

Supplemental Table 1. Associations of energy density of meals and snacks with total dietary intakes in men (*n* 659)*

(Regression coefficients and 95% confidence intervals)

	Meals and snacks determined based on time†						Meals and snacks determined based on EI contribution‡					
	Energy density of meals			Energy density of snacks			Energy density of meals			Energy density of snacks		
	β§	95% CI§	<i>P</i>	β§	95% CI§	<i>P</i>	β§	95% CI§	<i>P</i>	β§	95% CI§	<i>P</i>
Food intake from meals and snacks (g/10 MJ)												
Vegetables	-23.06	-26.90, -19.22	<0.0001	-4.92	-7.03, -2.80	<0.0001	-33.93	-38.87, -29.00	<0.0001	-2.60	-4.06, -1.13	<0.0001
Legumes	-1.32	-3.24, 0.61	0.18	-1.39	-2.45, -0.32	0.01	-5.06	-7.60, -2.52	0.0001	0.91	0.16, 1.67	0.02
Fruits	-29.52	-34.23, -24.80	<0.0001	-8.41	-11.01, -5.81	<0.0001	-28.41	-34.42, -22.40	<0.0001	-10.33	-12.12, -8.55	<0.0001
Cereals	-15.06	-19.83, -10.29	<0.0001	-3.11	-5.74, -0.47	0.02	-11.79	-18.04, -5.54	0.0002	-5.62	-7.47, -3.77	<0.0001
Biscuits, cakes and pastries	5.19	3.34, 7.05	<0.0001	0.82	-0.20, 1.84	0.12	7.09	4.62, 9.55	<0.0001	-0.31	-1.04, 0.43	0.41
Fish	-4.42	-6.35, -2.49	<0.0001	-1.98	-3.04, -0.91	0.0003	-5.23	-7.80, -2.65	<0.0001	-1.09	-1.85, -0.33	0.005
Meat	-9.51	-14.06, -4.95	<0.0001	-1.51	-4.03, 1.00	0.24	-16.57	-22.57, -10.57	<0.0001	0.49	-1.28, 2.27	0.59
Dairy products	-17.44	-26.39, -8.49	0.0001	2.98	-1.97, 7.92	0.24	-12.76	-24.61, -0.91	0.03	-4.98	-8.49, -1.47	0.006
Sugar, preserves and confectionery	6.54	4.99, 8.09	<0.0001	1.79	0.94, 2.64	<0.0001	3.25	1.22, 5.28	0.002	2.80	2.20, 3.40	<0.0001
Nutrient intake from meals and snacks												
Protein (% of energy)	-0.70	-0.82, -0.58	<0.0001	-0.12	-0.18, -0.05	0.0007	-0.84	-1.00, -0.68	<0.0001	-0.11	-0.16, -0.07	<0.0001
Fat (% of energy)	1.06	0.79, 1.32	<0.0001	0.37	0.23, 0.52	<0.0001	2.06	1.72, 2.39	<0.0001	0.02	-0.08, 0.12	0.66
Saturated fat (% of energy)	0.56	0.43, 0.70	<0.0001	0.23	0.16, 0.30	<0.0001	1.01	0.84, 1.18	<0.0001	0.05	-0.0003, 0.10	0.052
Carbohydrate (% of energy)	-0.26	-0.60, 0.08	0.14	-0.12	-0.31, 0.07	0.22	-0.66	-1.11, -0.20	0.005	-0.03	-0.16, 0.10	0.65
Starch (% of energy)	-0.31	-0.58, -0.03	0.03	-0.12	-0.28, 0.03	0.11	-0.06	-0.42, 0.30	0.75	-0.18	-0.29, -0.07	0.001
Non-milk extrinsic sugar (% of energy)	0.87	0.59, 1.15	<0.0001	0.18	0.02, 0.33	0.02	0.21	-0.15, 0.58	0.25	0.41	0.30, 0.52	<0.0001
Alcohol (% of energy)	-0.10	-0.44, 0.24	0.57	-0.14	-0.32, 0.05	0.15	-0.57	-1.01, -0.12	0.01	0.12	-0.01, 0.26	0.07
Dietary fiber (g/10 MJ)	-1.34	-1.56, -1.12	<0.0001	-0.37	-0.50, -0.25	<0.0001	-1.56	-1.86, -1.27	<0.0001	-0.31	-0.40, -0.22	<0.0001
Total EI (kJ/d)	239.7	120.6, 358.7	<0.0001	126.9	61.2, 192.6	0.0002	550.7	394.1, 707.2	<0.0001	-15.0	-61.4, 31.4	0.53

EI, energy intake.

