

Appendix Table 5. Mean \pm standard deviation (SD) of energy and nutrient intakes estimated by a self-administered diet history questionnaire (DHD) by BMI categories*

	Crude model					P value***	Density model				P value***	
	Quartiles of BMI						Quartiles of BMI					
	1 (n=58)	2 (n=59)	3 (n=59)	4 (n=59)			1 (n=58)	2 (n=59)	3 (n=59)	4 (n=59)		
Energy	kcal /day	2498 \pm 910	2471 \pm 693	2499 \pm 817	2356 \pm 930	0.765						
Protein	g/day	92.5 \pm 32.6	89.0 \pm 27.6	90.4 \pm 28.7	89.8 \pm 34.1	0.941	% energy	13.9 \pm 2.7	14.5 \pm 2.2	14.8 \pm 2.7	15.5 \pm 2.5	0.168
Fat	g/day	73.8 \pm 33.8	72.1 \pm 29.2	75.0 \pm 37.2	72.0 \pm 40.5	0.960	% energy	25.6 \pm 8.4	26.0 \pm 6.7	26.4 \pm 5.7	26.6 \pm 6.6	0.977
Total fatty acid	g/day	64.4 \pm 29.4	63.0 \pm 26.0	65.4 \pm 33.6	62.9 \pm 36.5	0.971	% energy	22.6 \pm 7.6	22.8 \pm 6.1	22.9 \pm 5.1	23.1 \pm 6.0	0.985
Saturated fatty acid	g/day	20.8 \pm 10.0	20.0 \pm 7.9	21.1 \pm 10.4	19.3 \pm 9.5	0.716	% energy	6.9 \pm 2.3	7.3 \pm 2.1	7.5 \pm 1.8	7.3 \pm 1.9	0.959
Monounsaturated fatty acid	g/day	26.2 \pm 12.7	25.9 \pm 11.8	26.5 \pm 14.6	26.0 \pm 17.0	0.994	% energy	9.3 \pm 3.7	9.3 \pm 2.9	9.2 \pm 2.4	9.4 \pm 3.0	0.989
Polyunsaturated fatty acid	g/day	17.0 \pm 7.3	16.8 \pm 7.0	17.4 \pm 9.2	17.3 \pm 10.4	0.988	% energy	6.1 \pm 2.1	6.1 \pm 1.7	6.1 \pm 1.5	6.3 \pm 1.8	0.925
Cholesterol	mg/day	402 \pm 164	378 \pm 171	406 \pm 185	384 \pm 205	0.799	mg/1000 kcal	157 \pm 59	151 \pm 50	162 \pm 54	161 \pm 58	0.609
Alcohol	g/day	15.6 \pm 27.5	17.6 \pm 28.3	15.1 \pm 32.1	20.7 \pm 48.7	0.820	% energy	8.8 \pm 10.0	4.6 \pm 7.8	3.7 \pm 7.3	4.2 \pm 8.5	0.939
Sodium	mg/day	5287 \pm 1989	5508 \pm 1712	5426 \pm 2423	5669 \pm 2426	0.810	mg/1000 kcal	2088 \pm 604	2273 \pm 582	2186 \pm 597	2461 \pm 682**	0.038
Potassium	mg/day	3342 \pm 1127	3290 \pm 906	3248 \pm 1304	3224 \pm 995	0.942	mg/1000 kcal	1180 \pm 252	1360 \pm 282	1315 \pm 314	1432 \pm 289	0.219
Calcium	mg/day	957 \pm 327	921 \pm 250	940 \pm 348	877 \pm 203	0.480	mg/1000 kcal	292 \pm 92	387 \pm 110	390 \pm 123	407 \pm 124	0.790
Magnesium	mg/day	351 \pm 114	344 \pm 95	352 \pm 128	332 \pm 103	0.756	mg/1000 kcal	131 \pm 27	142 \pm 26	143 \pm 34	147 \pm 27	0.800
Phosphorus	mg/day	1497 \pm 490	1444 \pm 406	1483 \pm 489	1415 \pm 456	0.763	mg/1000 kcal	542 \pm 105	592 \pm 97	605 \pm 127	621 \pm 98	0.541
Iron	mg/day	8.7 \pm 3.4	8.7 \pm 2.4	8.9 \pm 3.5	8.5 \pm 3.1	0.919	mg/1000 kcal	3.4 \pm 0.8	3.6 \pm 0.7	3.6 \pm 0.9	3.7 \pm 0.9	0.687
Zinc	mg/day	10.4 \pm 3.9	10.3 \pm 3.1	10.3 \pm 3.2	9.8 \pm 3.5	0.732	mg/1000 kcal	4.0 \pm 0.7	4.2 \pm 0.4	4.2 \pm 0.6	4.2 \pm 0.7	0.934
Copper	mg/day	1.4 \pm 0.5	1.4 \pm 0.4	1.4 \pm 0.5	1.3 \pm 0.4	0.763	mg/1000 kcal	0.5 \pm 0.1	0.6 \pm 0.1	0.6 \pm 0.1	0.6 \pm 0.1	0.595
Retinol	μ g/day	455 \pm 640	405 \pm 316	480 \pm 605	358 \pm 331	0.551	μ g/1000 kcal	191 \pm 211	161 \pm 114	193 \pm 221	151 \pm 119	0.542
Carotene	μ g/day	3498 \pm 2284	3707 \pm 2538	3350 \pm 2813	3420 \pm 1904	0.867	μ g/1000 kcal	1119 \pm 590	1560 \pm 1081	1351 \pm 1032	1557 \pm 828	0.598
Vitamin D	μ g/day	11.7 \pm 6.5	10.6 \pm 5.9	11.6 \pm 7.2	12.2 \pm 7.5	0.644	μ g/1000 kcal	4.5 \pm 2.1	4.2 \pm 2.0	4.7 \pm 2.9	5.0 \pm 2.0	0.335
Thiamin	mg/day	1.2 \pm 0.5	1.1 \pm 0.4	1.1 \pm 0.5	1.1 \pm 0.5	0.791	mg/1000 kcal	0.4 \pm 0.1	0.4 \pm 0.1	0.4 \pm 0.1	0.5 \pm 0.1	0.353
Riboflavin	mg/day	2.1 \pm 0.7	2.1 \pm 0.5	2.1 \pm 0.7	2.0 \pm 0.6	0.899	mg/1000 kcal	0.8 \pm 0.2	0.9 \pm 0.2	0.9 \pm 0.2	0.9 \pm 0.2	0.504
Niacin	mg/day	21.5 \pm 8.5	20.3 \pm 8.2	21.1 \pm 8.3	20.9 \pm 11.4	0.908	mg/1000 kcal	8.8 \pm 2.5	8.1 \pm 2.1	8.4 \pm 2.0	8.6 \pm 2.2	0.415
Vitamin C	mg/day	120 \pm 77	119 \pm 62	117 \pm 81	133 \pm 86	0.645	mg/1000 kcal	45 \pm 22	50 \pm 27	47 \pm 21	59 \pm 37	0.062
Soluble dietary fiber	g/day	3.6 \pm 1.8	3.6 \pm 1.3	3.7 \pm 2.1	3.6 \pm 1.4	0.984	g/1000 kcal	1.3 \pm 0.5	1.5 \pm 0.5	1.5 \pm 0.6	1.6 \pm 0.5	0.684
Insoluble dietary fiber	g/day	10.8 \pm 4.4	10.8 \pm 4.0	11.1 \pm 5.3	10.3 \pm 3.7	0.836	g/1000 kcal	4.0 \pm 1.1	4.5 \pm 1.4	4.5 \pm 1.6	4.6 \pm 1.4	0.917
Total dietary fiber	g/day	15.1 \pm 6.3	14.9 \pm 5.3	15.5 \pm 7.9	14.4 \pm 5.1	0.844	g/1000 kcal	5.5 \pm 1.5	6.2 \pm 2.0	6.3 \pm 2.4	6.5 \pm 2.0	0.895

