

Supplemental Table 1. Associations of eating frequency, meal frequency, and snack frequency with Healthy Eating Index-2010 and its component intake in acceptable reporters: NHANES 2003-2012*

(Mean values and standard deviations, or regression coefficients with their standard errors)

	Mean	SE	EF (times/d)			MF _{energy%} (times/d)†			SF _{energy%} (times/d)†			MF _{self-report} (times/d)‡			SF _{self-report} (times/d)‡			MF _{time} (times/d)§			SF _{time} (times/d)§		
			β	SE	P	β	SE	P	β	SE	P	β	SE	P	β	SE	P	β	SE	P	β	SE	P
Children aged 6-11 y (n 3425)																							
HEI-2010	47.2	0.37	1.23	0.28	<0.0001	1.43	0.59	0.02	0.69	0.23	0.003	3.44	0.65	<0.0001	0.67	0.29	0.02	1.79	0.39	<0.0001	0.08	0.30	0.79
Total fruit (cup eq/4184 kJ)	0.61	0.02	0.09	0.01	<0.0001	0.06	0.02	0.02	0.06	0.01	<0.0001	0.11	0.03	0.0007	0.07	0.02	<0.0001	0.10	0.02	<0.0001	0.03	0.02	0.10
Whole fruit (cup eq/4184 kJ)	0.34	0.01	0.05	0.01	<0.0001	0.03	0.02	0.14	0.03	0.01	0.0004	0.06	0.02	0.003	0.04	0.01	0.0005	0.06	0.01	<0.0001	0.01	0.01	0.20
Total vegetables (cup eq/4184 kJ)	0.51	0.01	-0.03	0.01	0.015	-0.03	0.02	0.18	-0.02	0.01	0.10	0.02	0.02	0.40	-0.03	0.01	0.004	-0.01	0.01	0.33	-0.02	0.01	0.04
Greens and beans (cup eq/4184 kJ)	0.042	0.003	-0.001	0.003	0.72	0.001	0.005	0.90	-0.001	0.003	0.75	0.005	0.007	0.51	-0.002	0.003	0.54	0.000	0.003	1.00	-0.001	0.003	0.76
Whole grains (oz eq/4184 kJ)	0.35	0.01	0.03	0.01	0.02	0.10	0.03	0.0002	0.000	0.012	0.99	0.08	0.02	<0.0001	0.01	0.01	0.24	0.06	0.01	<0.0001	-0.010	0.010	0.24
Dairy (cup eq/4184 kJ)	1.18	0.02	0.03	0.02	0.06	0.05	0.03	0.11	0.01	0.01	0.32	0.16	0.03	<0.0001	0.002	0.015	0.90	0.02	0.02	0.49	0.02	0.01	0.10
Total protein foods (oz eq/4184 kJ)	2.20	0.03	-0.16	0.03	<0.0001	-0.07	0.06	0.25	-0.12	0.02	<0.0001	-0.02	0.06	0.73	-0.16	0.03	<0.0001	-0.13	0.04	0.006	-0.10	0.03	0.002
Seafood and plant proteins (oz eq/4184 kJ)	0.41	0.03	-0.05	0.03	0.09	-0.01	0.06	0.83	-0.04	0.02	0.06	0.03	0.03	0.26	-0.06	0.03	0.08	-0.06	0.04	0.17	-0.02	0.02	0.41
Fatty acids¶	1.70	0.01	-0.03	0.01	0.02	-0.03	0.02	0.15	-0.02	0.01	0.07	-0.09	0.03	0.003	-0.02	0.01	0.22	-0.03	0.01	0.07	-0.02	0.01	0.17
Refined grains (oz eq/4184 kJ)	3.09	0.03	-0.09	0.03	0.003	-0.001	0.061	0.98	-0.08	0.03	0.0098	0.04	0.06	0.53	-0.10	0.03	0.003	-0.05	0.03	0.11	-0.07	0.03	0.02
Sodium (g/4184 kJ)	1.56	0.01	-0.07	0.01	<0.0001	-0.03	0.02	0.09	-0.05	0.01	<0.0001	0.01	0.02	0.54	-0.07	0.01	<0.0001	-0.05	0.01	0.0002	-0.05	0.01	<0.0001
Empty calories (% of energy)**	33.6	0.2	0.11	0.22	0.61	-0.34	0.44	0.44	0.17	0.19	0.37	-2.96	0.54	<0.0001	0.66	0.21	0.003	-0.79	0.30	0.012	0.79	0.24	0.002
Adolescents aged 12-19 y (n 3752)																							
HEI-2010	43.9	0.33	1.37	0.24	<0.0001	1.28	0.44	0.005	0.93	0.24	0.0003	3.39	0.51	<0.0001	0.42	0.26	0.11	1.74	0.27	<0.0001	0.11	0.31	0.73
Total fruit (cup eq/4184 kJ)	0.43	0.02	0.06	0.01	<0.0001	0.04	0.02	0.05	0.05	0.01	<0.0001	0.11	0.02	<0.0001	0.03	0.01	0.002	0.07	0.01	<0.0001	0.02	0.01	0.18
Whole fruit (cup eq/4184 kJ)	0.19	0.01	0.03	0.01	<0.0001	0.01	0.01	0.21	0.03	0.01	<0.0001	0.06	0.01	<0.0001	0.02	0.01	0.002	0.04	0.01	<0.0001	0.01	0.01	0.14
Total vegetables (cup eq/4184 kJ)	0.56	0.01	-0.03	0.01	0.0102	-0.06	0.02	0.002	-0.01	0.01	0.29	-0.003	0.017	0.87	-0.03	0.01	0.006	-0.02	0.01	0.03	-0.02	0.01	0.08
Greens and beans (cup eq/4184 kJ)	0.042	0.003	-0.001	0.003	0.60	-0.004	0.005	0.42	0.000	0.003	0.96	0.005	0.005	0.28	-0.003	0.002	0.23	0.000	0.002	0.87	-0.001	0.003	0.64
Whole grains (oz eq/4184 kJ)	0.29	0.01	0.04	0.01	<0.0001	0.04	0.02	0.03	0.03	0.01	0.004	0.07	0.02	0.0005	0.02	0.01	0.03	0.03	0.01	0.02	0.03	0.01	0.03
Dairy (cup eq/4184 kJ)	1.02	0.02	0.01	0.02	0.39	0.10	0.03	0.002	-0.02	0.01	0.31	0.16	0.03	<0.0001	-0.03	0.02	0.04	0.06	0.02	0.002	-0.03	0.02	0.05
Total protein foods (oz eq/4184 kJ)	2.43	0.05	-0.14	0.03	<0.0001	-0.12	0.06	0.05	-0.09	0.03	0.003	0.02	0.07	0.75	-0.15	0.03	<0.0001	-0.10	0.04	0.006	-0.08	0.03	0.03
Seafood and plant proteins (oz eq/4184 kJ)	0.39	0.02	0.04	0.02	0.02	0.07	0.04	0.07	0.02	0.01	0.21	0.04	0.04	0.34	0.03	0.02	0.14	0.03	0.02	0.05	0.02	0.02	0.34

