

Supplemental Table 1. Nutritionists' criteria applied for evaluating the healthiness of breakfasts reported by participants.

Factor	Standard breakfast	Decreases out of the total score of 10 for each criterion that was not meet
Food groups		
Fruit	1-2 portions	0 portions = -0.5; 3-4 portions = -0.5; > 5 portions = -1.0
Vegetable	1-2 portions	0 portions = -0.5; 3-4 portions = -0.5; > 5 portions = -1.0
Grain	2-3 portions	0 portions = -0.5; 4-5 portions = -0.5; > 6 portions = -1.0
Protein	1-2 portions	0 portions = -0.5; 3-4 portions = -0.5; > 5 portions = -1.0
Dairy	1 portion	0 portions = -0.5; 2-3 portions = -0.5; > 4 portions = -1.0
Water	1 portion	0 portions = -0.5
Fat	0-1 portion	2-3 portions = -1.0; > 4 portions = -1.5
Sugar	0-1 portion	2-3 portions = -0.5; > 4 portions = -1.0
Nutritional content		
Kilocalories	25% of energy needs $\pm 1.5 SD$	Below or above the 25% of energy needs $\pm 1.5 SD = -1.0$
Carbohydrate %	50-60%	
Protein %	10-20%	Below or above energy percent range from macronutrients = -1.0
Lipids %	20-30%	

Notes: *SD* = Standard deviations of estimated energy requirements of all participants.

Supplemental Table 2. Participant characteristics

	Overweight		Obesity		Urban location		Semi-urban location	
	Healthy	Unhealthy	Healthy	Unhealthy	Healthy	Unhealthy	Healthy	Unhealthy
	breakfast	breakfast	breakfast	breakfast	breakfast	breakfast	breakfast	breakfast
	<i>n</i> = 35	<i>n</i> = 30	<i>n</i> = 25	<i>n</i> = 30	<i>n</i> = 30	<i>n</i> = 30	<i>n</i> = 30	<i>n</i> = 30
Age in years	30.6 ± 5.3	31.8 ± 4.1	32.9 ± 4.1	31.6 ± 4.6	30.4 ± 4.5	31.0 ± 4.5	32.7 ± 5.1	32.4 ± 4.1
BMI kg/m²	27.4 ± 1.5	26.9 ± 1.4	33.1 ± 2.8	33.4 ± 3.2	29.0 ± 2.9	29.7 ± 3.4	30.5 ± 4.0	30.8 ± 4.6
Education, %								
Basic	45.7	53.3	56.0	66.7	33.3	33.3	66.7	86.7
High school	37.1	26.7	16.0	13.3	40.0	30.0	16.7	10.0
College/University	17.1	20.0	28.0	20.0	26.7	36.7	16.7	3.3
Occupation, %								
Home	51.4	70.0	56.0	60.0	53.3	66.7	53.3	63.3
Employee	48.6	30.0	44.0	30.0	46.7	33.3	46.7	36.7
Have children, %	74.3	83.3	84.0	96.7	76.7	76.7	80.0	93.3

Notes: Continuous variables: mean ± standard deviation. Categorical variables: percent (%) of total participants in the condition

Supplemental Table 3. Characteristics of reported healthy (HB) and unhealthy (UB) breakfasts.