BMI: Body mass Index

*Values are expressed as mean \pm standard deviation.

**Significant difference compared with the lowest BMI category between BMI categories (Dunnnett's t-test) p<0.05

*** Significant difference between BMI categories (analysis of variance).

Appendix Table 6. Mean \pm standard deviation (SD) of energy and nutrient intakes estimated by a self-administered diet history questionnaire (DHD) among male subjects (n=115) by BMI categories*

	Men (n=116)										P value***	
	Crude model					Density model						
	1 (n=29)	2 (n=29)	3 (n=29)	4 (n=29)	P value***	1 (n=29)	2 (n=29)	3 (n=29)	4 (n=29)	P value***		
Energy	kcal /day	2522 \pm 871	2791 \pm 596	2653 \pm 630	2870 \pm 994	0.355						
Protein	g/day	90.4 \pm 27.9	95.6 \pm 24.3	93.6 \pm 28.5	104.7 \pm 37.3	0.305	% energy	14.6 \pm 2.4	13.7 \pm 2.1	14.2 \pm 2.5	14.7 \pm 2.5	0.352
Fat	g/day	69.4 \pm 30.9	77.6 \pm 24.4	72.4 \pm 26.9	84.6 \pm 45.9	0.323	% energy	25.0 \pm 8.6	24.8 \pm 5.5	24.6 \pm 7.0	25.4 \pm 7.0	0.978
Total fatty acid	g/day	61.3 \pm 27.7	67.9 \pm 21.4	63.7 \pm 24.0	74.5 \pm 40.6	0.342	% energy	22.1 \pm 7.8	21.7 \pm 5.0	21.6 \pm 6.2	22.3 \pm 6.3	0.971
Saturated fatty acid	g/day	19.8 \pm 9.3	21.2 \pm 6.7	19.9 \pm 8.0	22.7 \pm 11.1	0.551	% energy	7.1 \pm 1.9	6.8 \pm 1.6	6.8 \pm 2.5	7.0 \pm 2.1	0.951
Monounsaturated fatty acid	g/day	25.1 \pm 12.4	28.1 \pm 9.5	25.9 \pm 10.3	31.2 \pm 18.9	0.311	% energy	9.0 \pm 3.9	9.0 \pm 2.4	8.8 \pm 2.6	9.2 \pm 3.0	0.958
Polysaturated fatty acid	g/day	16.1 \pm 6.4	18.0 \pm 5.8	17.6 \pm 6.4	20.2 \pm 11.4	0.261	% energy	5.9 \pm 2.3	5.8 \pm 1.3	6.0 \pm 1.5	6.0 \pm 1.8	0.957
Cholesterol	mg/day	395 \pm 149	427 \pm 154	444 \pm 191	447 \pm 228	0.689	mg/1000 kcal	161 \pm 60	152 \pm 46	168 \pm 61	151 \pm 54	0.607
Alcohol	g/day	26.7 \pm 34.7	28.3 \pm 33.1	33.4 \pm 41.8	41.6 \pm 63.7	0.585	% energy	7.2 \pm 8.4	7.2 \pm 8.7	8.4 \pm 10.1	8.1 \pm 10.9	0.944
Sodium	mg/day	4856 \pm 1591	5670 \pm 1619	5175 \pm 1659	6252 \pm 2605	0.037	mg/1000 kcal	2010 \pm 677	2038 \pm 423	1842 \pm 422	2187 \pm 537	0.343
Potassium	mg/day	3121 \pm 738	3263 \pm 844	3294 \pm 942	3594 \pm 1114	0.260	mg/1000 kcal	1295 \pm 293	1172 \pm 210	1264 \pm 308	1282 \pm 199	0.263
Calcium	mg/day	894 \pm 277	872 \pm 231	925 \pm 291	925 \pm 245	0.838	mg/1000 kcal	371 \pm 108	315 \pm 73	363 \pm 136	340 \pm 84	0.165
Magnesium	mg/day	333 \pm 76	355 \pm 90	366 \pm 109	381 \pm 115	0.323	mg/1000 kcal	139 \pm 33	128 \pm 21	140 \pm 34	136 \pm 23	0.349
Phosphorus	mg/day	1456 \pm 410	1502 \pm 371	1533 \pm 418	1626 \pm 513	0.491	mg/1000 kcal	594 \pm 114	539 \pm 82	587 \pm 123	576 \pm 90	0.181
Iron	mg/day	8.0 \pm 1.9	8.9 \pm 2.2	9.0 \pm 2.7	9.4 \pm 3.5	0.245	mg/1000 kcal	3.4 \pm 0.9	3.2 \pm 0.5	3.4 \pm 0.8	3.3 \pm 0.8	0.640
Zinc	mg/day	10.5 \pm 3.8	11.2 \pm 2.6	10.9 \pm 2.9	11.6 \pm 3.9	0.634	mg/1000 kcal	4.2 \pm 0.6	4.0 \pm 0.4	4.2 \pm 0.6	4.1 \pm 0.8	0.734
Copper	mg/day	1.3 \pm 0.4	1.5 \pm 0.4	1.4 \pm 0.4	1.5 \pm 0.5	0.349	mg/1000 kcal	0.5 \pm 0.1	0.5 \pm 0.1	0.5 \pm 0.1	0.5 \pm 0.1	0.915
Retinol	μ g/day	549 \pm 863	448 \pm 353	507 \pm 432	423 \pm 416	0.820	μ g/1000 kcal	205 \pm 250	158 \pm 118	211 \pm 228	147 \pm 144	0.489
Carotene	μ g/day	2681 \pm 1537	2815 \pm 1568	3037 \pm 2478	3505 \pm 2253	0.422	μ g/1000 kcal	1162 \pm 725	979 \pm 478	1148 \pm 865	1227 \pm 602	0.554
Vitamin D	μ g/day	10.9 \pm 5.2	11.6 \pm 6.6	11.2 \pm 6.2	14.3 \pm 8.7	0.206	μ g/1000 kcal	4.5 \pm 2.3	4.1 \pm 2.2	4.2 \pm 1.8	4.7 \pm 2.0	0.592
Thiamin	mg/day	1.2 \pm 0.4	1.1 \pm 0.3	1.2 \pm 0.4	1.4 \pm 0.5	0.168	mg/1000 kcal	0.5 \pm 0.1	0.4 \pm 0.1	0.4 \pm 0.1	0.5 \pm 0.1	0.106
Riboflavin	mg/day	2.0 \pm 0.5	2.1 \pm 0.5	2.1 \pm 0.5	2.3 \pm 0.6	0.333	mg/1000 kcal	0.8 \pm 0.2	0.8 \pm 0.2	0.8 \pm 0.2	0.8 \pm 0.2	0.336
Niacin	mg/day	22.0 \pm 7.8	22.4 \pm 7.5	22.3 \pm 8.5	26.4 \pm 12.7	0.237	mg/1000 kcal	9.0 \pm 2.8	8.0 \pm 2.0	8.3 \pm 2.1	9.1 \pm 2.4	0.220
Vitamin C	mg/day	101 \pm 44	112 \pm 52	110 \pm 61	146 \pm 83**	0.037	mg/1000 kcal	43 \pm 20	41 \pm 19	43 \pm 25	52 \pm 27	0.203
Soluble dietary fiber	g/day	3.2 \pm 1.1	3.4 \pm 1.2	3.5 \pm 1.7	3.8 \pm 1.7	0.549	g/1000 kcal	1.4 \pm 0.6	1.2 \pm 0.4	1.3 \pm 0.6	1.3 \pm 0.5	0.722
Insoluble dietary fiber	g/day	9.8 \pm 2.3	10.3 \pm 3.2	10.6 \pm 4.4	11.1 \pm 4.4	0.566	g/1000 kcal	4.2 \pm 1.4	3.7 \pm 0.8	4.0 \pm 1.4	4.0 \pm 1.0	0.511
Total dietary fiber	g/day	13.4 \pm 3.5	14.2 \pm 4.3	14.7 \pm 6.1	15.5 \pm 6.2	0.488	g/1000 kcal	5.7 \pm 2.0	5.1 \pm 1.1	5.5 \pm 1.9	5.5 \pm 1.5	0.488

