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BECOMING HEART ATTACK PROOF



The following remarks by **Caldwell B. Esselstyn, Jr., MD** were delivered September 2, 2000 in Orlando, Florida at the Summit Conference on Cholesterol and Coronary Risk presented by the Cleveland Clinic Foundation in cooperation with the Walt Disney World Company.

These comments are a reflection of epidemiologic survey information and Dr. Esselstyn's 12-year reversal study of patients with severe coronary disease. In the longest study of its type, the author has demonstrated elimination of disease progression in all compliant patients who maintained a total serum cholesterol less than 150 mg/dl and an LDL cholesterol less than 80 mg/dl through a plant-based diet and cholesterol-reducing medications.

PLANT-BASED NUTRITION

Plant-based nutrition provides us with a pathway to escape the coronary artery disease epidemic.

For persons in central Africa, the Papua Highlanders of New Guinea, the Tarahumara Indians of northern Mexico, and inhabitants of rural China as described in the Cornell China Study, coronary disease is essentially non-existent while hypertension, Western malignancies, obesity, and adult onset diabetes are rarely encountered.

While I am proud to have been the founder of this conference in 1997, it has become ever more apparent that these conferences are not the ultimate answer. This stopgap risk factor and drug oriented device-driven approach is not designed

to conquer this epidemic. This strategy is laden with expense, morbidity, mortality, and temporary benefits which rapidly erode with time.

We must focus on the toxic food environment for otherwise our children and young adults will become the next unsuspecting victims.

We have a crises of leadership in our public and private institutions with an emphasis on prevention. Their advice to the public of 30% fat in the diet guarantees disease development and progression. **This level advocated by the National Research Council, the American Heart Association, the National Cholesterol Education Program, and the National Institutes of Health has been shown scientifically to worsen the disease.**

For them to sanctify this diet as healthy for the American public, is egregiously inaccurate. Like trying to fit Cinderella's slipper on one of her sister's - it simply doesn't work. By way of contrast, the American Cancer Society prefers 20% dietary fat, while the World Health Organization advocates 15%.

In 1987 Dr. Scott Grundy proclaimed that with a blood pressure of 110/70 and a total cholesterol of under 150 mg/dl, 90% of heart attacks could be avoided. Sadly, no public or private institution detailed for the public the plant-based diet that could achieve those goals.

The United States Department of Agriculture has a sorrowful record of caving to the special interests of industry as does the U.S. Congress.

The U.S. Dietary Guidelines committee has over half its members with ties to industry, while the chairman of the health and human services department wears a milk mustache.

For those institutions to decide America's nutritive needs is surely putting the fox in the hen house.

A slogan has arisen from these groups stating there are no strictly good foods or bad foods. This is sheer nonsense. Coronary disease has no building blocks from the plant-based diet. Meat, cheese, milk, butter, ice cream, eggs, fried foods, oils, and margarine are the lethal atherosclerotic lynchpins.

Vogel demonstrated endothelial damage in young persons within hours of eating such foods. English children under 10 years of age have been found by ultrasound to be losing arterial elasticity and distensibility. The Bogalusa, PDAY, Korean, and Vietnam data reveal coronary artery disease is ubiquitous in our young.

We require a new yardstick to measure cardiovascular excellence in our institutions. No longer will the number or quality of interventions and their temporary benefits suffice.

There is ample evidence-based research to support efforts geared to prevention. We must ask how many patients have achieved successful arrest and reversal and avoided new coronary and cardiovascular events through preventive lifestyle changes?

Some will argue that their patients might not follow a plant-based diet. This, I increasingly find, is a totally negative and self-serving speculation. **Our experience is that patients rejoice that they are now empowered to abolish their disease progression and are often furious that they were not made aware of this option earlier. They clearly recognize that the locus of control for this disease is vested with them.**

While this conference will continue updating us with mechanisms of disease, that information alone will never shut down atherosclerotic development.

The truth be known, we don't need new information to end this epidemic. The evidence is in!

As practicing physicians, dietitians, nutritionists, nurses, and researchers, you are an essential part of the vanguard to disseminate the facts to patients, the public, and the government. As leaders, we must have the courage and a renewed moral compass to provide the public with accurate information to abolish and prevent atherosclerosis.

We must seek leaders and institutions that are not frayed or compromised by ties to industry or politics to deliver this message. It must be science and not the messenger which dictates public policy.

In Cholesterol Lowering, Moderation Kills

Even if all Americans kept their total cholesterol below 200 mg/dL, as recommended by the American Heart Association, millions would develop coronary artery disease.

Strong evidence from a wide variety of sources shows that total serum cholesterol levels must be kept below 150 mg/dL to stem America's epidemic of coronary artery disease.

My own experience with heart disease patients shows that cholesterol levels can be kept below this threshold with a diet low in lipids and cholesterol-lowering medications as needed. This low-lipid therapy stops coronary disease from progressing and even reverses it.

Unfortunately, our national health and medical organizations continue to recommend a cholesterol threshold of 200 mg/dL and a diet containing up to 30% fat, despite clear evidence that this threshold is too high to prevent or cure heart disease. It is true that these recommendations have the potential to reduce the incidence of heart disease, but only by a moderate amount. **Unfortunately, when it comes to lowering cholesterol, moderation kills.** With lower lipid levels, coronary artery disease need never exist. When it does exist, it need never progress.