	Overweight		Obesity		Urban location		Semi-urban location	
	HB <i>n</i> = 35	UB <i>n</i> = 30	HB <i>n</i> = 25	UB <i>n</i> = 30	HB <i>n</i> = 30	UB <i>n</i> = 30	HB <i>n</i> = 30	UB <i>n</i> = 30
Episode recency, days back	2.5 ± 2.4	2.6 ± 2.1	3.1 ± 2.2	3.0 ± 1.8	2.9 ± 2.6	3.1 ± 2.1	2.6 ± 2.0	2.8 ± 2.1
Place of the episode, %								
Home	91.0	47.0	88.0	50.0	90.0	46.7	90.0	50.0
Out of home	9.0	53.0	12.0	50.0	10.0	53.3	10.0	50.0
Number of people present	2.4 ± 1.9	2.4 ± 2.2	2.8 ± 1.4	3.0 ± 2.8	1.9 ± 1.7	2.7 ± 2.6	3.3 ± 1.5	2.7 ± 2.5
Relationship, %								
Alone	28.6	30.0	8.0	16.7	33.3	26.7	3.3	20.0
Family	62.9	60.0	80.0	70.0	60.0	53.3	80.0	76.7
Acquaintances	8.6	10.0	12.0	13.3	6.7	20.0	13.3	3.3
Food portions reported								
Fruit	1.9 ± 1.5	0.5 ± 1.5	1.2 ± 1.4	0.1 ± 0.4	2.1 ± 1.7	0.2 ± 1.5	1.2 ± 1.1	0.4 ± 1.5
Vegetables	0.4 ± 0.6	0.0 ± 0.2	0.3 ± 0.6	0.1 ± 0.3	0.4 ± 0.6	0.0 ± 0.2	0.3 ± 0.6	0.1 ± 0.3
Grains	1.6 ± 2.0	3.9 ± 2.6	1.9 ± 1.7	4.5 ± 3.1	1.7 ± 1.9	4.7 ± 3.4	1.7 ± 1.9	3.7 ± 2.1
Higher protein foods	1.0 ± 1.1	1.5 ± 1.7	1.2 ± 1.2	1.0 ± 1.3	1.0 ± 1.0	1.5 ± 1.7	1.1 ± 1.3	1.0 ± 1.2
Dairy	0.6 ± 0.6	0.3 ± 0.5	0.5 ± 0.9	0.2 ± 0.5	0.6 ± 0.9	0.3 ± 0.6	0.5 ± 0.6	0.2 ± 0.4
Water	0.2 ± 0.4	0.3 ± 0.5	0.6 ± 0.6	0.4 ± 0.4	0.3 ± 0.5	0.3 ± 0.5	0.5 ± 0.6	0.4 ± 0.5
Sugar	0.4 ± 0.7	2.1 ± 2.5	0.8 ± 0.8	2.3 ± 2.1	0.4 ± 0.7	1.8 ± 1.9	0.8 ± 0.8	2.6 ± 2.6
Fat	0.3 ± 0.5	2.4 ± 2.6	0.5 ± 0.8	3.0 ± 2.9	0.3 ± 0.5	3.6 ± 3.4	0.5 ± 0.8	1.9 ± 1.6
Nutritional content								
Kilocalories	368.8 ± 203.5	595.7 ± 340.9	378.7 ± 194.8	620.8 ± 346.6	397.0 ± 188.5	678.0 ± 414.2	349.0 ± 208.2	537.8 ± 234.3
Carbohydrate %	71.2 ± 20.6	63.2 ± 13.9	69.9 ± 18.8	64.8 ± 16.5	73.5 ± 15.5	59.6 ± 14.1	67.9 ± 23.1	68.4 ± 15.0
Protein %	16.5 ± 11.1	14.5 ± 7.5	15.8 ± 10.1	11.1 ± 6.1	15.4 ± 8.8	13.0 ± 6.4	17.1 ± 12.3	12.6 ± 7.7
Lipids %	12.3 ± 10.3	22.3 ± 11.1	14.2 ± 10.6	24.1 ± 12.5	11.2 ± 7.8	27.4 ± 11.0	15.0 ± 12.3	19.0 ± 11.0

Notes: Continuous variables: mean ± standard deviation. Categorical variables: percent (%) of total participants in the condition.

Supplemental Table 3. Continued.