BMI: Body mass Index

*Values are expressed as mean \pm standard deviation.

**Significant difference compared with the lowest BMI category between BMI categories (Dunnett's t-test) p<0.05

*** Significant difference between BMI categories (analysis of variance).

Appendix Table 7. Mean \pm standard deviation (SD) of energy and nutrient intakes estimated by a self-administered diet history questionnaire (DHD) among female subjects (n=119) by BMI categories**

	Women (n=119)										
	Crude model					Density model					
	Quartiles of BMI					Quartiles of BMI					
	1 (n=29)	2 (n=30)	3 (n=30)	4 (n=30)	P value***	1 (n=29)	2 (n=30)	3 (n=30)	4 (n=30)	P value**	
Energy	kcal /day	2494 \pm 961	2170 \pm 618	2242 \pm 916	1941 \pm 648**	0.072	15.2 \pm 2.7	15.3 \pm 1.6	15.5 \pm 3.0	16.1 \pm 2.3	0.446
Protein	g/day	94.4 \pm 37.0	82.5 \pm 22.0	85.1 \pm 33.0	77.9 \pm 27.1	0.203	% energy	% energy	% energy	% energy	0.734
Fat	g/day	80.5 \pm 37.0	69.4 \pm 29.2	72.5 \pm 46.6	60.1 \pm 31.9	0.207	28.5 \pm 6.9	28.0 \pm 5.0	27.7 \pm 6.1	26.8 \pm 6.0	0.778
Total fatty acid	g/day	69.5 \pm 31.9	60.1 \pm 26.0	62.8 \pm 42.5	52.4 \pm 29.3	0.257	24.7 \pm 6.3	24.3 \pm 4.7	23.7 \pm 5.7	23.3 \pm 5.5	0.518
Saturated fatty acid	g/day	22.3 \pm 10.6	20.0 \pm 9.9	20.5 \pm 11.5	16.0 \pm 6.9**	0.100	7.9 \pm 1.9	8.0 \pm 1.8	8.0 \pm 1.7	7.4 \pm 1.5	0.737
Monounsaturated fatty acid	g/day	28.4 \pm 13.7	24.1 \pm 11.4	25.5 \pm 19.0	21.3 \pm 13.4	0.311	10.1 \pm 3.1	9.7 \pm 2.4	9.5 \pm 2.9	9.3 \pm 2.8	0.817
Polyunsaturated fatty acid	g/day	18.5 \pm 8.4	15.7 \pm 6.1	16.5 \pm 12.1	14.6 \pm 8.7	0.408	6.6 \pm 1.9	6.5 \pm 1.5	6.2 \pm 1.7	6.4 \pm 1.8	0.788
Cholesterol	mg/day	401 \pm 179	335 \pm 147	371 \pm 196	325 \pm 169	0.322	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	0.048
Alcohol	g/day	5.3 \pm 9.7	1.0 \pm 3.0**	1.5 \pm 3.7**	1.6 \pm 3.7**	0.017	% energy	% energy	% energy	% energy	0.300
Sodium	mg/day	5733 \pm 2220	5531 \pm 1745	5585 \pm 3109	4995 \pm 2054	0.639	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	0.511
Potassium	mg/day	3632 \pm 1385	3173 \pm 890	3220 \pm 1601	2927 \pm 816	0.171	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	0.773
Calcium	mg/day	1057 \pm 364	923 \pm 262	955 \pm 376	841 \pm 183**	0.062	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	0.832
Magnesium	mg/day	374 \pm 142	327 \pm 89	331 \pm 146	294 \pm 76**	0.078	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	0.742
Phosphorus	mg/day	1559 \pm 585	1363 \pm 366	1405 \pm 562	1246 \pm 352**	0.091	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	0.714
Iron	mg/day	9.5 \pm 4.3	8.4 \pm 2.5	8.6 \pm 4.2	7.7 \pm 2.4	0.249	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	0.617
Zinc	mg/day	10.5 \pm 4.1	9.2 \pm 2.2	9.5 \pm 3.7	8.4 \pm 2.6**	0.107	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	0.434
Copper	mg/day	1.4 \pm 0.6	1.3 \pm 0.3	1.3 \pm 0.6	1.2 \pm 0.4	0.218	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	mg/1000 kcal	0.451
Retinol	μ g/day	360 \pm 262	349 \pm 282	470 \pm 735	292 \pm 216	0.441	μ g/1000 kcal	139 \pm 66	192 \pm 214	150 \pm 98	0.599
Carotene	μ g/day	4703 \pm 2699	4166 \pm 2476	3697 \pm 3437	3323 \pm 1600	0.215	μ g/1000 kcal	1872 \pm 936	1619 \pm 1249	1810 \pm 897	0.877
Vitamin D	μ g/day	12.4 \pm 7.4	10.4 \pm 5.2	11.2 \pm 8.4	10.3 \pm 5.7	0.631	μ g/1000 kcal	5.0 \pm 2.2	4.7 \pm 1.9	5.3 \pm 2.0	0.554
Thiamin	mg/day	1.2 \pm 0.6	1.1 \pm 0.3	1.0 \pm 0.5	0.9 \pm 0.4	0.194	mg/1000 kcal	0.5 \pm 0.1	0.5 \pm 0.1	0.5 \pm 0.1	0.247
