

Global Epidemics of Obesity and Diabetes: A Renewed Call for Action

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It gives me great pleasure, to write this editorial for the journal of EC Endocrinology and Metabolic Research, for their first issue of the New Year, 2020. In the ancient health sciences of India and Tibet, diseases of altered metabolism were classified as 'Doshas' and the remedies prescribed, included restoring the balance of altered metabolism, by structured lifestyle education [1]. Metabolic diseases such as hypertension, excess weight, obesity, type-2 diabetes and vascular diseases, have increased in the incidence and prevalence to epidemic proportions worldwide [2-5]. Despite this observation, we do not have a regional, ethnic-specific guideline, for the prevention and management of these chronic diseases. China has been declared the capital of diabetes and India is competing for that position again. Chinese, Indians, and Japanese, consume rice as a major source of their daily diets. Chinese, Indians and Japanese have been eating rice as their major diet for thousands of years. It is hard to suggest a change of diet at the population level. Japanese claim that eating brown rice, fish and lots of vegetables has protected them from diabetes. They also claim, that use of vinegar with their rice (sushi), also offers protection from metabolic diseases. However, recent trends suggest that this nation of healthy people are no exception to this worldwide trend in the increase in the incidence of diabetes. Japan ranks 8th worldwide, in the number of individuals with type-2 diabetes (International Federation of Diabetes).

When I visited China in the early 1990s, I could see bicycles everywhere and hardly any automobiles. In the last four decades, economic boom in China, has totally altered their lifestyle. According to Shen and associates, during the past 30 years, 7 national diabetes surveys were conducted in China, indicating the prevalence of diabetes has increased by 17- fold. Potential risk factors that contributed to the increase in the prevalence and incidence of diabetes include social and economic development, urbanization, dietary pattern and Westernized lifestyle [6]. Authors concluded, "Public health strategies should focus on modifying lifestyle and dietary factors, particularly among those with a susceptible genetic background. In China, India and the USA the number of individuals with prediabetes far exceeds the number of diabetics. This is the population, that is at greater risk for developing diabetes in less than 10 years. The number of obese children and adolescents aged five to 19 years worldwide, has risen tenfold in the past four decades, and if current trends continue, there will be more obese children and adolescents than those moderately or severely underweight by 2020, according to a United Nations-backed study. "These data highlight, remind, and reinforce, that overweight is a global health crisis, and threatens to worsen in coming years unless we start taking drastic action," says, Fiona Bull, programme coordinator for surveillance and population-based prevention of noncommunicable diseases (NCDs) at the World Health Organization (WHO).

The above -mentioned study was conducted by the Imperial College of London and WHO and reported in The Lancet, ahead of World Diabetes Day [7,8]. "These worrying trends reflect the impact of food marketing and policies across the globe, with healthy nutritious foods too expensive for poor families and communities," says lead author Majid Ezzati, a professor at Imperial College's School of Public Health. Consider the Harvard's Heart Health Plate for example, it recommends half of the plate to include fruits and vegetables. Majority of

the individuals worldwide, cannot afford to follow such recommendations. The WHO recommends that “Countries should aim particularly to reduce consumption of cheap, ultra-processed, calorie dense, nutrient poor foods. They should also reduce the time children spend on screen-based and sedentary leisure activities by promoting greater participation in physical activity through active participation and sports,” Action to curb obesity is a key element of the 2030 Agenda for Sustainable Development. The WHO has established a Commission on Ending Childhood Obesity (ECHO). The ECHO recommends implementation plan guide to the Member States and other partners on the actions needed to implement recommendations of the Commission on Ending Childhood Obesity.

In 1997, the World Health Organization (WHO) held for the first time, an Expert Consultation and reviewed the global prevalence of obesity trends in children and adults. In 2012, almost 15 years after the first Expert Consultation on Obesity was held, the Sixty-fifth World Health Assembly endorsed the Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition, together with six nutrition targets to be attained by 2025. In 2013, the Sixty-sixth World Health Assembly endorsed the Global Action Plan for the Prevention and Control of NCDs 2013 - 2020, including a set of nine voluntary goal targets to be attained by 2025. One of the nine targets is to “halt the rise in diabetes and obesity.” During this time period from 1990 to present obesity has increased two-fold and diabetes four-fold worldwide. According to the NCD Task Force experts, meeting the World Health Assembly Goals or the Millennium Development Goals of halting, obesity and diabetes by 2030 is a far cry.

In an article on Policy Solutions, experts consider that the efforts of developing country like India, which is focused on economic growth and its role in transforming India into a developed nation by 2030 has resulted in neglect of health consequences and contributed to a diabetes epidemic [9]. The authors of this seminal article suggest that the policy makers should move from health policies to “health in all policies” as recommended by Pekka Puska, director general of Finland’s National Public Health Institute [10]. What these authors are referring to is the, “Unrepeatable Success Story in Public Health”. The North Karelia Project is often presented as international success story, that progressed linearly from its commencement to the analysis of results. The further the project progressed, the lower the mortality rate related to cardiovascular diseases fell. The success of the North Karelia Project was the sum of many overlapping factors. In spite of the fact, that this success story has been publicized worldwide, no country has reduced, reversed, or prevented the increase in the prevalence and incidence of metabolic disease such as hypertension, obesity and diabetes. The WHA global nutrition goals include a goal to halt the increase in childhood overweight by 2025. The global NCD goals include a 25% relative reduction in overall mortality from NCDs (including diabetes) and halting the increase in obesity prevalence in adolescents and adults by 2025.

Tea Collins and colleagues, in a recent article in the British Medical Journal (BMJ), call for coordinated global action to catalyse effective national response to noncommunicable diseases.

Just signing a declaration by the Member Nations of the United Nations for Millennium Sustainable Goals, will not prevent the increase in the incidence of NCDs. Until recently, NCDs have not been seen as part of the global development agenda, and external resources for their prevention and control have been negligible. Health systems in the member countries are ill prepared to deal with the high epidemiological and economic costs of chronic conditions. Providing any solution to this problem is beyond the scope of this editorial. However, having worked for decades on the problems-related to metabolic diseases, I feel strongly that efforts to reduce, reverse, or prevent metabolic diseases should occur at individual, community and population levels. The complexity of management of the obesity and diabetes pandemic relies heavily on the management of ‘whole-population’ as documented by the prevention-oriented policy framework set out in the Global Action Plan.

Major clinical studies have demonstrated that a healthy lifestyle and robust management of modifiable risks for CVD will significantly prevent premature mortality due to vascular diseases [11,12]. Similar large population-based clinical studies need to be done to find optimum intervention strategies, to reduce or reverse the prevalence and incidence of the twin epidemics of obesity and diabetes [13,14].

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