	Weight status effect			Location effect			HB vs. UB effect		
	<i>size</i>	<i>F</i>	<i>p</i>	<i>size</i>	<i>F</i>	<i>p</i>	<i>size</i>	<i>F</i>	<i>p</i>
Episode recency, days back	.016	1.91	.17	.017	1.84	.17	.000	0.00	.96
Place of the episode, %									
Home	.000	0.00	.99	.001	0.08	.77	.191	26.50	.001
Out of home									
Number of people present	.003	0.38	.54	.026	2.93	.09	.000	0.03	.86
Relationship, %	.024	2.79	.10	.043	5.04	.03	.005	0.57	.45
Alone									
Family									
Acquaintances									
Food portions reported									
Fruit	.028	3.25	.07	.006	0.72	.40	.174	23.58	.001
Vegetables	.000	0.01	.94	.000	0.02	.89	.091	11.17	.001
Grains	.010	1.08	.30	.016	1.77	.19	.214	30.47	.001
Higher protein foods	.002	0.25	.62	.170	1.99	.16	.001	0.10	.75
Dairy	.001	0.08	.78	.014	1.64	.20	.089	10.91	.001
Water	.074	8.92	.003	.012	1.36	.25	.003	0.34	.56
Sugar	.008	8.90	.35	.018	2.06	.15	.164	22.02	.001
Fat	.007	0.82	.37	.036	4.18	.04	.263	39.92	.001
Nutritional content									
Kilocalories	.002	0.20	.65	.032	3.73	.06	.139	18.13	.001
Carbohydrate %	.000	0.03	.87	.008	0.91	.34	.016	1.83	.18
Protein %	.012	1.37	.25	.000	0.01	.94	.067	8.07	.005
Lipids %	.004	0.47	.50	.019	2.11	.15	.151	19.95	.001

Notes: Continuous variables: mean \pm standard deviation. Categorical variables: percent (%) of total participants in the condition. Effect size: partial eta squared. *p*: probability value – adjusted for 16 comparisons from 0.05 to 0.003.

Supplemental Table 4. Counts of reported beliefs about why breakfasts were healthy (HB) or unhealthy (UB) (%).

Categories	Overweight		Obesity		Weight status effect		Urban location		Semi-urban location		Location effect	
	HB <i>n</i> = 35	UB <i>n</i> = 30	UB <i>n</i> = 25	HB <i>n</i> = 30	<i>Size</i>	<i>Exact p</i>	HB <i>n</i> = 30	UB <i>n</i> = 30	UB <i>n</i> = 30	HB <i>n</i> = 30	<i>Size</i>	<i>Exact p</i>
<i>It had fruit</i>	51.4	0.0	44.0	0.0	.055	.690	43.3	0.0	53.3	0.0	.182	.072
<i>It had no fruit</i>	0.0	10.0	0.0	13.3			0.0	0.0	0.0	23.3		
<i>It had vegetables</i>	22.9	0.0	16.0	0.0	.126	.254	20.0	0.0	20.0	0.0	.052	.777
<i>It had no vegetables</i>	0.0	6.7	0.0	0.0			0.0	0.0	0.0	6.7		
<i>It had grains</i>	28.6	0.0	8.0	0.0	.247	.011	23.3	0.0	16.7	0.0	.025	1.00
<i>It had no grains</i>	0.0	10.0	0.0	0.0			0.0	0.0	0.0	10.0		
<i>It had protein</i>	17.1	0.0	16.0	0.0	.060	.546	20.0	0.0	13.3	0.0	.029	1.00
<i>It had no protein</i>	0.0	3.3	0.0	0.0			0.0	0.0	0.0	3.3		
<i>It had dairy</i>	20.0	0.0	12.0	0.0	.052	.770	26.7	0.0	6.7	0.0	.080	.558
<i>It had no dairy</i>	0.0	3.3	0.0	6.7			0.0	0.0	0.0	10.0		
<i>It had water</i>	2.9	0.0	0.0	0.0	.084	1.000	3.3	0.0	0.0	0.0	.092	1.00
<i>It had no water</i>	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0		
<i>It had no sugar</i>	0.0	0.0	0.0	0.0	.110	.253	0.0	0.0	0.0	0.0	.188	.075
<i>It had sugar</i>	0.0	16.7	0.0	26.7			0.0	10.0	0.0	33.3		
<i>It had no fat</i>	11.4	0.0	12.0	0.0	.046	.679	13.3	0.0	10.0	0.0	.019	1.00
<i>It had fat</i>	0.0	46.7	0.0	33.3			0.0	40.0	0.0	40.0		
<i>It had no refined grains</i>	0.0	0.0	0.0	0.0	.207	.042	0.0	0.0	0.0	0.0	.060	.743
<i>It had refined grains</i>	0.0	6.7	0.0	26.7			0.0	13.3	0.0	20.0		
<i>It was natural</i>	22.9	0.0	12.0	0.0	.086	.435	20.0	0.0	16.7	0.0	.072	.602
<i>It was not natural</i>	0.0	10.0	0.0	10.0			0.0	13.3	0.0	6.7		
<i>It had nutrients</i>	17.1	0.0	4.0	0.0	.090	.354	20.0	0.0	3.3	0.0	.172	.097
<i>It had no nutrients</i>	0.0	26.7	0.0	23.3			0.0	30.0	0.0	20.0		
<i>It was balanced</i>	14.3	0.0	48.0	0.0	.202	.035	33.3	0.0	23.3	0.0	.175	.084
<i>It is unbalanced</i>	0.0	40.0	0.0	43.3			0.0	53.3	0.0	30.0		