Riboflavin	mg/day	2.1 \pm 0.8	2.0 \pm 0.5	2.0 \pm 0.8	1.8 \pm 0.5	0.284	mg/1000 kcal	0.9 \pm 0.2	0.9 \pm 0.2	1.0 \pm 0.2	0.862
Niacin	mg/day	20.8 \pm 9.1	18.7 \pm 6.8	18.6 \pm 9.5	16.5 \pm 7.5	0.279	mg/1000 kcal	8.5 \pm 2.5	8.1 \pm 2.1	8.4 \pm 2.0	0.368
Vitamin C	mg/day	138 \pm 96	127 \pm 66	123 \pm 105	122 \pm 85	0.906	mg/1000 kcal	53 \pm 22	53 \pm 28	65 \pm 42	0.905
Soluble dietary fiber	g/day	4.2 \pm 2.2	3.6 \pm 1.3	3.8 \pm 2.5	3.3 \pm 1.0	0.326	g/1000 kcal	1.7 \pm 0.5	1.7 \pm 0.8	1.8 \pm 0.4	0.948
Insoluble dietary fiber	g/day	12.4 \pm 6.0	10.9 \pm 3.3	11.3 \pm 6.5	9.7 \pm 2.8	0.203	g/1000 kcal	4.9 \pm 1.4	5.1 \pm 2.0	5.1 \pm 1.1	0.964
Total dietary fiber	g/day	17.4 \pm 8.2	15.2 \pm 4.7	15.9 \pm 9.8	13.5 \pm 4.0	0.204	g/1000 kcal	6.9 \pm 2.0	7.2 \pm 3.0	7.2 \pm 1.7	

BMI : Body mass Index

**Values are expressed as mean \pm standard deviation.

***Significant difference compared with the lowest BMI category between BMI categories (Dunnett's t-test) p<0.05

*** Significant difference between BMI categories (analysis of variance).

Appendix Table 8. Mean \pm standard deviation (SD) of energy and nutrient intakes estimated by a self-administered diet history questionnaire (DHO) by group*

	Crude model			Density model		
	Intervention group (n=119)	Control group (n=116)	P-value**	Intervention group (n=119)	Control group (n=116)	P-value**
Energy	kcal /day	2485 \pm 854	2426 \pm 825.6	0.591		
Protein	g/day	93.5 \pm 30.8	87.2 \pm 30.4	0.117	% energy	15.2 \pm 2.1
Fat	g/day	74.3 \pm 33.8	72.2 \pm 36.7	0.646	% energy	26.5 \pm 6.0
Total fatty acid	g/day	65.0 \pm 29.8	62.8 \pm 33.1	0.594	% energy	23.2 \pm 5.4
Saturated fatty acid	g/day	21.0 \pm 9.1	19.5 \pm 9.8	0.234	% energy	7.6 \pm 1.7
Monounsaturated fatty acid	g/day	26.5 \pm 13.3	25.8 \pm 14.9	0.730	% energy	9.4 \pm 2.6
Polyunsaturated fatty acid	g/day	17.2 \pm 8.0	17.1 \pm 9.1	0.930	% energy	6.1 \pm 1.6
Cholesterol	mg/day	402 \pm 181	383 \pm 182	0.416	mg/1000 kcal	161 \pm 50
Alcohol	g/day	14.8 \pm 32.7	19.7 \pm 37.4	0.279	% energy	3.7 \pm 7.1
Sodium	mg/day	5390 \pm 2127	5558 \pm 2180	0.551	mg/1000 kcal	2199 \pm 542
Potassium	mg/day	3436 \pm 1114	3111 \pm 1038	0.022	mg/1000 kcal	1417 \pm 283
Calcium	mg/day	1042 \pm 238	802 \pm 284	0.000	mg/1000 kcal	441 \pm 100
Magnesium	mg/day	355 \pm 112	334 \pm 108	0.143	mg/1000 kcal	146 \pm 29
Phosphorus	mg/day	1535 \pm 445	1382 \pm 463	0.010	mg/1000 kcal	632 \pm 90
Iron	mg/day	8.7 \pm 3.2	8.7 \pm 3.0	0.937	mg/1000 kcal	3.6 \pm 0.8
Zinc	mg/day	10.5 \pm 3.5	9.8 \pm 3.3	0.110	mg/1000 kcal	4.3 \pm 0.5
Copper	mg/day	1.4 \pm 0.5	1.4 \pm 0.4	0.956	mg/1000 kcal	0.6 \pm 0.1
Retinol	μ g/day	434 \pm 472	414 \pm 519	0.757	μ g/1000 kcal	174 \pm 165
Carotene	μ g/day	3338 \pm 2374	3653 \pm 2420	0.316	μ g/1000 kcal	1387 \pm 888
Vitamin D	μ g/day	11.2 \pm 6.2	11.9 \pm 7.3	0.416	μ g/1000 kcal	4.5 \pm 2.0
Thiamin	mg/day	1.2 \pm 0.5	1.1 \pm 0.4	0.126	mg/1000 kcal	0.5 \pm 0.1
Riboflavin	mg/day	2.2 \pm 0.6	1.9 \pm 0.6	0.000	mg/1000 kcal	0.9 \pm 0.2
Niacin	mg/day	20.8 \pm 8.8	21.1 \pm 9.6	0.821	mg/1000 kcal	8.3 \pm 2.2
Vitamin C	mg/day	119 \pm 83	126 \pm 70	0.510	mg/1000 kcal	48 \pm 24
Soluble dietary fiber	g/day	3.5 \pm 1.8	3.7 \pm 1.5	0.510	g/1000 kcal	1.4 \pm 0.5
Insoluble dietary fiber	g/day	10.6 \pm 4.7	10.9 \pm 4.1	0.625	g/1000 kcal	4.4 \pm 1.3
Total dietary fiber	g/day	14.7 \pm 6.8	15.2 \pm 5.6	0.548	g/1000 kcal	6.1 \pm 1.9

