Letter to the Editor



## RE: Current WHO recommendation to reduce free sugar intake from all sources to below 10% of daily energy intake for supporting overall health is not well supported by available evidence

Dear Editor:

We read the review by Yan et al. (1) with great interest. We were glad to see that our publication was referred to (2); however, our work is not represented accurately and we want to clarify the misconception.

The authors question the validity of our conclusions because they argue that we did not compare effects of high fructose corn syrup (HFCS) or fructose with other sugars. This is not accurate. Although we only reported the differences between HFCS or fructose with aspartame in the Abstract, the full article shows results from Tukey–Kramer post hoc tests. The test was used to identify differences between 6 experimental groups, including 1 group consuming glucose.

The interested reader is referred to Figure 2 in our publication where the mean changes ( $\Delta$ : 2wk - 0wk) in 24-h triglyceride (TG) AUC (A), postprandial apoCIII (B), 24-h uric acid AUC (C), and fasting nonHDL-cholesterol (D), LDL-C (E), and apoB (F) are presented in a bar graph including postscripts indicating differences between the groups (Tukey-Kramer post-test). There were significant differences between the effects of consuming 25% of the individual's daily energy requirement as fructose and 25% energy requirement as glucose on uric acid and LDL-C. There were significant differences between the effects of consuming 25% energy requirement as HFCS and 25% energy requirement as glucose on uric acid, nonHDL-C, LDL-C, and apoB. The main finding of our study resulted from a statistical model showing that a significant interaction between glucose and fructose contributed to the increases in apoB, LDL-C, and nonHDL-C, but only the fructose component contributed to the increase in 24-h triglycerides.

In addition, our publication (2) is referenced and described in Table 4 of the review. The authors list all 8 intervention groups of the overall study; however, the corresponding number of subjects given in the table (n = 145) is accurate for the 6 groups included in this work.

Table 4 also includes an error regarding another of our publications. For Sigala et al. (3) the P value printed alongside the effects of consuming 25% energy requirement as fructose on 24-h leptin AUC does not correspond to the effects of fructose but to the difference between the effects of consuming fructose or sucrose (Tukey–Kramer post-test).

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Note: The authors of the review chose not to submit a reply.

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## References

- Yan RR, Bun Chan C, Chun Yu Louie J. Current WHO recommendation to reduce free sugar intake from all sources to below 10% of daily energy intake for supporting overall health is not well supported by available evidence. Am J Clin Nutr 2022;116(1):15–39.
- Hieronimus B, Medici V, Bremer AA, Lee V, Nunez MV, Sigala DM, et al. Synergistic effects of fructose and glucose on lipoprotein risk factors for cardiovascular disease in young adults. Metabolism 2020;112:154356.
- Sigala DM, Widaman AM, Hieronimus B, Nunez MV, Lee V, Benyam Y, et al. Effects of consuming sugar-sweetened beverages for 2 weeks on 24-h circulating leptin profiles, ad libitum food intake and body weight in young adults. Nutrients 2020;12(12): 3893.

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