



Clinical Champion Update

Date: 2/8/21

Subject: Hyperlipidemia/Heart Disease

February is Heart Health Month; this year is the 57th – first proclaimed by then-President Lyndon Johnson in 1964 because of rising rates of heart disease among all Americans, especially men. By 1960, one-third of Americans were dying of heart disease. Johnson's own initial MI occurred in 1955 at age 47 (he died of a massive MI in 1973 at age 64).

In reality, of course, every month needs to be Heart Health Month: Heart disease remains the number-one cause of death in the United States, with approximately 659,000 deaths (one in every four deaths overall) as of 2019. Twenty percent of heart disease deaths occur in adults under age 65. Cancer is the second leading cause of death (more than 599,000), with SARS-CoV-2 currently third, taking more than 462,000 lives over the past year; SARS-CoV-2 disease is made worse by the presence of heart disease, hypertension, diabetes, obesity, and other chronic diseases. The morbidity from heart disease is also significant, impacting the lives of approximately 18.2 million adults ages 20 and older, with a price tag of more than \$219 billion annually including the cost of health care services, medicines, and lost productivity.

We all know patients, neighbors, friends, family members, and colleagues with heart disease. The good news is that it's largely preventable, with treatments found in the produce aisle rather than just the pharmacy. Although hyperlipidemia is a prerequisite for heart disease, that disease process is not the result of a statin deficiency!

The evidence for poor diet and other lifestyle habits underlying heart disease has been known since at least the 1950s and has been mounting ever since. Ninety percent of initial MIs have been attributed to these modifiable risk factors: smoking, dyslipidemia, hypertension, abdominal obesity, diabetes, stress, inadequate consumption of fruits and vegetables, and sedentary lifestyle. However, only elevated cholesterol (total > 150mg/dL) is necessary to cause atherosclerotic plaques; the other factors are merely contributory. Research showing relatively quick reversal through lifestyle modification exists as well. Dietary contributions to LDL include foods high in saturated and trans fats and cholesterol. Decreasing or eliminating these foods can achieve a reduction in LDL

greater than that achieved with a statin (which is 20-30% regardless of baseline LDL level) and without a statin's adverse effects.

Evidence suggests that a total cholesterol level $\leq 150\text{mg/dL}$ is highly protective against MI and that the currently accepted higher "normal" cholesterol levels are actually atherogenic and putting much of the population at risk. The lower the LDL, the lower the risk of MI or other atherosclerotic event. Many researchers consider an LDL of 50mg/dL to 70mg/dL to be physiologically normal and an LDL $\leq 70\text{mg/dL}$ to be "heart attack-proof" – yet atherosclerosis is endemic in the US population because most Americans have an LDL level of roughly twice that, if not higher. The reason given for not recommending a lower level is that it might "frustrate" the population ... but we are not serving our patients well if we do not inform them of this and educate them appropriately.

Recommendations for the general population from UpToDate (based on USPSTF, American College of Cardiology, AHA) include utilizing a statin for adults ages 40 to 75 with LDL $\geq 100\text{mg/dL}$ and 10-year ASCVD risk (per the calculator in Athena) greater than 10% with at least one risk factor. Those with 10-year ASCVD risk between 5 and 10% should be counseled regarding potential risks and benefits; those whose risk level is below 5% are not usually offered a statin. Individuals whose LDL is $\geq 160\text{mg/dL}$ are recommended to start a statin, even if their calculated risk is between 5 and 10%, and those whose LDL is $\geq 190\text{mg/dL}$ do not need their risk calculated – they should be prescribed a high-intensity statin.

However, plant-based diets have been shown to reduce heart disease risk by 40%. A 2018 review of multiple clinical trials and observational studies found strong and consistent evidence that high-fiber, low-fat, plant-based diets (emphasizing fruits, vegetables, whole grains, and legumes and discouraging the consumption of dairy, meats, eggs, oils, and processed foods) can prevent and reverse atherosclerosis and decrease other markers of cardiovascular disease risk such as cholesterol, blood pressure, and weight.

If you'd like to increase your own knowledge base, please consider free CME at <https://www.nutritioncme.org/> such as "Bringing Cardiovascular Prevention into Clinical Practice," by Eugenia Gianos, MD; "[The Role of Diet in Preventing, Arresting, and Reversing Our Top 15 Killers](#)," by Michael Greger, MD; "[A Unifying Theory of Reversing Chronic Diseases](#)," by Dean Ornish, MD; and "How to Talk to Your Patients About Nutrition," by Jasmol Sardana, DO.

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