*Values are expressed as mean \pm standard deviation.

** Significant difference between randomized groups (analysis of variance).

Appendix Table 9. Mean \pm standard deviation (SD) of energy and nutrient intakes estimated by a self-administered diet history questionnaire (DHQ) among men subjects by randomized groups in 116 men and 119 women

	Men (n=116)										Women (n=119)									
	Crude model					Density model					Crude model					Density model				
	Intervention group (n=59)	Control group (n=57)	P-value**	Intervention group (n=59)	Control group (n=57)	P-value**	Intervention group (n=60)	Control group (n=59)	P-value**	Intervention group (n=60)	Control group (n=59)	P-value**	Intervention group (n=60)	Control group (n=59)	P-value**	Intervention group (n=60)	Control group (n=59)	P-value**		
Energy	2721 \pm 755	2696 \pm 834	0.866	14.7 \pm 1.9	13.9 \pm 2.7	0.047	2253 \pm 888	2165 \pm 734	0.558	15.7 \pm 2.1	15.4 \pm 2.8	0.418	15.7 \pm 2.1	15.4 \pm 2.8	0.418	15.7 \pm 2.1	15.4 \pm 2.8	0.418		
Protein	99.2 \pm 26.8	92.8 \pm 32.9	0.249	% energy	% energy		kcal /day	kcal /day		% energy	% energy		% energy	% energy		% energy	% energy			
Fat	75.1 \pm 29.2	76.9 \pm 37.1	0.776	24.6 \pm 5.3	25.3 \pm 8.5	0.563	87.9 \pm 33.6	81.9 \pm 27.0	0.283	28.4 \pm 6.2	27.1 \pm 5.7	0.263	28.4 \pm 6.2	27.1 \pm 5.7	0.263	28.4 \pm 6.2	27.1 \pm 5.7	0.263		
Total fatty acid	65.9 \pm 25.8	67.8 \pm 33.0	0.728	21.5 \pm 4.7	22.4 \pm 7.7	0.495	73.4 \pm 38.0	67.6 \pm 36.2	0.391	24.8 \pm 5.7	23.1 \pm 5.3	0.108	24.8 \pm 5.7	23.1 \pm 5.3	0.108	24.8 \pm 5.7	23.1 \pm 5.3	0.108		
Saturated fatty acid	21.3 \pm 8.7	20.5 \pm 9.2	0.595	7.0 \pm 1.7	6.8 \pm 2.4	0.654	64.2 \pm 33.6	58.0 \pm 32.7	0.314	8.1 \pm 1.6	7.5 \pm 1.8	0.033	8.1 \pm 1.6	7.5 \pm 1.8	0.033	8.1 \pm 1.6	7.5 \pm 1.8	0.033		
Monounsaturated fatty acid	26.8 \pm 11.3	28.3 \pm 15.3	0.564	8.7 \pm 2.1	9.3 \pm 3.7	0.354	20.7 \pm 9.6	18.7 \pm 10.4	0.269	10.0 \pm 3.0	9.3 \pm 2.6	0.178	10.0 \pm 3.0	9.3 \pm 2.6	0.178	10.0 \pm 3.0	9.3 \pm 2.6	0.178		
Polyunsaturated fatty acid	17.4 \pm 6.4	18.6 \pm 9.2	0.416	5.7 \pm 1.2	6.1 \pm 2.1	0.219	26.1 \pm 15.2	23.5 \pm 14.2	0.329	6.5 \pm 1.8	6.3 \pm 1.6	0.438	6.5 \pm 1.8	6.3 \pm 1.6	0.438	6.5 \pm 1.8	6.3 \pm 1.6	0.438		
Cholesterol	435 \pm 168	422 \pm 197	0.687	161 \pm 50	155 \pm 60	0.567	370 \pm 188	346 \pm 159	0.454	161 \pm 50	160 \pm 56	0.858	161 \pm 50	160 \pm 56	0.858	161 \pm 50	160 \pm 56	0.858		
Alcohol	27.8 \pm 42.4	37.4 \pm 47.1	0.250	6.8 \pm 9.0	8.7 \pm 9.9	0.286	2.0 \pm 6.1	2.7 \pm 5.6	0.519	0.6 \pm 1.6	0.9 \pm 2.0	0.368	0.6 \pm 1.6	0.9 \pm 2.0	0.368	0.6 \pm 1.6	0.9 \pm 2.0	0.368		
Sodium	5382 \pm 1542	5598 \pm 2331	0.559	2004 \pm 446	2086 \pm 599	0.405	5399 \pm 2590	5520 \pm 2042	0.777	2390 \pm 562	2598 \pm 682	0.073	2390 \pm 562	2598 \pm 682	0.073	2390 \pm 562	2598 \pm 682	0.073		
Potassium	3509 \pm 779	3120 \pm 1023	0.024	1324 \pm 249	1180 \pm 250	0.003	3365 \pm 1369	3102 \pm 1060	0.245	1510 \pm 286	1462 \pm 324	0.395	1510 \pm 286	1462 \pm 324	0.395	1510 \pm 286	1462 \pm 324	0.395		