Supplemental Table 1. Continued

	Mean	SE	EF (times/d)			MF _{energy%} (times/d)†			SF _{energy%} (times/d)†			MF _{self-report} (times/d)‡			SF _{self-report} (times/d)‡			MF _{time} (times/d)§			SF _{time} (times/d)§		
			β	SE	P	β	SE	P	β	SE	P	β	SE	P	β	SE	P	β	SE	P	β	SE	P
Fatty acids¶	1.77	0.02	-0.02	0.01	0.07	-0.07	0.03	0.006	-0.001	0.012	0.95	-0.11	0.03	<0.0001	0.01	0.01	0.44	-0.02	0.02	0.22	-0.01	0.02	0.52
Refined grains (oz eq/4184 kJ)	3.17	0.03	-0.07	0.03	0.005	-0.07	0.06	0.27	-0.05	0.03	0.06	0.11	0.05	0.04	-0.11	0.03	0.0002	-0.03	0.03	0.35	-0.07	0.03	0.04
Sodium (g/4184 kJ)	1.63	0.01	-0.06	0.01	<0.0001	-0.06	0.02	0.005	-0.04	0.01	<0.0001	0.01	0.02	0.47	-0.07	0.01	<0.0001	-0.03	0.01	0.02	-0.05	0.01	<0.0001
Empty calories (% of energy)**	34.1	0.3	0.40	0.17	0.02	0.34	0.46	0.46	0.28	0.16	0.08	-2.73	0.44	<0.0001	1.22	0.17	<0.0001	-0.37	0.25	0.15	0.83	0.23	0.0006

NHANES, National Health and Nutrition Examination Survey; EF, eating frequency; MF_{energy%}, meal frequency (MF) determined based on percentage contribution to total energy intake; SF_{energy%}, snack frequency (SF) determined based on percentage contribution to total energy intake; MF_{self-report}, MF determined based on self-report; SF_{self-report}, SF determined based on self-report; MF_{time}, MF determined based on the time consumed; SF_{time}, SF determined based on the time consumed; HEI-2010, Healthy Eating Index-2010; eq, equivalent.

* Analyses are based on subjects with the ratio of energy intake to estimated energy requirement (EI:EER) 0.69 to 1.46 (i.e., acceptable reporters). Subjects with EI:EER <0.69 (i.e., under-reporters; *n* 447 in children and 2115 in adolescents) and those with EI:EER >1.46 (i.e., over-reporters; *n* 397 in children and 326 in adolescents) were excluded from the analyses. All dietary variables are based on average values of two 24-h dietary recalls. Adjustment was made for sex (boys or girls), age (y, continuous), race/ethnicity (non-Hispanic white, non-Hispanic black, Mexican American, or others), family poverty income ratio (< 130%, 130%-349%, or ≥ 350%), education of household head (< 12 y, 12 y, some college, or college degree or more), household size (≤ 2, 3-4, or ≥ 5), physical activity (low, moderate, or active), watching television and computer use (< 2, ≥ 2 to < 4, ≥ 4 to < 6, or ≥ 6 h/d), weight status (underweight, normal overweight, or obese), and survey cycle (2003-2004, 2005-2006, 2007-2008, 2009-2010, or 2011-2012).

† A meal was defined as any eating episode comprising ≥ 15% of total energy intake, regardless of the time of day or composition of foods and beverages consumed; all other eating episodes were classified as snacks.

‡ Self-reports of breakfast, brunch, lunch, supper, and dinner or their equivalents in Spanish were considered meals; all other self-reported eating events were considered as snacks.

§ Meals were defined as eating events reported during select times of the day (0600-0900, 1200-1400, and 1700-2000 hours); all other eating occasions were considered snacks.

|| Regression coefficients mean the change of dietary variables with one additional eating occasion per day.

¶ Ratio of PUFA and MUFA to SFA.

** Energy from solid fats, alcohol, and added sugars.