* Energy density was calculated based on foods only, excluding all caloric and non-caloric beverages (tea, coffee, water, alcoholic beverages, soft drinks, fruit juice, and milk). Adjustment was made for age (years, continuous) and social class (manual or non-manual). Both energy density of meal and energy density of snack based on the same definition were entered simultaneously into the regression model.

† Meals were defined as eating events reported during select times of the day (0600-1000, 1200-1500, and 1800-2100 hours); all other eating occasions were considered as snacks.

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

§ Regression coefficients mean the change of dietary variables with 1-unit increase of energy density (kJ/g).

Supplemental Table 2. Associations of energy density of meals and snacks with total dietary intakes in women (*n* 792)*

(Regression coefficients and 95% confidence intervals)

	Meals and snacks determined based on time†						Meals and snacks determined based on EI contribution‡					
	Energy density of meals			Energy density of snacks			Energy density of meals			Energy density of snacks		
	β§	95% CI§	<i>P</i>	β§	95% CI§	<i>P</i>	β§	95% CI§	<i>P</i>	β§	95% CI§	<i>P</i>
Food intake from meals and snacks (g/10 MJ)												
Vegetables	-31.35	-35.68, -27.03	<0.0001	-7.28	-9.42, -5.14	<0.0001	-47.57	-52.84, -42.30	<0.0001	-3.35	-5.10, -42.30	0.0002
Legumes	-1.34	-2.99, 0.31	0.11	-0.99	-1.81, -0.18	0.02	-5.21	-7.33, -3.10	<0.0001	1.00	0.30, 1.70	0.005
Fruits	-47.81	-53.43, -42.18	<0.0001	-8.69	-11.47, -5.90	<0.0001	-43.06	-50.11, -36.01	<0.0001	-14.04	-16.38, -11.70	<0.0001
Cereals	-8.46	-12.76, -4.15	0.0001	-1.69	-3.82, 0.44	0.12	-10.30	-15.84, -4.77	0.0003	-2.00	-3.84, -0.17	0.03
Biscuits, cakes and pastries	3.24	1.69, 4.78	<0.0001	1.50	0.74, 2.27	0.0001	5.24	3.24, 7.23	<0.0001	0.56	-0.10, 1.22	0.10
Fish	-7.53	-9.89, -5.16	<0.0001	-0.97	-2.14, 0.20	0.10	-10.15	-13.18, -7.13	<0.0001	-0.84	-1.84, 0.17	0.10
Meat	-4.09	-8.82, 0.64	0.09	-2.46	-4.80, -0.11	0.04	-12.20	-18.29, -6.12	<0.0001	1.34	-0.68, 3.35	0.19
Dairy products	-10.25	-19.37, -1.12	0.03	-7.50	-12.01, -2.98	0.001	-11.50	-23.30, 0.30	0.06	-4.98	-8.89, -1.07	0.01
Sugar, preserves and confectionery	6.06	4.73, 7.40	<0.0001	1.86	1.20, 2.52	<0.0001	4.74	3.02, 6.46	<0.0001	2.24	1.67, 2.81	<0.0001
Nutrient intake from meals and snacks												
Protein (% of energy)	-0.61	-0.73, -0.49	<0.0001	-0.26	-0.32, -0.20	<0.0001	-0.94	-1.10, -0.79	<0.0001	-0.12	-0.17, -0.07	<0.0001
Fat (% of energy)	1.35	1.10, 1.60	<0.0001	0.37	0.25, 0.50	<0.0001	2.18	1.87, 2.49	<0.0001	0.11	0.01, 0.22	0.03
Saturated fat (% of energy)	0.67	0.54, 0.80	<0.0001	0.20	0.14, 0.26	<0.0001	1.10	0.94, 1.26	<0.0001	0.07	0.02, 0.13	0.005
Carbohydrate (% of energy)	-0.28	-0.58, 0.02	0.06	-0.10	-0.24, 0.05	0.20	-0.87	-1.25, -0.48	<0.0001	0.09	-0.04, 0.21	0.18
Starch (% of energy)	-0.07	-0.31, 0.17	0.57	-0.10	-0.22, 0.02	0.09	-0.35	-0.66, -0.04	0.03	0.03	-0.07, 0.14	0.52
Non-milk extrinsic sugar (% of energy)	0.90	0.67, 1.14	<0.0001	0.29	0.17, 0.41	<0.0001	0.65	0.34, 0.95	<0.0001	0.35	0.25, 0.45	<0.0001
Alcohol (% of energy)	-0.48	-0.70, -0.25	<0.0001	-0.02	-0.13, 0.09	0.73	-0.39	-0.69, -0.10	0.009	-0.08	-0.18, 0.01	0.09
Dietary fiber (g/10 MJ)	-1.73	-1.97, -1.49	<0.0001	-0.43	-0.55, -0.31	<0.0001	-2.42	-2.72, -2.12	<0.0001	-0.31	-0.41, -0.21	<0.0001
Total EI (kJ/d)	149.3	79.0, 219.6	<0.0001	99.4	64.6, 134.2	<0.0001	287.3	197.1, 377.4	<0.0001	48.0	18.1, 77.8	0.002

