, the heart scans of the same person was compared before and after the vitamin program. This study design had the advantage of the patients serving as their own controls.

### **Study Results**

During the course of the 12-month nutritional supplement program, the fast growth of coronary deposits was slowed during the first six months of the study and essentially stopped during the second six months. After one year of using the specific supplement program, the coronary deposits entirely disappeared, indicating on a natural healing process of the artery wall.

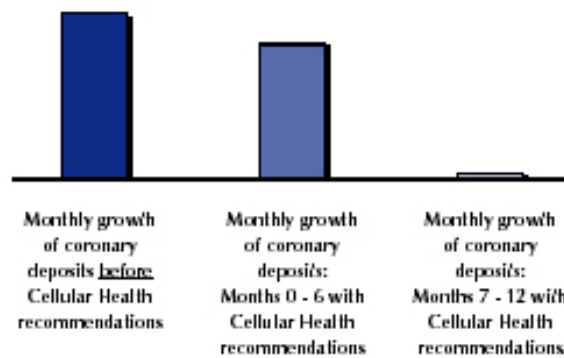
For the first time in medical history, the reversal of atherosclerotic deposits without bypass surgery, angioplasty, and medication was documented. The results of this remarkable discovery were published in the *Journal of Applied Nutrition* in 1996.

Without use of Dr. Rath's Cellular Health recommendations, the atherosclerotic plaques in the coronary arteries increased exponentially. This graph shows the growth rate of coronary deposits in each patient before the vitamin program. Patients with early coronary heart disease had an average increase in plaque area of 4 mm<sup>2</sup> every year (left). The deposits of patients with advanced coronary heart disease increased by 40 mm<sup>2</sup> or more every year (right).



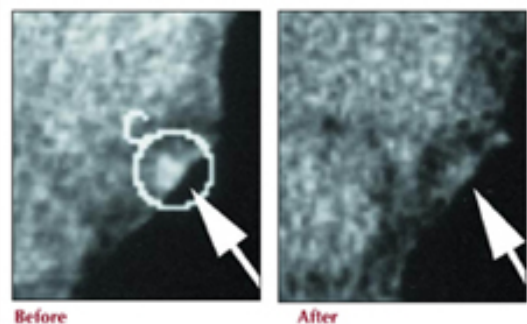
Growth rate of coronary deposits per year in each patient

With use of Dr. Rath's Cellular Health recommendations, the fast growth of coronary artery deposits was slowed during the first six months and essentially stopped during the second six months. As a result, no heart attack would occur. These are the study results of patients with early coronary deposits who, like millions of adults in the prime of their lives, have developed heart disease without yet experiencing symptoms.



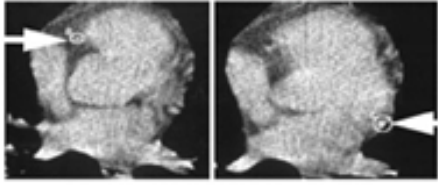
Dr. Rath's Cellular Health recommendations can stop coronary heart disease.

Before following Dr. Rath's Cellular Health recommendations, the patient had developed atherosclerotic deposits in the walls of his left coronary artery (white circled area in the left picture). The scans below are magnifications of the heart scan taken with Ultrast CT.



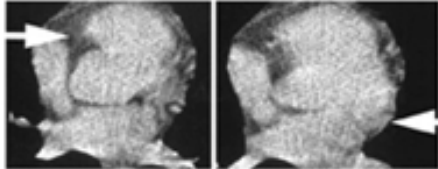
*These pictures document a milestone in medicine – the complete natural disappearance of coronary heart disease. The Ultrafast Computed Tomography (Ultrafast CT) scans (top row) document atherosclerotic deposits in the right and left coronary arteries of this patient. After one year with Dr. Rath's Cellular Health recommendations, these coronary deposits entirely disappeared (bottom row) – indicating a natural healing process of the artery wall.*

**Without Vitamin Program**



Deposits in left and right coronary arteries

**With Vitamin Program**



Natural disappearance of deposits in both coronary arteries