

Editorial

Diet and Lifestyle, Recommendations for 2009: A Scientific Statement of International College of Cardiology

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The world scientific community has been reading the diet and lifestyle guidelines for prevention of coronary artery disease (CAD) with great interest, for the last few decades. Recommendations of the AHA [1] have been reformed for better understanding, based on new scientific evidence which has emerged after publication of guidelines in 2000. However, none of these guidelines emphasized on the role of diet in patients with acute myocardial infarction (AMI) [2-4]. Patients presenting with AMI, due to their serious condition, are highly motivated to follow what is being advised by the cardiologist. It is easy to change health behaviors of the victims when they are admitted in the intensive cardiac care unit, to follow the same diet when they go back home.

AMI is associated with hyperglycemia, hyperinsulinemia, hypertriglyceridemia, free radical stress, rise in free fatty acid and proinflammatory cytokines, leading to endothelial dysfunction [2-6]. There is an acute generation of proinflammatory milieu among AMI patients, which is known to cause disruption of atheroma plaque, resulting into reinfarction and death [2-4]. Lichtenstein and coworkers [1], very diligently advise dietary patterns; including grains, vegetables, fruits, nuts, seeds and legumes, fat and oils based on renowned studies. There is no recommendation for refined starches which is considered as the most wise step in the prevention of endothelial dysfunction. However, there is no guideline about the type of oil and nuts depending upon the w-3 fat and monounsaturated fatty acid (MUFA) content of these foods. While foods and beverages with added sugars and refined starches as well as excess of w-6, total and saturated fat and trans fatty acids, which may be proinflammatory, increased the intake of w-3 fatty acid and MUFA, they may be protective against surge of TNF-alpha, IL-6, IL-18 and adhesion molecules like VCAM-1 (vascular cell adhesion molecule-1) and IVAM-1, which are caused by high glycemic, and rapidly absorbed proinflammatory foods [4-8]. These foods are known to initiate a proinflammatory milieu in the body which is similar to that of AMI, causing further increase in complications among these patients.

A low w-6/w-3 ratio and polyunsaturated/saturated fatty acid ratio in the diet/blood serum of 1:1 has been proposed by the Columbus Paradigm Institute (www.columbus-concept.com) for prevention of dyslipidemia and CAD. It seems that this weakness in the guideline may be due to the lade of related work [4-8]. Infact one of the greatest weaknesses of these guidelines is that there is no discussion on proinflammatory foods, therefore there is little opportunity for the industry to influence the consumers without considering their health. The increased servings of grains, vegetables, fruits, nuts and fish are good source for the prevention of weight gain, hyperlipidemia and hypertension, as well as they are also good for the prevention of dyslipidemia and metabolic syndrome and CAD by inhibiting the rise in FFA, and maintaining good endothelial function [7, 8]. There is overemphasis on dietary cholesterol, in the recommendations [1], although it is well known that dietary cholesterol has only little influence on the atherothrombo-genesity of serum LDL, which can be further decreased by substituting Columbus foods. Columbus foods are natural foods, rich in phytochemicals which are slowly absorbed without causing any abnormal increase in blood glucose, insulin, proinflammatory cytokines and free fatty acids [6-8]. The Columbus® Concept stands for a return of alpha-linolenic acid (ALA, C18:3 ω 3) - herein referred to as *wild-* or *game-* type land-based fatty acid - into the feed ration of land-based bred animals to such an extent that their fat depots (white adipose tissue) exhibit a balanced ratio of *essential* fatty acids, i.e. ω 6: ω 3 = 1:1, characteristic of fat depots in wild animals or game. This returns to the wild standard which translates into a substantial reduction in long chain omega-6 fatty acids and a moderate species-specific increase in long chain omega-3 fatty acids in organs and peripheral tissues of these domesticated animals or livestock. The ω 6: ω 3 = 1:1 ratio is also taken as a reference for the design of composite plant-derived table oils and fats as these represent other primary sources of energy in the modern human diet. Provided particular attention is drawn to the antioxidant content of such foods, the two-fold end results are a return to animal and plant food supplies in better compliance with human genetic heritage, and a possible rehabilitation of dietary cholesterol and saturated fats (former CSI, C: Cholesterol, S: Saturated fats, I: Index). Taking into a larger context, the Columbus® Concept stands for the return of a specific healthy cholesterol into men's food supply and blood stream, the so-called wild or game cholesterol that is associated with a dietary balanced essential fatty acid ratio (ω 6: ω 3 = 1:1). As observed from the overall distribution of fats in a natural untamed environment, nature recommends the consumption of a balanced ratio of saturated and polyunsaturated fatty acids as part of a dietary lipid pattern rich in monounsaturated fatty acids (P:M:S = 1:6:1). The value of such diet has also been proven in long term clinical trials [9-11]. Addition of moderate physical activity to dietary advice may provide further protection against CVD and diabetes [12].

In brief, it should be emphasised that clinical diagnosis of a disease is the failure of the clinician to prevent a vascular variability disorder (VVD). Our attempt should be to diagnose a disease in a biochemical or biological state before it becomes clinically apparent. It is good that hypertension is now diagnosed as prehypertension and diabetes as prediabetes as well as metabolic syndrome as pre-metabolic syndrome by makers of medicine. The diagnosis of VVDs in presence of high w-6/w-6 fatty acid ratio in the tissues, and high free fatty acids, (endothelial dysfunction) would be a great achievement of the new makers of medicine (Fabien De Meester), because this would open new roads for primordial prevention of VVDs.

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