Notes: % = percent of total participants in the condition. *p*: exact probability value – adjusted for 12 comparisons from 0.05 to 0.004.

Supplemental Table 5. Associations between participants and nutritionists in rated healthiness of reported breakfasts.

	Breakfast healthiness				<i>r</i> HB vs. <i>r</i> UB					
	<i>k</i>	Nutritionists <i>M</i> ± <i>SD</i>	<i>n</i>	Participants <i>M</i> ± <i>SD</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>z</i>	<i>p</i>
Overweight										
Healthy breakfasts	35	6.5 ± 1.0	35	8.1 ± 1.4	-5.86	.001	-0.06	.72	-0.23	.81
Unhealthy breakfasts	30	4.5 ± 1.4	30	3.2 ± 2.3	2.73	.01	0.001	1.00		
Healthy and unhealthy breakfasts	65	5.6 ± 1.5	65	5.9 ± 3.1	-0.92	.36	0.52	.001		
Obesity										
Healthy breakfasts	25	5.9 ± 0.7	25	7.9 ± 1.7	-5.49	.001	-0.03	.90	-1.11	.27
Unhealthy breakfasts	30	4.5 ± 1.2	30	3.0 ± 2.7	3.23	.003	0.28	.14		
Healthy and unhealthy breakfasts	55	5.5 ± 1.3	55	5.6 ± 3.2	-0.21	.84	0.53	.001		
Urban locality										
Healthy breakfasts	30	6.3 ± 1.0	30	8.1 ± 1.3	-5.35	.0001	-0.18	.34	-1.38	.17
Unhealthy breakfasts	30	4.2 ± 1.2	30	3.0 ± 2.6	2.42	.02	0.16	.39		
Healthy and unhealthy breakfasts	60	5.3 ± 1.5	60	5.5 ± 3.2	-0.79	.43	0.58	.0001		
Semi-urban locality										
Healthy breakfasts	30	6.1 ± 0.8	30	8.0 ± 1.7	-5.97	.0001	0.12	.52	-0.22	.82
Unhealthy breakfasts	30	4.8 ± 1.3	30	3.1 ± 2.4	3.58	.001	0.11	.56		
Healthy and unhealthy breakfasts	60	5.5 ± 1.3	60	5.6 ± 3.2	-0.34	.74	0.46	.0001		

Notes: *k* = number of breakfasts evaluated by nutritionists. *M* ± *SD* = mean ± standard deviation. HB = Healthy breakfasts. UB = Unhealthy breakfasts. *t* = *t* test. *r* = correlation coefficient. *p* = probability value.