Supplementary data to:

Sugar-sweetened beverage consumption and fatty liver disease in the Framingham Heart Study cohorts

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Supplemental Table 1. Characteristics of participants according to cross-sectional consumption of diet soda[1]

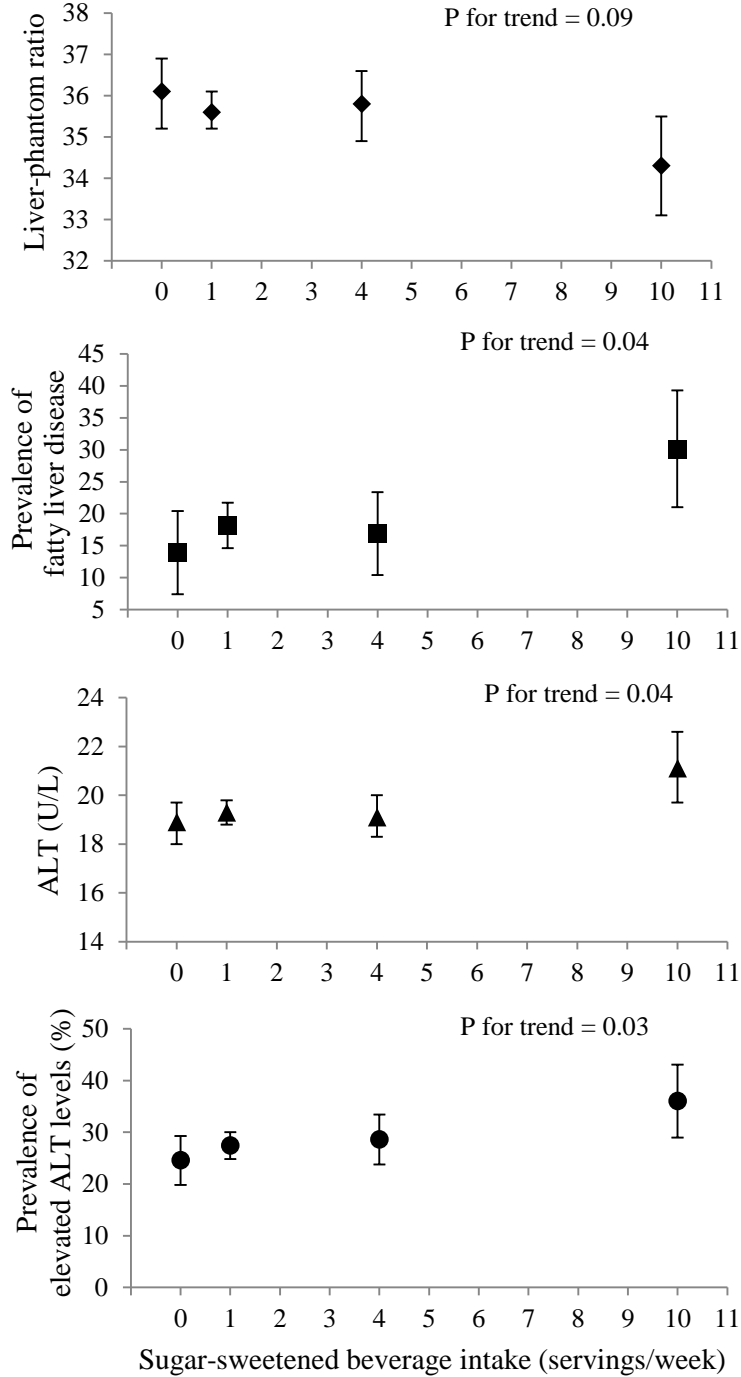| Median consumption (servings/wk)	Non-consumers 0 – 1 serving/mo	Consumers			P for trend
		1 serving/mo – <1 serving/wk	1 serving/wk - <1 serving/d	≥1 servings/d	
	0	1	4	13	
n=2634	1233	543	402	456	
Age (y)	51.3 (50.7, 51.8)	51.3 (50.4, 52.2)	51.3 (50.3, 52.3)	50.5 (49.5, 51.5)	0.17
Women (%)	50.7 (48.0, 53.5)	54.6 (50.4, 58.7)	56.6 (51.7, 61.4)	51.3 (46.7, 55.8)	0.99
Current smoker (%)	13.4 (11.6, 15.2)	8.9 (6.3, 11.6)	7.8 (4.7, 10.9)	13.4 (10.5, 16.4)	0.67
Alcohol intake (g/d)	7.2 (6.8, 7.7)	8.1 (7.4, 8.8)	7.8 (7.0, 8.6)	6.8 (6.1, 7.6)	0.23
Multivitamin user (%)	50.2 (47.4, 52.9)	51.4 (47.3, 55.6)	51.1 (46.2, 55.9)	50.4 (45.8, 54.9)	0.99
Physical Activity Score	37.8 (37.4, 38.2)	37.4 (36.7, 38.0)	37.1 (36.3, 37.8)	37.0 (36.3, 37.7)	0.07
Education (%) [2]	47.4 (44.6, 50.2)	44.7 (40.6, 48.9)	50.1 (45.2, 54.9)	49.1 (44.6, 53.7)	0.32
BMI (kg/m^2)	26.6 (26.3, 26.8)	27.4 (27.0, 27.8)	28.2 (27.7, 28.7)	29.7 (29.2, 30.2)	<0.001
Waist circumference (cm)	93.9 (93.2, 94.7)	95.7 (94.6, 96.8)	98.3 (97.0, 99.6)	101.0 (99.8, 102.3)	<0.001
SAT (cm^3) [3]	2594 (2520, 2669)	2789 (2676, 2901)	3041 (2910, 3172)	3370 (3246, 3494)	<0.001
VAT (cm^3) [3]	1604 (1556, 1652)	1706 (1634, 1778)	1825 (1741, 1909)	2009 (1930, 2088)	<0.001
Hypertension (%)	25.1 (22.7, 27.4)	28.7 (25.2, 32.2)	28.3 (24.2, 32.3)	32.3 (28.5, 36.1)	0.002
Dyslipidemia (%)	44.1 (41.4, 46.8)	47.7 (43.6, 51.8)	47.1 (42.3, 51.8)	52.7 (48.2, 57.1)	0.002
Diabetes (%)	3.2 (1.9, 4.4)	4.0 (2.1, 5.9)	8.5 (6.3, 10.7)	11.2 (9.2, 13.2)	<0.001
Impaired fasting glucose (%)	22.3 (19.9, 24.6)	24.2 (20.7, 27.8)	24.4 (20.2, 28.6)	31.5 (27.5, 35.5)	<0.001
