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Can low W-6/W-3 ratio diets stop cardiovascular diseases: The tsium tsoum concept

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Roselyn Mega,Fabien De Meester, Agniesca Wilczynska, Tsim Tsoum Institute, Krakow, Poland Chronic diseases of affluence are also called non-communicable diseases (NCD) by the World Health Organization. These diseases are a major impediment to human development, imposing large health and economic burden worldwide. These burdens are reciprocal because poverty is a potential cause of NCDs in developed countries and NCDs contribute to poverty. The world has been in a position to learn, the mechanism of transition from poverty to economic development and emergence of NCDs. The last decade of the last century offered us an opportunity to initiate action to counter growing epidemics of CVD including metabolic syndrome on both sides of the atlantic. When people learned the methods of prevention, there was a decrease in CVD in the western world but obesity continued to increase, resulting into an increase in the metabolic syndrome in both developed and developing economies. Western diet is characterized with energy dense, refined, ready prepared foods with a high glycemic

index (e.g., refined starches; bread, biscuits, candies, cornflakes, peeza, potato chips, cola drinks and sugar) and unhealthy lipids (e.g., trans fats, saturated fat , ω -6 rich oils) poor in w-3 fatty acids, phytochemicals and fiber. Such diets have been adopted by increased number of people and populations in the Western world and in the urban populations of middle income countries in the last few decades. These diets are known to predispose inflammation and the epidemic of NCDs. Cardiovascular disease(CVD), diabetes mellitus, obesity, cancer, autoimmune diseases, rheumatoid arthritis, asthma and depression are associated with increased production of thromboxane A2(TXA2), leucotrienes, prostacyclin, interleukins-1 and 6, tumor necrosis factor-alpha and C-reactive proteins. Increased dietary intake of w-6 fatty acids is known to enhance all these biomarkers as well as atherogenicity of cholesterol which have adverse pro-inflammatory effects resulting into NCDs. Recent studies indicate that Tsim Tsoum approaches including Mediterranean diet rich in fruits, vegetables, nuts, canola oil, olive oil characterized with low w-6/w-3 ratio in the diet, as well as physical activity, and meditation can modulate inflammation as well as body-mind interactions and may be protective against risk of CVD and all cause mortality. Inflammation appears to be an important unifying hypothesis, because one recent study has demonstrated that decline in inflammation can cause significant reduction in all cause mortality and cardiovascular events.