For the last 50 years, we have been advised to lower fat intake and reduce blood cholesterol. We have used commercial strategies to make these changes have little impact on the incidence of heart disease. They have, however, resulted in a massive increase in low fat-high sugar products on supermarket shelves with an accompanying world-wide increase in obesity, metabolic syndrome, NAFLD and diabetes. Glycation, oxidation and inflammation are the new risk factors. Could we change these risk factors through dietary and supplemental control? New dietary advice should emphasize whole, seasonal, high fiber, unprocessed food. We need to place particular emphasis on understanding the effects of sugar in the diet and totally rethink our approach to dietary fat/oil consumption. Evidence indicates that cholesterol per se is not the problem. We are learning that the normal lipoprotein pathology tests are insufficient and that we need data on the lipoprotein subclasses. For example: large buoyant LDLs are associated with lower CAD risk and small dense LDLs are associated with increased CAD risk. Such new markers of cardiovascular risk are now being looked with great interest. They include LDL fractionation, number of LDL particles, functional HDL, Apo B:Apo A ratio and triglyceride/HDL ratio. A high triglyceride/HDL ratio can predict a large number of small dense LDL particles whereas lower ratios are associated with large fluffy (buoyant) LDLs. These new markers and ratios should give valuable insight into the standard lipid panel of LDL-C, HDL-C and triglycerides.

Biography

Robert Buist completed his PhD in Medicinal Chemistry and Pharmacology. He spent eight years in Asthma and Cardiovascular Drug Research at Macquarie University, followed by a Postdoctoral Research Fellowship at New York State Health Department. He is presently acknowledged as one of the founders of Nutritional Medicine in Australia. He is currently a Nutritional Educator for pharmacists, doctors, and other health professionals, and is a formulator of nutrition products and functional foods.

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