EI, energy intake.

* Energy density was calculated based on foods only, excluding all caloric and non-caloric beverages (tea, coffee, water, alcoholic beverages, soft drinks, fruit juice, and milk). Adjustment was made for age (years, continuous) and social class (manual or non-manual). Both energy density of meal and energy density of snack based on the same definition were entered simultaneously into the regression model.

† Meals were defined as eating events reported during select times of the day (0600-1000, 1200-1500, and 1800-2100 hours); all other eating occasions were considered as snacks.

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

§ Regression coefficients mean the change of dietary variables with 1-unit increase of energy density (kJ/g).

Supplemental Table 3. Characteristics of meals and snacks in men reporting acceptable energy intake (EI) (*n* 422)*

(Mean values and standard deviations)

	Meals and snacks determined based on time*						<i>P</i> ‡	Meals and snacks determined based on EI contribution†				
	Total intake		Intake from meals		Intake from snacks			Intake from meals		Intake from snacks		<i>P</i> ‡
	Mean	SD	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food EI (kJ/d)	9126	1883	6666	1922	2460	1561	<0.0001	7467	1605	1658	1097	<0.0001
Beverage EI (kJ/d)	1904	1073	1159	667	745	624	<0.0001	675	496	1229	915	<0.0001
Food weight consumed (g/d)	1168	281	869	287	299	208	<0.0001	969	225	199	148	<0.0001
Energy density (kJ/g)	7.99	1.38	7.95	1.58	9.04	2.84	<0.0001	7.83	1.27	9.78	3.99	<0.0001
Food intake (g/10 MJ)												
Vegetables	104.6	75.3	114.8	89.3	70.1	91.5	<0.0001	132.0	91.5	30.8	83.4	<0.0001
Legumes	35.8	36.7	36.7	43.8	27.3	57.1	0.004	47.2	50.1	4.4	22.5	<0.0001
Fruits	104.5	112.7	101.6	118.1	123.7	218.2	0.03	65.8	86.8	245.9	383.9	<0.0001
Cereals	240.5	95.2	259.2	110.3	173.5	123.6	<0.0001	279.4	108.3	125.5	117.7	<0.0001
Biscuits, cakes and pastries	43.8	38.6	38.3	41.5	67.6	80.8	<0.0001	35.3	37.5	67.6	74.3	<0.0001
Fish	32.2	36.1	35.4	42.1	21.2	50.4	<0.0001	41.5	46.2	6.0	23.0	<0.0001
Meat	189.1	83.7	194.4	97.8	154.2	145.1	<0.0001	245.2	115.2	37.4	68.1	<0.0001
Dairy products	286.8	169.2	278.9	165.5	355.8	349.1	<0.0001	179.9	137.7	641.5	471.0	<0.0001
Sugar, preserves and confectionery	33.5	31.9	31.4	32.5	44.5	54.2	<0.0001	20.3	23.0	71.1	79.2	<0.0001
Nutrient intake												
Protein (% of energy)	14.9	2.5	15.4	2.7	13.0	4.1	<0.0001	16.8	2.8	10.1	3.8	<0.0001
Fat (% of energy)	33.6	5.7	33.9	5.9	31.8	9.0	<0.0001	37.8	6.0	21.8	9.1	<0.0001
Saturated fat (% of energy)	12.8	2.9	12.7	3.1	12.9	4.2	0.44	13.7	3.1	10.2	4.8	<0.0001
Carbohydrate (% of energy)	44.7	6.8	45.1	7.1	44.4	10.2	0.12	42.4	6.8	51.9	12.4	<0.0001
Starch (% of energy)	25.2	5.3	26.5	5.6	20.7	7.6	<0.0001	28.9	5.3	14.7	8.3	<0.0001
Non-milk extrinsic sugar (% of energy)	12.7	5.4	11.9	5.8	16.5	9.3	<0.0001	7.9	3.9	26.3	13.6	<0.0001
Alcohol (% of energy)	6.9	7.0	5.7	6.3	10.8	12.8	<0.0001	3.1	4.2	16.4	16.0	<0.0001
Dietary fiber (g/10 MJ)	15.9	5.1	16.7	5.6	13.2	6.6	<0.0001	17.5	4.8	11.7	8.4	<0.0001

