

Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Ebbeling CB, Feldman HA, Chomitz VR, et al. A randomized trial of sugar-sweetened beverages and adolescent body weight. *N Engl J Med* 2012;367:1407-16. DOI: [10.1056/NEJMoa1203388](https://doi.org/10.1056/NEJMoa1203388)

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Table S1. Baseline Characteristics of the Study Participants by Ethnic Group.*

Characteristic	Non-Hispanic		Hispanic		P Value
	Experimental Group	Control Group	Experimental Group	Control Group	
N	83	95	27	19	
Sex – no. (%)					
Male	46 (55)	57 (60)	12 (44)	9 (47)	0.18
Female	37 (45)	38 (40)	15 (56)	10 (53)	
Race – no. (%)†					
White	50 (60)	57 (60)	10 (37)	7 (37)	<0.001
Black	23 (28)	25 (26)	3 (11)	2 (11)	
Asian	4 (5)	4 (4)	0 (0)	0 (0)	
Multiple or other	6 (7)	9 (9)	14 (52)	10 (53)	
Age – yr	15.3 ± 0.6	15.3 ± 0.6	15.2 ± 0.7	15.2 ± 0.8	0.55
Weight – kg	86.1 ± 17.4	85.8 ± 16.9	82.7 ± 15.1	87.8 ± 18.2	0.70
Height – cm	168.8 ± 8.4	168.9 ± 9.0	163.2 ± 8.6	169.4 ± 10.0	0.04
BMI‡	30.1 ± 5.2	30.0 ± 4.6	31.1 ± 5.4	30.5 ± 4.9	0.33
Weight status§					
Overweight	32 (39)	38 (40)	8 (30)	6 (32)	0.31
Obese	51 (61)	57 (60)	19 (70)	13 (68)	
Body fat – % of total weight	31.3 ± 8.5	30.9 ± 8.0	33.5 ± 7.4	32.7 ± 9.4	0.13
Annual household income – no. (%)					
<\$30,000	21 (25)	22 (23)	9 (33)	9 (47)	0.008
\$30,000–\$59,999	25 (30)	29 (31)	13 (48)	5 (26)	
≥\$60,000	37 (45)	44 (46)	5 (19)	5 (26)	
Parental educational level – no. (%) ¶					
Some high school	1 (1)	1 (1)	1 (4)	4 (21)	0.009
High school diploma or GED certificate	13 (16)	17 (18)	10 (37)	3 (16)	
Some college or vocational school	20 (24)	21 (22)	8 (30)	3 (16)	
Associate’s degree	6 (7)	11 (12)	1 (4)	3 (16)	
Bachelor’s degree	28 (34)	29 (31)	5 (19)	4 (21)	
Some graduate school or graduate degree	15 (18)	16 (17)	2 (7)	2 (11)	
Daily physical activity level – MET	1.54 ± 0.18	1.54 ± 0.17	1.50 ± 0.18	1.53 ± 0.24	0.42
Television viewing – hr/day	2.9 ± 1.8	2.9 ± 1.4	3.4 ± 1.7	2.6 ± 1.4	0.48

* Plus-minus values are means ±SD. Means were compared with the use of the Student’s t-test and proportions compared with the use of Fisher’s exact test between Hispanic and non-Hispanic participants. Percentages may not sum to 100 due to rounding. GED denotes General Educational Development, and MET metabolic equivalent.

† Race and ethnic group were reported by parents. “Multiple” included white-black (8 participants), white-Asian (3), white-black-Asian (1), and white-Arabic (1). “Other” included Latino or Latina (8 participants), Hispanic (7), Brazilian (2), Cape Verdean (2), Puerto Rican (4), Latino or Latina-Brazilian (1), Spanish (1), and American (1).

‡ BMI denotes body-mass index (the weight in kilograms divided by the square of the height in meters).

§ Participants at or above the 85th percentile for BMI but below the 95th percentile were classified as overweight, and participants at or above the 95th percentile were classified as obese. The BMI range for overweight participants was 23.2–28.8 for non-Hispanic and 23.7–28.1 for Hispanic participants. The BMI range for obese participants was 26.7–50.7 for non-Hispanic and 27.4–47.8 for Hispanic participants.

¶ The educational level listed is for the father or mother, depending on which parent had the higher level of education.