Calcium	1050 \pm 196	753 \pm 230	< 0.0001	401 \pm 87	291 \pm 91	< 0.001	1034 \pm 274	850 \pm 323	0.001	480 \pm 97	403 \pm 114	0.000	480 \pm 97	403 \pm 114	0.000	480 \pm 97	403 \pm 114	0.000		
Magnesium	372 \pm 89	346 \pm 107	0.155	140 \pm 30	131 \pm 27	0.077	339 \pm 129	323 \pm 108	0.471	153 \pm 27	152 \pm 30	0.918	153 \pm 27	152 \pm 30	0.918	153 \pm 27	152 \pm 30	0.918		
Phosphorus	1618 \pm 375	1438 \pm 466	0.024	607 \pm 94	540 \pm 105	0.001	1454 \pm 495	1328 \pm 457	0.151	657 \pm 80	622 \pm 120	0.066	657 \pm 80	622 \pm 120	0.066	657 \pm 80	622 \pm 120	0.066		
Iron	8.8 \pm 2.2	8.9 \pm 3.0	0.985	3.3 \pm 0.7	3.3 \pm 0.8	0.905	8.6 \pm 3.9	8.5 \pm 3.0	0.913	3.8 \pm 0.8	4.0 \pm 1.0	0.172	3.8 \pm 0.8	4.0 \pm 1.0	0.172	3.8 \pm 0.8	4.0 \pm 1.0	0.172		
Zinc	11.4 \pm 3.1	10.7 \pm 3.5	0.243	4.2 \pm 0.5	4.0 \pm 0.7	0.033	9.7 \pm 3.6	9.0 \pm 2.9	0.260	4.3 \pm 0.5	4.2 \pm 0.6	0.183	4.3 \pm 0.5	4.2 \pm 0.6	0.183	4.3 \pm 0.5	4.2 \pm 0.6	0.183		
Copper	1.4 \pm 0.4	1.4 \pm 0.4	0.951	0.5 \pm 0.1	0.5 \pm 0.1	0.716	1.3 \pm 0.6	1.3 \pm 0.4	0.891	0.6 \pm 0.1	0.6 \pm 0.1	0.044	0.6 \pm 0.1	0.6 \pm 0.1	0.044	0.6 \pm 0.1	0.6 \pm 0.1	0.044		
Retinol	444 \pm 378	521 \pm 684	0.455	172 \pm 176	189 \pm 210	0.644	424 \pm 551	310 \pm 244	0.147	176 \pm 154	142 \pm 108	0.161	176 \pm 154	142 \pm 108	0.161	176 \pm 154	142 \pm 108	0.161		
Carotene	3000 \pm 2097	3019 \pm 1916	0.961	1134 \pm 766	1123 \pm 586	0.932	3671 \pm 2592	4266 \pm 2701	0.223	1636 \pm 835	2013 \pm 1169	0.054	1636 \pm 835	2013 \pm 1169	0.054	1636 \pm 835	2013 \pm 1169	0.054		
Vitamin D	11.5 \pm 5.8	12.5 \pm 7.7	0.443	4.3 \pm 2.0	4.5 \pm 2.1	0.639	10.8 \pm 6.7	11.3 \pm 6.9	0.700	4.7 \pm 2.0	5.3 \pm 3.0	0.239	4.7 \pm 2.0	5.3 \pm 3.0	0.239	4.7 \pm 2.0	5.3 \pm 3.0	0.239		
Thiamin	1.2 \pm 0.4	1.2 \pm 0.5	0.364	0.5 \pm 0.1	0.4 \pm 0.1	0.191	1.1 \pm 0.6	1.0 \pm 0.4	0.213	0.5 \pm 0.1	0.5 \pm 0.1	0.391	0.5 \pm 0.1	0.5 \pm 0.1	0.391	0.5 \pm 0.1	0.5 \pm 0.1	0.391		
Riboflavin	2.3 \pm 0.4	1.9 \pm 0.6	0.001	0.9 \pm 0.2	0.7 \pm 0.2	0.001	2.2 \pm 0.7	1.8 \pm 0.6	0.008	1.0 \pm 0.2	0.9 \pm 0.2	0.001	1.0 \pm 0.2	0.9 \pm 0.2	0.001	1.0 \pm 0.2	0.9 \pm 0.2	0.001		
Niacin	22.7 \pm 8.0	23.8 \pm 10.8	0.535	8.4 \pm 2.2	8.8 \pm 2.5	0.373	18.9 \pm 9.3	18.4 \pm 7.4	0.749	8.3 \pm 2.2	8.5 \pm 2.1	0.538	8.3 \pm 2.2	8.5 \pm 2.1	0.538	8.3 \pm 2.2	8.5 \pm 2.1	0.538		
Vitamin C	115 \pm 59	119 \pm 68	0.744	44 \pm 24	45 \pm 22	0.821	123 \pm 101	132 \pm 73	0.569	51 \pm 24	64 \pm 35	0.078	51 \pm 24	64 \pm 35	0.078	51 \pm 24	64 \pm 35	0.078		
Soluble dietary fiber	3.4 \pm 1.5	3.5 \pm 1.5	0.765	1.3 \pm 0.5	1.3 \pm 0.5	0.633	3.6 \pm 2.2	3.8 \pm 1.5	0.553	1.6 \pm 0.5	1.8 \pm 0.6	0.022	1.6 \pm 0.5	1.8 \pm 0.6	0.022	1.6 \pm 0.5	1.8 \pm 0.6	0.022		
Insoluble dietary fiber	10.5 \pm 3.6	10.4 \pm 3.8	0.944	4.0 \pm 1.2	4.0 \pm 1.1	0.941	10.7 \pm 5.5	11.3 \pm 4.3	0.514	4.8 \pm 1.3	5.4 \pm 1.7	0.029	4.8 \pm 1.3	5.4 \pm 1.7	0.029	4.8 \pm 1.3	5.4 \pm 1.7	0.029		
Total dietary fiber	14.4 \pm 5.1	14.5 \pm 5.2	0.925	5.4 \pm 1.8	5.5 \pm 1.5	0.794	15.1 \pm 8.2	15.9 \pm 5.9	0.508	6.7 \pm 1.9	7.6 \pm 2.4	0.021	6.7 \pm 1.9	7.6 \pm 2.4	0.021	6.7 \pm 1.9	7.6 \pm 2.4	0.021		

*Values are expressed as mean \pm standard deviation.