* Acceptable EI reporters were defined as subjects with the ratio of EI to estimated energy requirement 0.665 to 1.335.

† Meals were defined as eating events reported during select times of the day (0600-1000, 1200-1500, and 1800-2100 hours); all other eating occasions were considered as snacks.

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

§ *P* values for differences between meal and snack based on the paired *t*-test.

|| Calculated based on foods only; excluding all caloric and non-caloric beverages (tea, coffee, water, alcoholic beverages, soft drinks, fruit juice, and milk).

Supplemental Table 4. Characteristics of meals and snacks in women reporting acceptable energy intake (EI) (*n* 446)*

(Mean values and standard deviations)

	Total intake		Meals and snacks determined based on time*				<i>P</i> ‡	Meals and snacks determined based on EI contribution†				<i>P</i> ‡
			Intake from meals		Intake from snacks			Intake from meals		Intake from snacks		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Food EI (kJ/d)	6899	1336	5023	1328	1876	1165	<0.0001	5611	1172	1288	727	<0.0001
Beverage EI (kJ/d)	1179	628	749	404	430	342	<0.0001	463	306	716	497	<0.0001
Food weight consumed (g/d)	960	241	716	254	244	167	<0.0001	783	198	178	117	<0.0001
Energy density (kJ/g)	7.44	1.54	7.43	1.72	8.72	3.38	<0.0001	7.38	1.40	8.61	3.93	<0.0001
Food intake (g/10 MJ)												
Vegetables	153.5	113.8	161.1	134.5	108.5	141.8	<0.0001	191.6	139.6	41.4	110.4	<0.0001
Legumes	32.0	33.1	33.0	40.6	24.1	49.0	0.002	41.2	44.1	3.9	17.0	<0.0001
Fruits	154.8	156.4	149.4	159.9	200.9	338.9	0.0007	93.9	112.4	364.1	466.1	<0.0001
Cereals	234.7	92.5	256.0	106.3	160.6	128.8	<0.0001	267.9	108.4	124.5	132.1	<0.0001
Biscuits, cakes and pastries	50.2	40.1	43.3	40.5	78.1	83.2	<0.0001	43.0	42.5	74.3	70.0	<0.0001
Fish	40.6	47.3	42.6	55.2	25.0	50.7	<0.0001	51.3	59.9	7.8	31.6	<0.0001
Meat	162.5	90.8	164.7	105.8	126.0	135.2	<0.0001	209.8	116.4	21.6	45.4	<0.0001
Dairy products	350.1	200.6	345.3	222.2	444.4	436.6	<0.0001	207.9	146.8	814.1	568.4	<0.0001
Sugar, preserves and confectionery	35.1	33.0	32.7	34.5	50.5	59.0	<0.0001	21.4	23.3	76.7	77.4	<0.0001
Nutrient intake												
Protein (% of energy)	14.9	2.5	15.1	2.9	13.2	4.3	<0.0001	16.3	2.8	10.6	3.7	<0.0001
Fat (% of energy)	34.1	6.1	34.3	6.7	32.6	8.8	<0.0001	37.4	6.3	24.1	9.1	<0.0001
Saturated fat (% of energy)	13.1	3.2	13.0	3.5	13.3	4.6	0.07	13.6	3.4	11.4	4.7	<0.0001
Carbohydrate (% of energy)	46.9	6.3	47.0	7.0	48.0	10.1	0.06	44.2	6.3	55.2	11.3	<0.0001
Starch (% of energy)	25.8	5.1	26.8	5.5	21.4	8.3	<0.0001	28.9	5.3	15.6	7.9	<0.0001
Non-milk extrinsic sugar (% of energy)	12.6	5.9	11.9	6.3	16.6	10.2	<0.0001	8.6	4.0	24.8	13.5	<0.0001
Alcohol (% of energy)	4.2	5.5	3.6	5.2	6.2	10.0	<0.0001	2.2	3.5	10.1	13.2	<0.0001
Dietary fiber (g/10 MJ)	18.0	6.2	18.7	7.0	15.4	7.8	<0.0001	19.1	5.9	14.7	10.1	<0.0001

