

Guidelines on ‘added’ sugars are unscientific and unnecessary

Edward Archer

In her recent Comment article (Guidelines to lower intake of added sugar are necessary and justified. *Nat. Rev. Cardiol.* **19**, 569–570 (2022))¹, Kimber Stanhope offers a rebuttal to criticisms that recommendations to reduce the consumption of ‘added’ sugars were based on “low-quality evidence” and “ill-informed opinions”. Given the prominence (and misrepresentation) of my critique² in that rebuttal¹, I write to correct several misconceptions.

To begin, my colleagues and I established that the data underlying the US Dietary Guidelines were physiologically implausible^{3,4}, pseudo-scientific (non-falsifiable)^{5,6} and “essentially meaningless”⁵. We further showed that, by obscuring established facts and causal mechanisms^{7,8}, these data created a “fictional discourse on diet–disease relations”⁶. Therefore, because the rebuttal¹ failed to address our conclusions, the critique that recommendations were “ill-formed” and based on “low-quality evidence” stands unopposed. However, more importantly, the author misrepresented the large body of rigorous evidence presented in my critique² and previous reviews^{5,8}.

First, sugars added to foods and beverages enter the same metabolic pathways as sugars intrinsic to foods and beverages⁹. This unequivocal fact is an a priori refutation of the position that ‘added’ sugars are unique and demonstrates that the term ‘added sugar’ has only rhetorical, not scientific, value^{2,8}.

Second, humans begin life consuming ~40% of their daily calories as dietary sugars — either in breast milk or infant formula. However, infant formula is an ‘ultra-processed’, sugar-sweetened beverage with ‘added’ sugar, ‘added’ salt and ‘added’ fat. Therefore, recommendations to limit ‘added’ sugar and ‘processed’ foods would prevent the proper feeding of most infants in industrialized nations. And contrary to anti-sugar rhetoric, nations with the highest rates of sugar-sweetened beverage (formula) consumption by infants (for example, Japan and Norway) also have the lowest rates of obesity, type 2 diabetes mellitus and cardiovascular disease^{2,8}.

Third, the medicinal use of sucrose (table sugar) for malnutrition and diarrhoeal diseases saves the lives of 600,000 children each year, and if every ill child were treated, another

500,000 would be saved. Therefore, so-called ‘added’ sugars have saved more lives than any pharmaceutical agent^{2,8}.

Fourth, the most comprehensive governmental reports on dietary sugars drew surprisingly similar conclusions^{9,10}. The US report concluded that there was “no plausible evidence that the consumption of simple sugars” was related to the aetiology of obesity, type 2 diabetes or cardiovascular disease⁹ and that “feeding normal human volunteers at levels of fructose approximating the 90th percentile intake levels of the U.S. population failed to demonstrate adverse effects on insulin sensitivity or glucose tolerance”⁹.

The UK report concluded that “the consumption of sugars within the present range in the UK carries no special metabolic risks” and “played no direct causal role in the development of cardiovascular disease . . . essential hypertension, or of diabetes mellitus”¹⁰. Given these unequivocal findings, arguments that sugars and sugar-sweetened beverages are causal to obesity, type 2 diabetes and cardiovascular disease defy rigorous experimental and real-world evidence^{9,10} while obscuring established facts and causal relationships^{7,8}.

Most importantly, because foods and beverages are often the only innately gratifying ‘goods’ that economically or socially disadvantaged people can purchase, proscriptions against sugars and fats are “regressive and unjust because they harm the most vulnerable members of our society while providing no personal or public health benefits”².

In conclusion, no-one — and especially not disadvantaged individuals — should be

subjected to the fear and confusion caused by anti-sugar rhetoric or to recommendations based on physiologically implausible and pseudo-scientific dietary data.

There is a reply to this letter by Stanhope, K. L. *Nat. Rev. Cardiol.* <https://doi.org/10.1038/s41569-022-00794-7> (2022).

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Competing interests

The author declares no competing interests.

Reply to: ‘Guidelines on ‘added’ sugars are unscientific and unnecessary’

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I thank Dr Archer for his Correspondence (Guidelines on ‘added’ sugars are unscientific and unnecessary. *Nat. Rev. Cardiol.* <https://doi.org/10.1038/s41569-022-00792-9> (2022))¹ on my Comment article (Guidelines to lower

intake of added sugar are necessary and justified. *Nat. Rev. Cardiol.* **19**, 569–570 (2022))². The stated purpose of Dr Archer’s letter is to correct several misconceptions. However, he does not explain how any of the statements