

Abstract

Effectiveness of Dietary Guidelines for Reducing Free Sugar Intakes: A Randomised Controlled Trial [†]

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Abstract: National dietary guidelines aim to educate and assist the public by enhancing overall diet health and decreasing health risk. Despite the widespread use of food-based dietary guidelines, assessments into their effectiveness are lacking. **Methods:** Using a randomised controlled parallel-group trial, 242 adults (18–65 years) consuming >5% total energy intake from free sugars (FS) were randomised to receive nutrient-based (N) (n = 61), nutrient- and food-based (NF) (n = 60), nutrient-, food- and food-substitution-based recommendations (NFS) (n = 63) or no recommendations regarding free sugar intake (control, n = 58). Effects were assessed for dietary and health outcomes, with our primary outcomes being the % of total energy intake from FS (%FS) and adherence at an endpoint of 12 weeks. Participants achieving a $\geq 2\%$ reduction in %FS from baseline or <5% %FS intakes and those that did not, were classified as adherent or non-adherent, respectively. There were no significant differences between the groups in baseline variables, with 200 participants completing dietary outcomes at week 12. Data were analysed on an intention to treat basis. Multiple regression models significantly predicted endpoint %FS ($F(7, 234) = 8.86, p < 0.001$), $R^2 = 0.21$. Significant predictors were recommendations received ($B = -0.636, p = 0.029$), baseline %FS ($B = 0.377, p < 0.001$) and baseline bodyweight ($B = -0.04, p = 0.041$). There were no significant differences at baseline %FS (mean with standard error in parentheses); control with 10.36% (0.67), N with 10.15% (0.66), NF with 10.68% (0.62), and NFS with 10.19% (0.56). The mean %FS reduced in all intervention groups, with the reduction in N, NF, and NFS being 2.47%, 3.25%, and 3.08%, respectively, in comparison to no change in the control group (-1.18%). No significant differences were found between the three intervention groups at endpoint %FS. At endpoint, adherence counts were larger in all intervention groups, N with 39; NF with 39; and NFS with 37; than the control group with 23, the reverse was observed for non-adherence with 22, 21, 26, and 35, respectively. Our results show that providing participants with N, NF or NFS dietary guidelines reduced %FS for 12 weeks. Further analyses will investigate the time course of these effects, and effects on our other outcomes.



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