

## EDITORIAL

### **OUR FOOD: How we went wrong**

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All living beings share eco-biopsychosocial systems. Good health of any single element of the system is dependent upon well-being of all the elements together.

The primary source of our food is from plants. A healthy plant is not conceivable without a healthy soil in which its root system grows. Soil contains multifarious microorganisms, fungal networks, nematodes and arthropods etc. These all act in concert to contribute to the richness of the milieu through zillions of phytochemicals that they all produce and exchange. Plants participate in the trade through root exudates in exchange for their own needs. Greater the biodiversity of the species, greater the opportunities and benefits for all. Also, quorum sensing prevails, and population balances are maintained. This is how life has evolved and flourished on planet earth over the last four billion years.

In higher animals, humans included, relationships similar to the plant-soil situation the soil prevail within the body, in the gastrointestinal system. Diversity of our food ingestion determines the health of our gut microbiome, hence our health too.

Hunter-gatherers perhaps had great health given their circumstances favouring better survival based on diverse foods. Human settlements necessitated food sources with longer storage lives. This brought increasing dependence on grains to support growing populations. The high starch content of grains meant increasing glucose load for the body as the proportion of starch kept on creeping up in our diets. This is further compounded by the advent of refined grains and simple sugars in most of our food. The situation today is that most of the humanity is not able to metabolise the sugar load safely. About 20% are overtly type II diabetic and at least another 40% prediabetic. Their tissues have developed insulin resistance, a defensive mechanism against insulin attempting to push, undesirably, even more glucose into the cells. Glucose is not a mandatory fuel for metabolising tissue cells. Protein and fat deficiencies are known to cause disorders. There is no disease produced by absence of glucose from diet. By any measure, sugar has been the most potent, and most prevalent, weapon of mass destruction unleashed onto humanity.

Most of the 'modern era' diseases have insulin resistance with consequent hyperinsulinaemia as their underlying pathogenic mechanism. This includes, in addition to the pathology of type II diabetes mellitus, hypertension, atherosclerotic vascular disease (underlying myocardial infarction and stroke), allergies, autoimmune diseases, many types of cancers, autism and dementia. The common denominator, in this burden of noncommunicable diseases (NCDs), is the inflammation ushered in due to, and accompanying, hyperinsulinaemia.

Sugars and starches have addictive potential. The thriving industrial/commercial activity benefitting from this human predilection has continued to pocket huge profits, particularly over the last century.

Natural, organically grown wholesome foods have receded as the corporate industrial and supply chain processes had outstripped them. All this despite scientific evidence mounting up in favour of such food. The industry thrived on managed perception through advertisement. There was little to guard the peoples' right to know the reality for it is crowded out by the corporate efficiencies and propaganda.

The costs of health care on account of all the NCDs, as stated above, keeps on soaring. Globally, NCDs kill 41 million people each year, accounting for 71% of all deaths.<sup>1</sup> Institute of Global Health Sciences at University of

California San Francisco had estimated, in 2017, that the NCDs could cost global economy US \$ 47 trillion by 2030.<sup>2</sup>

Disease prevention and health promotion through correction of our diet, by replacing sugar and starch rich foods with diverse nutrient dense, organic, wholesome foods, is obviously necessary. However, it is not easy. Old habits die hard. Those who profit from this human suffering may not become the most compliant easily, either.

After all, as Albert Einstein had remarked, 'it is easier to fool people than to convince them that they have been fooled'.

*Editor-in-Chief*

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