* Acceptable EI reporters were defined as subjects with the ratio of EI to estimated energy requirement 0.665 to 1.335.

† Meals were defined as eating events reported during select times of the day (0600-1000, 1200-1500, and 1800-2100 hours); all other eating occasions were considered as snacks.

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

§ *P* values for differences between meal and snack based on the paired *t*-test.

|| Calculated based on foods only; excluding all caloric and non-caloric beverages (tea, coffee, water, alcoholic beverages, soft drinks, fruit juice, and milk).

Supplemental Table 5. Associations of energy density of meals and snacks with total dietary intakes in men reporting acceptable energy intake (EI) (*n* 422)*

(Regression coefficients and 95% confidence intervals)

	Meals and snacks determined based on time†						Meals and snacks determined based on EI contribution‡					
	Energy density of meals			Energy density of snacks			Energy density of meals			Energy density of snacks		
	β§	95% CI§	<i>P</i>	β§	95% CI§	<i>P</i>	β§	95% CI§	<i>P</i>	β§	95% CI§	<i>P</i>
Food intake from meals and snacks (g/10 MJ)												
Vegetables	-19.01	-23.19, -14.82	<0.0001	-3.56	-5.75, -1.37	0.002	-27.30	-32.67, -21.91	<0.0001	-1.70	-3.30, -0.11	0.04
Legumes	0.72	-1.70, 3.15	0.56	-1.12	-2.39, 0.15	0.08	-4.25	-7.38, -1.12	0.008	1.93	1.00, 2.85	<0.0001
Fruits	-32.30	-38.34, -26.26	<0.0001	-8.77	-11.93, -5.61	<0.0001	-26.67	-34.19, -19.15	<0.0001	-12.36	-14.59, -10.12	<0.0001
Cereals	-16.52	-22.57, -10.46	<0.0001	-2.51	-5.68, 0.66	0.12	-15.80	-23.65, -7.94	<0.0001	-4.91	-7.24, -2.58	<0.0001
Biscuits, cakes and pastries	6.26	3.80, 8.72	<0.0001	-0.56	-1.84, 0.73	0.40	6.21	2.94, 9.48	0.0002	-0.54	-1.51, 0.43	0.28
Fish	-3.76	-6.02, -1.49	0.001	-1.16	-2.35, 0.02	0.06	-3.43	-6.39, -0.47	0.02	-1.37	-2.25, -0.49	0.002
Meat	-6.36	-11.87, -0.85	0.02	-1.29	-4.18, 1.60	0.38	-13.99	-21.17, -6.81	0.0001	1.49	-0.64, 3.62	0.17
Dairy products	-18.14	-29.20, -7.07	0.001	1.36	-4.44, 7.15	0.65	-13.03	-27.61, 1.55	0.08	-3.39	-7.72, 0.94	0.12
Sugar, preserves and confectionery	5.96	3.97, 7.95	<0.0001	1.66	0.62, 2.71	0.002	4.71	2.13, 7.29	0.0004	2.31	1.55, 3.08	<0.0001
Nutrient intake from meals and snacks												
Protein (% of energy)	-0.62	-0.77, -0.48	<0.0001	-0.13	-0.20, -0.05	0.001	-0.77	-0.96, -0.57	<0.0001	-0.09	-0.15, -0.03	0.002
Fat (% of energy)	1.10	0.76, 1.45	<0.0001	0.39	0.21, 0.58	<0.0001	1.93	1.49, 2.37	<0.0001	0.12	-0.01, 0.25	0.07
Saturated fat (% of energy)	0.58	0.41, 0.76	<0.0001	0.25	0.15, 0.34	<0.0001	0.91	0.68, 1.14	<0.0001	0.12	0.05, 0.19	0.0006
Carbohydrate (% of energy)	-0.26	-0.71, 0.20	0.26	-0.16	-0.40, 0.07	0.17	-0.55	-1.14, 0.05	0.07	-0.13	-0.31, 0.05	0.15
Starch (% of energy)	-0.28	-0.62, 0.07	0.12	-0.10	-0.28, 0.09	0.30	-0.23	-0.69, 0.23	0.33	-0.13	-0.27, 0.01	0.06
Non-milk extrinsic sugar (% of energy)	0.89	0.54, 1.23	<0.0001	0.12	-0.06, 0.30	0.21	0.78	0.02, 0.93	0.04	0.27	0.14, 0.41	<0.0001
Alcohol (% of energy)	-0.23	-0.70, 0.23	0.32	-0.10	-0.34, 0.14	0.42	-0.62	-1.23, -0.02	0.04	0.10	-0.08, 0.28	0.28
Dietary fiber (g/10 MJ)	-1.36	-1.64, -1.07	<0.0001	-0.32	-0.47, -0.17	<0.0001	-1.54	-1.91, -1.16	<0.0001	-0.28	-0.39, -0.17	<0.0001
Total EI (kJ/d)	192.9	68.5, 317.4	0.003	34.7	-30.5, 99.9	0.30	331.4	168.6, 494.1	<0.0001	-30.6	-79.0, 17.7	0.21
Diet quality score												
Healthy diet indicator	-0.26	-0.35, -0.18	<0.0001	-0.05	-0.09, -0.001	0.04	-0.26	-0.37, -0.15	<0.0001	-0.07	-0.10, -0.03	<0.0001
Mediterranean diet score¶	-0.29	-0.39, -0.20	<0.0001	-0.11	-0.16, -0.06	<0.0001	-0.30	-0.43, -0.17	<0.0001	-0.11	-0.14, -0.07	<0.0001