Table S2. Outcomes for Body Fat, Daily Physical Activity, and Television Viewing.*

Variable	Ethnic Group§	Study Group	Unadjusted Data			Change from Baseline			
			Baseline	1 yr	2 yr	1 yr	P value†	2 yr	P value‡
Body fat – % of total Weight	All	Experimental	31.9 ± 8.3	32.3 ± 9.0	33.3 ± 9.4	0.3 ± 0.3	0.28	1.3 ± 0.4	0.002
		Control	31.2 ± 8.2	32.5 ± 8.5	33.2 ± 8.6	1.0 ± 0.3	0.001	1.8 ± 0.4	<0.001
		Experimental – Control				–0.7 ± 0.4	0.12	–0.5 ± 0.6	0.40
	Non-Hispanic	Experimental	31.3 ± 8.5	31.8 ± 9.1	33.2 ± 9.1	0.4 ± 0.4	0.26	1.6 ± 0.5	0.002
		Control	30.9 ± 8.0	32.1 ± 8.2	32.9 ± 8.4	1.0 ± 0.3	0.005	1.8 ± 0.5	<0.001
		Experimental – Control				–0.6 ± 0.5	0.26	–0.2 ± 0.7	0.72
	Hispanic	Experimental	33.5 ± 7.4	34.1 ± 8.5	33.6 ± 10.4	0.1 ± 0.7	0.91	0.4 ± 0.9	0.65
		Control	32.7 ± 9.4	34.5 ± 10.0	34.9 ± 9.3	1.3 ± 0.9	0.12	2.1 ± 1.1	0.07
		Experimental – Control				–1.3 ± 1.1	0.24	–1.6 ± 1.4	0.24
Daily Physical activity level – MET	All	Experimental	1.53 ± 0.18	1.62 ± 0.26	1.62 ± 0.24	0.09 ± 0.03	<0.001	0.08 ± 0.03	0.002
		Control	1.54 ± 0.18	1.63 ± 0.32	1.60 ± 0.24	0.11 ± 0.03	<0.001	0.08 ± 0.03	0.004
		Experimental – Control				–0.02 ± 0.04	0.67	0.01 ± 0.04	0.86
	Non-Hispanic	Experimental	1.54 ± 0.18	1.61 ± 0.22	1.62 ± 0.26	0.07 ± 0.03	0.02	0.07 ± 0.03	0.02
		Control	1.54 ± 0.17	1.65 ± 0.33	1.59 ± 0.23	0.11 ± 0.03	<0.001	0.06 ± 0.03	0.05
		Experimental – Control				–0.04 ± 0.04	0.30	0.02 ± 0.04	0.66
	Hispanic	Experimental	1.50 ± 0.18	1.65 ± 0.34	1.62 ± 0.19	0.15 ± 0.05	0.006	0.11 ± 0.05	0.03
		Control	1.53 ± 0.24	1.54 ± 0.16	1.68 ± 0.25	0.06 ± 0.07	0.34	0.20 ± 0.07	0.003
		Experimental – Control				0.09 ± 0.09	0.32	–0.09 ± 0.09	0.31
Television Viewing – hr/day	All	Experimental	3.0 ± 1.8	2.4 ± 1.6	2.3 ± 1.8	–0.6 ± 0.2	0.002	–0.7 ± 0.2	0.001
		Control	2.8 ± 1.4	2.9 ± 2.0	2.8 ± 1.6	0.1 ± 0.2	0.72	–0.1 ± 0.2	0.67
		Experimental – Control				–0.7 ± 0.3	0.01	–0.6 ± 0.3	0.04
	Non-Hispanic	Experimental	2.9 ± 1.8	2.4 ± 1.6	2.3 ± 1.8	–0.5 ± 0.2	0.03	–0.5 ± 0.2	0.02
		Control	2.9 ± 1.4	2.9 ± 2.1	2.8 ± 1.6	0.0 ± 0.2	0.96	–0.1 ± 0.2	0.60
		Experimental – Control				–0.5 ± 0.3	0.11	–0.4 ± 0.3	0.19
	Hispanic	Experimental	3.4 ± 1.7	2.4 ± 1.7	2.3 ± 1.8	–1.0 ± 0.4	0.009	–1.1 ± 0.4	0.008
		Control	2.6 ± 1.4	3.0 ± 1.8	2.8 ± 1.8	0.4 ± 0.5	0.43	0.1 ± 0.5	0.88
		Experimental – Control				–1.4 ± 0.6	0.03	–1.2 ± 0.7	0.08

* Plus–minus values for unadjusted data are means ±SD, and plus–minus values for changes from baseline are means ±SE. Changes were calculated at 1 year and 2 years from the general linear model, and were adjusted for sex, race, ethnic group, household income, parental education, baseline BMI, baseline beverage consumption (energy from sugar-sweetened beverages, energy from fruit juices, servings of artificially sweetened beverages, servings of unsweetened beverages), baseline total energy intake, baseline sugar intake, and baseline obesity-related behavioral measures (physical activity and hours of television viewing).

† The P values for changes from baseline in each study group are based on tests of the hypothesis that the mean change was zero.

‡ The P values for the between-group differences in changes from baseline are based on tests of the hypothesis that the mean change was the same in the two groups.

§ Results specific to ethnic group are from a model that included an interaction term for study group and ethnic group. For the change during the 2 years, before imputation, BMI data were available for 166 non-Hispanic participants (78 in the experimental group and 88 in the control group) and 43 Hispanic participants (27 in the experimental group and 16 in the control group).