Title: Effect of Reducing Added Sugar Intake, By Substituting Sparkling Water, on Glycemia in Adolescents at Risk for Type 2 Diabetes

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<u>Statistical Model</u>

Linear mixed models with participants as a repeated measure were performed using SAS OnDemand (Cary, NC) in Jupyter Lab. Full code is available in Appendix A.

The model used was:

Rating = Concentration Time Concentration*Time

Where "Rating" is the JAR/liking rating. "Concentration" is 0, 1.8, 2.8, 4.4 6.9, 10.7% w/v. "Time" is before ("Pre") or after ("Post") the 12-week intervention. The Kenward Rogers approximation was used for degrees of freedom and participants were incorporated as a repeated measure. Distribution of residuals was checked and met model assumptions for independence and normality. For JAR ratings, covariance structure was set to compound symmetry; for disliking/liking ratings, a variance components structure had to be used as compound symmetry failed the null model test (indicating the compound symmetry was not a better model than variance components, which is the default).