* Energy density was calculated based on foods only, excluding all caloric and non-caloric beverages (tea, coffee, water, alcoholic beverages, soft drinks, fruit juice, and milk). Acceptable EI reporters were defined as subjects with the ratio of EI to estimated energy requirement 0.665 to 1.335. Adjustment was made for age (years, continuous) and social class (manual or non-manual). Both energy density of meal and energy density of snack based on the same definition were entered simultaneously into the regression model.

† Meals were defined as eating events reported during select times of the day (0600-1000, 1200-1500, and 1800-2100 hours); all other eating occasions were considered as snacks.

Supplemental Table 5. Continued

‡ A meal was defined as any eating episode comprising $\geq 15\%$ of total EI, regardless of the time of day or composition of foods and beverages consumed; all other eating episodes were classified as snacks.

§ Regression coefficients mean the change of dietary variables with 1-unit increase of energy density (kJ/g).

|| Possible score ranging from 0 to 7.

¶ Possible score ranging from 0 to 9.

Supplemental Table 6. Associations of energy density (ED) of meals and snacks with total dietary intakes in women reporting acceptable energy intake (EI) (*n* 446)*
(Regression coefficients and 95% confidence intervals)

	Meals and snacks determined based on time†						Meals and snacks determined based on EI contribution‡					
	Energy density of meals			Energy density of snacks			Energy density of meals			Energy density of snacks		
	β§	95% CI§	<i>P</i>	β§	95% CI§	<i>P</i>	β§	95% CI§	<i>P</i>	β§	95% CI§	<i>P</i>
Food intake from meals and snacks (g/10 MJ)												
Vegetables	-32.52	-38.11, -26.94	<0.0001	-3.98	-6.62, -1.35	0.003	-43.90	-50.96, -36.84	<0.0001	-2.91	-5.31, -0.51	0.02
Legumes	-1.31	-3.26, 0.64	0.19	-0.78	-1.70, 0.14	0.10	-6.20	-8.71, -3.70	<0.0001	1.73	0.88, 2.58	<0.0001
Fruits	-48.04	-54.90, -41.17	<0.0001	-9.44	-12.68, -6.20	<0.0001	-36.49	-45.38, -27.60	<0.0001	-15.98	-19.00, -12.96	<0.0001
Cereals	-11.07	-16.38, -5.75	<0.0001	-3.71	-6.22, -1.20	0.004	-18.38	-25.33, -11.42	<0.0001	-1.39	-3.75, 0.98	0.25
Biscuits, cakes and pastries	4.20	1.91, 6.50	0.0003	0.96	-0.13, 2.04	0.08	5.36	2.34, 8.38	0.0005	0.70	-0.32, 1.73	0.18
Fish	-7.02	-9.66, -4.38	<0.0001	-0.67	-1.91, 0.58	0.29	-10.77	-14.20, -7.35	<0.0001	-0.39	-1.56, 0.77	0.51