** Significant difference between randomized groups (analysis of variance).

Appendix Table 10. Mean \pm standard deviation (SD) of food group intakes estimated by a self-administered diet history questionnaire (DHQ) among 235 subjects*

	Crude model (g/day)	Density model (g/1000kcal)
Cereals	508.1 \pm 196.7	213.2 \pm 62.2
Nuts	3.6 \pm 7.5	1.3 \pm 2.5
Potatoes	33.6 \pm 37.8	13.3 \pm 11.4
Sugars	13.2 \pm 8.1	5.5 \pm 3.0
Confectionaries	78.5 \pm 68.5	31.8 \pm 22.3
Animal fat	0.5 \pm 1.0	0.2 \pm 0.5
Vegetable oil	29.2 \pm 23.0	11.5 \pm 7.3
Pulses	61.4 \pm 37.7	26.2 \pm 16.2
Fruits	122.5 \pm 159.8	50.9 \pm 68.0
Green and yellow vegetables	121.8 \pm 85.7	51.5 \pm 34.5
Other vegetables	177.5 \pm 122.1	75.1 \pm 41.6
Mushrooms	14.9 \pm 13.7	6.3 \pm 5.8
Seaweeds	16.1 \pm 15.8	7.0 \pm 6.5
Seasonings	21.9 \pm 16.7	9.1 \pm 6.6
Alcoholic beverages	185.2 \pm 333.0	67.3 \pm 108.7
Nonalcoholic beverages	949.5 \pm 572.5	410.2 \pm 256.6
Fish and shellfish	106.6 \pm 66.5	42.9 \pm 21.1
Meats	68.1 \pm 56.8	26.0 \pm 15.7
Eggs	37.7 \pm 26.8	15.6 \pm 10.9
Dairy products	408.4 \pm 175.6	178.3 \pm 83.1
Water	451.4 \pm 448.9	203.3 \pm 230.3

*Values are expressed as mean \pm standard deviation.

Appendix Table 11. Mean \pm standard deviation (SD) of food group intakes estimated by a self-administered diet history questionnaire (DHD) according to BMI categories (n=235)*

	Crude model (g/day)				Density model (g/1000kcal)					
	Quartiles of BMI									
	1 (n=58)	2 (n=59)	3 (n=59)	4 (n=59)	P-value***	1 (n=58)	2 (n=59)	3 (n=59)	4 (n=59)	P-value***
Cereals	529.2 \pm 258.1	526.6 \pm 195.7	515.1 \pm 160.0	461.8 \pm 153.7	0.210	212.6 \pm 64.2	214.9 \pm 57.6	217.4 \pm 68.7	208.0 \pm 58.8	0.8687
Nuts	3.3 \pm 6.0	3.3 \pm 5.2	4.9 \pm 11.4	2.8 \pm 5.6	0.452	1.1 \pm 1.3	1.3 \pm 1.8	1.8 \pm 4.1	0.9 \pm 1.6	0.256
Potatoes	31.3 \pm 28.1	34.3 \pm 23.1	36.1 \pm 59.4	32.5 \pm 30.2	0.912	12.2 \pm 9.8	14.2 \pm 9.5	13.1 \pm 14.4	13.8 \pm 11.3	0.800
Sugars	13.2 \pm 7.0	13.9 \pm 9.3	13.4 \pm 9.4	12.3 \pm 6.3	0.736	5.5 \pm 3.0	5.7 \pm 3.5	5.3 \pm 2.9	5.4 \pm 2.7	0.945
Confectionaries	80.0 \pm 68.6	77.1 \pm 47.5	96.5 \pm 100.7	60.6 \pm 35.6	0.042	30.6 \pm 19.6	32.4 \pm 19.9	35.9 \pm 27.7	28.2 \pm 20.8	0.2961
Animal fat	0.6 \pm 1.0	0.5 \pm 1.0	0.6 \pm 1.3	0.4 \pm 0.6	0.490	0.2 \pm 0.4	0.2 \pm 0.4	0.3 \pm 0.7	0.2 \pm 0.2	0.492
Vegetable oil	28.2 \pm 18.3	29.3 \pm 21.3	29.1 \pm 22.7	30.1 \pm 29.0	0.975	11.7 \pm 8.6	11.7 \pm 7.2	11.0 \pm 5.9	11.6 \pm 7.5	0.955
Pulses	58.7 \pm 36.5	64.0 \pm 32.3	59.8 \pm 46.1	63.1 \pm 35.4	0.848	24.0 \pm 12.5	27.1 \pm 14.7	24.8 \pm 18.5	28.9 \pm 18.1	0.341
Fruits	135.6 \pm 154.2	104.3 \pm 137.1	107.2 \pm 113.5	143.2 \pm 216.2	0.446	54.6 \pm 51.1	44.1 \pm 60.9	40.9 \pm 32.0	63.8 \pm 105.0	0.245
Green and yellow vegetables	124.3 \pm 87.6	128.0 \pm 97.0	113.4 \pm 81.5	121.4 \pm 77.2	0.821	52.1 \pm 35.8	53.1 \pm 40.9	45.7 \pm 28.4	55.1 \pm 31.6	0.490
Other vegetables	168.0 \pm 90.6	185.9 \pm 107.6	185.7 \pm 183.2	170.4 \pm 81.3	0.779	70.3 \pm 34.6	77.1 \pm 37.8	74.2 \pm 50.1	78.7 \pm 42.5	0.711
Mushrooms	13.6 \pm 12.5	12.9 \pm 12.0	16.9 \pm 15.4	16.4 \pm 14.5	0.290	5.6 \pm 5.2	5.8 \pm 5.8	6.6 \pm 6.0	7.1 \pm 5.9	0.458
Seaweeds	16.6 \pm 13.9	14.5 \pm 12.3	19.6 \pm 23.4	13.6 \pm 10.0	0.169	7.0 \pm 6.2	6.4 \pm 6.0	8.0 \pm 7.8	6.5 \pm 5.7	0.486
Seasonings	19.0 \pm 11.2	22.4 \pm 17.9	20.4 \pm 14.9	25.8 \pm 20.9	0.139	7.6 \pm 3.9	9.3 \pm 7.2	8.1 \pm 4.6	11.3 \pm 8.8**	0.010
Alcoholic beverages	176.3 \pm 258.9	207.4 \pm 341.3	179.8 \pm 337.1	177.4 \pm 388.4	0.951	73.9 \pm 114.3	72.7 \pm 109.8	65.2 \pm 116.6	57.4 \pm 94.7	0.834
Nonalcoholic beverages	853.4 \pm 442.4	1017.9 \pm 550.2	1030.2 \pm 776.8	894.7 \pm 447.4	0.243	371.0 \pm 248.3	432.4 \pm 245.1	421.5 \pm 283.7	415.3 \pm 249.5	0.589
Fish and shellfish	106.7 \pm 63.8	99.0 \pm 57.4	102.7 \pm 62.4	117.7 \pm 80.3	0.457	42.8 \pm 21.3	39.6 \pm 18.9	41.7 \pm 22.3	47.7 \pm 21.3	0.194
Meats	70.4 \pm 58.8	69.6 \pm 51.4	60.4 \pm 40.1	71.9 \pm 72.8	0.690	26.9 \pm 16.3	26.7 \pm 14.7	23.4 \pm 11.8	27.1 \pm 19.2	0.537
Eggs	38.1 \pm 23.0	36.2 \pm 26.9	40.9 \pm 30.5	35.8 \pm 26.6	0.728	16.2 \pm 10.2	14.4 \pm 10.5	16.3 \pm 11.1	15.6 \pm 11.7	0.768
Dairy products	441.6 \pm 218.0	406.3 \pm 165.4	401.6 \pm 168.0	384.6 \pm 142.7	0.356	184.9 \pm 85.9	173.4 \pm 83.3	170.5 \pm 75.4	184.4 \pm 88.5	0.707
Water	406.7 \pm 415.8	434.0 \pm 406.1	437.1 \pm 456.7	527.1 \pm 511.0	0.496	174.0 \pm 193.3	180.3 \pm 160.6	203.1 \pm 256.0	255.4 \pm 285.8	0.208