Energy intake (kcal/d)	1947 (1913, 1981)	1893 (1842, 1945)	1972 (1913, 2032)	2007 (1951, 2063)	0.02
Fat (%EI)	31.3 (31.0, 31.7)	31.6 (31.0, 32.1)	32.3 (31.7, 32.9)	33.5 (32.9, 34.1)	<0.001
Carbohydrate (%EI)	49.8 (49.4, 50.3)	48.7 (48.0, 49.4)	48.1 (47.3, 48.9)	46.9 (46.1, 47.7)	<0.001
Protein (%EI)	17.8 (17.6, 18.0)	18.3 (18.1, 18.6)	18.4 (18.0, 18.7)	18.8 (18.5, 19.1)	<0.001
Dietary fiber (g/d) [4]	17.4 (17.1, 17.7)	17.7 (17.2, 18.2)	17.8 (17.2, 18.4)	17.5 (17.0, 18.0)	0.80
Total sugar (g/d) [4]	105.3 (103.3, 107.3)	99.4 (96.7, 102.3)	95.8 (92.8, 99.0)	90.2 (87.4, 93.0)	<0.001
Whole grains (g/d) [4]	18.2 (17.4, 19.1)	19.5 (18.2, 20.9)	19.3 (17.7, 20.9)	16.6 (15.4, 18.0)	0.02
Red meat (servings/d) [4]	0.7 (0.6, 0.7)	0.7 (0.6, 0.7)	0.7 (0.7, 0.8)	0.8 (0.7, 0.8)	<0.001
Fruit intake (servings/d) [4]	1.9 (1.9, 2.0)	1.9 (1.8, 2.0)	1.9 (1.8, 2.0)	1.7 (1.6, 1.8)	0.003
Vegetables (servings/d) [4]	2.8 (2.7, 2.8)	2.8 (2.7, 3.0)	2.8 (2.7, 3.0)	2.9 (2.8, 3.1)	0.08
Nuts (servings/d)	1.2 (1.0, 1.3)	1.1 (0.9, 1.3)	1.3 (1.0, 1.5)	1.2 (1.0, 1.5)	0.43
SSB (servings/wk)	3.6 (3.3, 3.8)	2.4 (2.0, 2.8)	2.1 (1.7, 2.5)	1.7 (1.2, 2.1)	<0.001
DGAI	9.3 (9.2, 9.5)	9.2 (9.0, 9.5)	9.1 (8.9, 9.4)	8.8 (8.5, 9.0)	<0.001

1. Values are means and 95%CI.
2. Education level: college or above
3. n=2556 for VAT and SAT
4. Geometric means and 95% CI
5. DGAI: dietary guideline adherence index

Supplemental Figure 1. Associations between cumulative average intake of sugar-sweetened beverage and measures of fatty liver. Symbols are (geometric) means or proportions and 95% CI. Models were adjusted for age, gender, energy intake, alcohol intake, dietary fiber, dietary fat (% of energy), dietary protein (%energy), smoking status, and BMI. Sample size was 888 for liver-phantom ratio and fatty liver (%) and 2029 for ALT (U/L) and elevated ALT levels.