Meat	0.93	-4.42, 6.28	0.73	-1.15	-3.68, 1.38	0.37	-2.33	-9.41, 4.74	0.52	0.91	-1.50, 3.31	0.46
Dairy products	-10.30	-21.71, 1.11	0.08	-5.71	-11.09, -0.32	0.04	-2.90	-18.02, 12.22	0.71	-5.73	-10.86, -0.59	0.03
Sugar, preserves and confectionery	6.53	4.73, 8.32	<0.0001	1.82	0.97, 2.66	<0.0001	5.60	3.23, 7.97	<0.0001	2.15	1.35, 2.96	<0.0001
Nutrient intake from meals and snacks												
Protein (% of energy)	-0.52	-0.65, -0.39	<0.0001	-0.18	-0.24, -0.12	<0.0001	-0.72	-0.89, -0.55	<0.0001	-0.10	-0.16, -0.04	0.0007
Fat (% of energy)	1.19	0.85, 1.52	<0.0001	0.40	0.24, 0.56	<0.0001	1.81	1.37, 2.24	<0.0001	0.20	0.05, 0.35	0.008
Saturated fat (% of energy)	0.67	0.49, 0.84	<0.0001	0.19	0.11, 0.27	<0.0001	1.01	0.78, 1.23	<0.0001	0.11	0.03, 0.19	0.005
Carbohydrate (% of energy)	-0.18	-0.56, 0.19	0.33	-0.19	-0.37, -0.02	0.03	-0.61	-1.11, -0.12	0.02	0.01	-0.16, 0.18	0.90
Starch (% of energy)	-0.03	-0.33, 0.27	0.84	-0.11	-0.25, 0.03	0.13	-0.45	-0.84, -0.05	0.03	0.10	-0.04, 0.23	0.16
Non-milk extrinsic sugar (% of energy)	0.96	0.64, 1.29	<0.0001	0.20	0.04, 0.35	0.01	0.78	0.35, 1.21	0.0004	0.26	0.12, 0.41	0.0005
Alcohol (% of energy)	-0.50	-0.82, -0.18	0.003	-0.03	-0.18, 0.12	0.73	-0.48	-0.90, -0.06	0.03	-0.11	-0.26, 0.03	0.12
Dietary fiber (g/10 MJ)	-1.70	-2.00, -1.40	<0.0001	-0.31	-0.45, -0.17	<0.0001	-2.07	-2.46, -1.69	<0.0001	-0.26	-0.39, -0.13	0.0001
Total EI (kJ/d)	104.7	31.4, 178.0	0.005	31.0	-3.6, 65.6	0.08	148.9	52.6, 245.2	0.003	27.9	-4.8, 60.6	0.09
Diet quality score												
Healthy diet indicator	-0.21	-0.28, -0.14	<0.0001	-0.02	-0.05, 0.02	0.29	-0.21	-0.31, -0.11	<0.0001	-0.05	-0.08, -0.01	0.006
Mediterranean diet score¶	-0.38	-0.47, -0.29	<0.0001	-0.05	-0.09, -0.005	0.03	-0.53	-0.65, -0.41	<0.0001	-0.04	-0.08, -0.003	0.04

* Energy density was calculated based on foods only, excluding all caloric and non-caloric beverages (tea, coffee, water, alcoholic beverages, soft drinks, fruit juice, and milk). Acceptable EI reporters were defined as subjects with the ratio of EI to estimated energy requirement 0.665 to 1.335. Adjustment was made for age (years, continuous) and social class (manual or non-manual). Both energy density of meal and energy density of snack based on the same definition were entered simultaneously into the regression model.

† Meals were defined as eating events reported during select times of the day (0600-1000, 1200-1500, and 1800-2100 hours); all other eating occasions were considered as snacks.