A Plant-based Diet for Advanced Disease

In 1985, I embarked on a program to help a group of patients with severe coronary artery disease. Most were debilitated by angina and other symptoms, and their angiograms showed severe stenoses. In some cases, disease was so advanced that standard interventional techniques such as bypass grafts or angioplasty could no longer be offered.

These patients (1 woman and 23 men) agreed to adopt a plant-based diet with fats making up less than 10% of calories. They ate no oils, fish, meat or dairy products (except skim milk and non-fat cheese and yogurt). The patients also took cholesterol-lowering medication as necessary to maintain their total serum cholesterol below 150 mg/dL.

At 5 Years, Heart Disease was Halted

Eighteen patients adhered to the diet and medications, bringing their mean cholesterol level from 237 mg/dL at baseline to 137 mg/dL at 5 years. None experienced any coronary events; in contrast, these 18 had had 29 events in the 8 years before the study. None underwent any interventions. All 11 of those who underwent angiography at 5 years had no additional stenosis, and 8 had regression.

One patient died of ventricular arrhythmia just after his 5-year angiogram, but the angiogram showed that the disease had regressed and autopsy found no evidence of myocardial infarction.

Six nonadherent patients were released from the study within the first 18 months to return to standard care.

Although their baseline levels of disease were similar to those of the adherent patients, these 6 patients suffered 13 new cardiac events after leaving the study. 1

At 12 Years, the Benefits Continue

Today, the remaining 17 patients continue to follow the prescribed diet and medication schedules. At 12 years, their mean cholesterol level was 145 mg/dL. They experienced no disease progress or interventions. One left the study briefly but suffered a recurrence of severe angina and returned to the diet and medication after undergoing an elective bypass operation. The rest experienced no coronary events. 2

These results are important because they show that sharply reducing cholesterol levels is safe and that it stops coronary atherosclerosis rather than merely slowing it.

Support from Other Research

When our arrest-and-reversal study began, strong observational evidence already supported the benefits of low cholesterol levels. For example, 35% of the cases of ischemic heart disease found among the Framingham Heart Study cohort occurred among those with total serum cholesterol levels between 150 and 200 mg/dL.

In contrast, few of those with levels below 150 mg/dL developed the disease, and none died of it. 3 Atherosclerosis was already known to develop silently over many years of high-fat diets; autopsy studies of young, healthy men killed in the Korean and Vietnam conflicts found that many already had advanced atherosclerotic lesions. 4,5

More supporting data continued to pour in. For example, coronary artery disease is virtually unknown in populations that subsist primarily on grains, legumes, vegetables, and fruits, such as those in rural China. 6,7 Normal adult cholesterol levels in these populations range from 90 to 150 mg/dL.

More than 10 years ago, Blankenhorn and colleagues showed that coronary artery disease can be halted or reversed by lowering lipid levels with medication. 8 More recently, Dean Ornish and other investigators confirmed the benefits of a low-cholesterol diet. Their results showed that patients derived the most benefit if lipids are lowered by diet combined with medical therapy,

rather than by diet alone or **by modest diet changes** combined with medication. 9-11

The AVERT study provides similar supporting evidence. The study showed that aggressive lipid-lowering medication is at least as effective as angioplasty plus standard care. However, the AVERT patients continued to eat a fairly standard diet, and 13% of them continued to experience cardiac events. **This suggests that medication alone cannot confer the full benefit of lipid lowering.** 12 A recent review of cholesterol-lowering studies showed that the degree of benefit is related directly to how much cholesterol is reduced. 13

LOW CHOLESTEROL ADDRESSES THE CAUSE OF THE DISEASE

Coronary artery bypass grafting, angioplasty, and other coronary interventions are directed at severe coronary stenoses. However, 85% of heart attacks are now known to be cause by rupture of smaller, unstable plaques, many of which are not even visible on angiography.

Thus, costly "heroic" interventions do not reduce the risks of new heart attacks, slow disease progression, or even prolong survival for most patients.14



In contrast, lowering levels of total cholesterol and low-density lipoprotein (LDL) prevents coronary disease from starting or progressing.

Lowering lipid levels also lowers concentrations of harmful foam cells within plaques and reduces the quantity of proteolytic enzymes. As a result, plaques may shrink, their caps stabilize, and they become much less likely to rupture.

America Resists Lowering Fat

Despite the strong evidence in favor of reducing both dietary fat and serum cholesterol, Americans continue to increase their consumption of fat.

Television and print advertisements aggressively push delicious, colorful, habituating, high-fat food. At our most memorable and emotional events - birthdays, weddings, funerals, and banquets - the food is even richer and more harmful than our everyday fare. Fad diets even promise weight loss and better healthy by increasing our consumption of fats and protein. **It is clear that we live in a toxic food environment.**

Unfortunately, the American Heart Association has failed to show strong leadership on this issue. If the coronary artery disease epidemic is seen as a raging fire, and cholesterol and fats are the fuels, the AHA has merely recommended cutting the flow of fuel. **The only tenable solution is to cut off the fuel supply altogether - by reducing cholesterol levels to those proven to prevent and reverse coronary disease.**

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WARNING:

The Information in these articles is not intended to replace medical advice or treatment. Questions about symptoms, specific dietary needs and medications, general or specific, should be discussed with your physician. The information in this article is for informational purposes only, and is not medical advice or a substitute for a physician's consultation and/or examination.

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