

LETTER TO THE EDITOR

Response to Shahzad A. Our Food: How we went wrong

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We thank the author for his response to our editorial entitled “Our food: How we went wrong” which appeared in Vol 3. No. 2, 2022 of this journal.

The essence of our editorial is in the title. We do not mean to imply that the glucose is not essential for the human body. Indeed, red blood cells can only utilize glucose as its fuel. The brain, which while having the capacity to use ketone bodies, uses glucose as its primary source of energy. Having said that and as pointed out by our worthy colleague, the human body has evolved systems to manage hypoglycemia through glycogen degradation and gluconeogenesis in the liver and use of ketone bodies for energy in the brain, through protein and fat breakdown, allowing the human body to survive without glucose. Therefore, reducing or quitting carbohydrates in the diet, particularly refined carbohydrates like simple sugar and white flour, does not affect the human body adversely. Unrefined carbohydrates are known to have beneficial role through their high fiber content and nutrients such as vitamins and lower glucose content.

Our editorial is meant to highlight the detrimental impact of our diets overloaded with unhealthy carbohydrates, with high glycemic indexes (GI), that are leading to the alarming rise of non-communicable diseases including obesity, diabetes, metabolic dysfunction and various inflammatory conditions.

The term “addiction” is traditionally used for conditions where individuals lose control over consumption with an ever-increasing desire to consume and continuing to consume despite negative consequence, and is usually associated with drugs and alcohol. The term is now used more broadly to include 'routines; or 'behaviours' that are habitually performed to attain reward despite obvious negative consequences. The neurobiology of food addiction has been a focus of many studies in the last decade or so. Although the studies have shown conflicting results in humans, there is some evidence that high GI carbohydrates produce neurochemical responses similar to addiction. Lennerz and Lennerz have comprehensively reviewed the properties that make high glycemic index carbohydrates a plausible trigger for food addiction that contribute to obesity.¹

The evidence from fossil records of hunter gatherers is limited in the information they can provide. But archeological evidence along with studies on present-day hunter gatherer communities from different parts of the world provide some information of the health indicators in associated with this lifestyle² It has been reported that less than 10% of deaths in individuals over 60 years is caused by chronic, non-communicable disease, in these populations. The most common cause is infectious and gastrointestinal disease (70%) and followed by trauma (20%). In contrast all noncommunicable diseases together accounted for 74% of deaths globally in 2019 in the world according to WHO. Non-insulin dependent (type 2) diabetes is close to non-existent in hunter gatherer populations and one study on eleven of these populations found a prevalence of only 1%.³ There is no doubt that the high levels of daily physical activities of these communities contribute to this. Many theories exist about the diets of the hunter gatherer populations which are varied and largely determined by their geography. Some contain a significant proportion of carbohydrates in the form of honey, tubers, plantain etc as well as meat and game. Both fossil records of the Paleolithic diet as well as recent hunter-gatherers reflect a dietary diversity in these populations.

We reiterate that a balanced diet where sugar and starch is replaced by diverse nutrient-rich, organic and fiber-rich foods needs to be promoted. The aim of our editorial was not to promote one or the other diet, but to point out that our current diet, full of fast food and fizzy drinks, are putting the health and wellbeing of our future generations at risk.

Finally, we clarify that our editorial only covered one aspect of our lives, our diet, that affects our health. Besides diet, there are a multitude of factors that contribute to our health and wellbeing. As pointed out by our colleague, daily high levels of physical activity are protective against non-communicable diseases. In addition, our technology-driven sedentary lives associated with chronic social stress, economic disparities and dysfunctional family systems, all directly or indirectly contributing to an increase in non-communicable diseases, including metabolic disease and obesity, need correction.

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