Supplemental Table 6. Continued

‡ A meal was defined as any eating episode comprising $\geq 15\%$ of total EI, regardless of the time of day or composition of foods and beverages consumed; all other eating episodes were classified as snacks.

§ Regression coefficients mean the change of dietary variables with 1-unit increase of energy density (kJ/g).

|| Possible score ranging from 0 to 7.

¶ Possible score ranging from 0 to 9.

Supplemental Table 7. Associations of energy density (ED) of meals and snacks with **measures of body fatness** in acceptable energy intake (EI) reporters*

(Regression coefficients and 95% confidence intervals)

	Men (n 422)						Women (n 446)					
	Model 1†			Model 2‡			Model 1†			Model 2‡		
	β§	95% CI§	P	β§	95% CI§	P	β§	95% CI§	P	β§	95% CI§	P
ED of meals determined based on time (kJ/g)												
BMI (kg/m ²)	0.29	0.04, 0.53	0.02	0.33	0.08, 0.58	0.009	-0.03	-0.31, 0.25	0.82	0.06	-0.22, 0.35	0.66
WC (cm)	0.62	-0.04, 1.27	0.07	0.71	0.04, 1.37	0.04	0.24	-0.39, 0.87	0.46	0.40	-0.24, 1.04	0.22
ED of snacks determined based on time (kJ/g)												
BMI (kg/m ²)	-0.07	-0.20, 0.06	0.30	-0.05	-0.18, 0.07	0.40	0.12	-0.01, 0.25	0.06	0.13	0.004, 0.26	0.04
WC (cm)	0.05	-0.30, 0.39	0.79	0.08	-0.27, 0.42	0.67	0.21	-0.08, 0.50	0.16	0.22	-0.07, 0.51	0.13
ED of meals determined based on EI contribution (kJ/g)¶												
BMI (kg/m ²)	0.29	-0.03, 0.61	0.07	0.37	0.04, 0.69	0.03	0.27	-0.10, 0.63	0.15	0.37	0.005, 0.74	0.047
WC (cm)	0.57	-0.29, 1.43	0.20	0.72	-0.15, 1.60	0.11	0.76	-0.05, 1.58	0.07	0.94	0.12, 1.76	0.03
ED of snacks determined based on EI contribution (kJ/g)¶												
BMI (kg/m ²)	-0.01	-0.11, 0.08	0.72	-0.02	-0.11, 0.07	0.68	0.04	-0.09, 0.16	0.54	0.05	-0.07, 0.18	0.40
WC (cm)	0.10	-0.15, 0.36	0.43	0.10	-0.16, 0.35	0.45	0.13	-0.15, 0.41	0.36	0.15	-0.12, 0.43	0.27
ED of total diet (kJ/g)												
BMI (kg/m ²)	0.29	0.01, 0.57	0.04	0.35	0.07, 0.64	0.02	0.33	0.01, 0.64	0.04	0.46	0.14, 0.77	0.005
WC (cm)	0.82	0.07, 1.57	0.03	0.97	0.20, 1.73	0.01	0.90	0.20, 1.60	0.01	1.12	0.41, 1.84	0.002

WC, waist circumference.

* Energy density was calculated based on foods only, excluding all caloric and non-caloric beverages (tea, coffee, water, alcoholic beverages, soft drinks, fruit juice, and milk). Acceptable EI reporters were defined as subjects with the ratio of EI to estimated energy requirement 0.665 to 1.335.

† Adjusted for age (years, continuous), social class (manual or non-manual), smoking status (never, former, or current), physical activity (metabolic equivalent-h/d, continuous), meal frequency based on the same definition (times/d, continuous), snack frequency based on the same definition (times/d, continuous), and energy intake from beverages (kJ/d, continuous). Both energy density of meal and energy density of snack based on the same definition were entered simultaneously into the regression model.

‡ Adjusted for variables used in model 1 and ratio of EI to estimated energy requirement (continuous). Both energy density of meal and energy density of snack based on the same definition were entered simultaneously into the regression model.

§ Regression coefficients mean the change of adiposity measures with 1-unit increase of energy density (kJ/g).

|| Meals were defined as eating events reported during select times of the day (0600-1000, 1200-1500, and 1800-2100 hours); all other eating occasions were considered as snacks.

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