BMI: Body mass Index

*Values are expressed as mean \pm standard deviation.

**Significant difference compared with the lowest BMI category between BMI categories (Dunnett's t-test) p<0.05

*** Significant difference between BMI categories (analysis of variance).

Appendix Table 12. Mean \pm standard deviation (SD) of food group intakes estimated by a self-administered diet history questionnaire (DHQ) according to BMI categories in women (n=119)*

	Crude model (g/day)				Density model (g/1000kcal)					
	Quartiles of BMI				Quartiles of BMI					
	1 (n=29)	2 (n=30)	3 (n=30)	4 (n=30)	P-value***	1 (n=29)	2 (n=30)	3 (n=30)	4 (n=30)	P-value***
Cereals	442.9 \pm 182.6	424.2 \pm 61.3	426.2 \pm 118.8	398.1 \pm 103.1	0.577	183.0 \pm 56.9	208.3 \pm 56.1	207.5 \pm 76.5	211.7 \pm 43.1	0.2314
Nuts	3.8 \pm 6.5	3.7 \pm 6.1	6.7 \pm 15.4	1.0 \pm 1.4	0.112	1.2 \pm 1.7	1.5 \pm 2.2	2.5 \pm 5.6	0.5 \pm 0.7	0.095
Potatoes	38.5 \pm 32.7	32.5 \pm 17.9	43.7 \pm 80.1	31.7 \pm 33.6	0.736	14.6 \pm 10.9	15.4 \pm 9.1	16.3 \pm 18.9	15.2 \pm 13.4	0.971
Sugars	14.9 \pm 7.5	11.7 \pm 5.4	13.9 \pm 9.9	10.5 \pm 4.6	0.079	6.1 \pm 3.2	5.4 \pm 1.7	6.1 \pm 3.0	5.6 \pm 2.8	0.658
Confectionaries	113.3 \pm 77.1	112.1 \pm 106.7	96.7 \pm 87.2	63.9 \pm 37.7	0.073	42.7 \pm 18.2	46.9 \pm 29.9	39.6 \pm 23.5	34.0 \pm 23.8	0.2178
Animal fat	0.5 \pm 0.8	0.5 \pm 1.1	0.8 \pm 1.7	0.3 \pm 0.4	0.265	0.2 \pm 0.2	0.2 \pm 0.5	0.4 \pm 0.9	0.1 \pm 0.2	0.291
Vegetable oil	33.6 \pm 23.6	27.7 \pm 18.7	29.0 \pm 30.2	26.6 \pm 29.9	0.750	13.6 \pm 9.3	12.6 \pm 6.6	11.2 \pm 7.0	12.1 \pm 8.8	0.702
Pulses	64.7 \pm 42.8	60.8 \pm 31.1	58.7 \pm 44.1	59.0 \pm 33.1	0.926	25.8 \pm 12.8	29.3 \pm 16.1	27.8 \pm 21.4	31.9 \pm 19.9	0.607
Fruits	173.4 \pm 168.0	117.4 \pm 134.6	111.5 \pm 99.8	158.9 \pm 278.9	0.484	66.0 \pm 43.1	49.8 \pm 39.3	47.2 \pm 35.6	82.9 \pm 140.2	0.266
Green and yellow vegetables	166.2 \pm 100.7	134.0 \pm 87.0	119.4 \pm 94.0	103.5 \pm 43.3**	0.035	67.5 \pm 37.2	62.4 \pm 39.5	54.2 \pm 35.2	59.2 \pm 32.3	0.553
Other vegetables	191.9 \pm 108.7	177.6 \pm 68.4	211.7 \pm 241.6	175.5 \pm 78.4	0.745	76.1 \pm 29.9	84.9 \pm 34.6	91.5 \pm 62.6	94.1 \pm 43.3	0.414
Mushrooms	18.4 \pm 15.5	19.1 \pm 12.5	16.6 \pm 17.5	16.6 \pm 13.1	0.884	7.2 \pm 6.1	9.2 \pm 6.3	7.2 \pm 7.3	8.4 \pm 6.3	0.594
Seaweeds	21.8 \pm 15.7	18.7 \pm 13.4	24.4 \pm 29.3	13.5 \pm 11.1	0.140	9.2 \pm 7.1	9.3 \pm 6.9	10.6 \pm 9.0	7.6 \pm 6.9	0.493
Seasonings	19.0 \pm 11.5	23.3 \pm 23.0	26.0 \pm 23.2	25.1 \pm 23.1	0.589	7.4 \pm 3.0	10.7 \pm 9.2	11.6 \pm 9.7	12.3 \pm 8.3	0.099
Alcoholic beverages	106.1 \pm 184.8	25.6 \pm 76.7**	40.1 \pm 99.3	35.4 \pm 79.9	0.041	49.3 \pm 106.3	12.0 \pm 33.8	17.2 \pm 37.4	20.3 \pm 42.6	0.0997
Nonalcoholic beverages	774.8 \pm 426.8	1074.9 \pm 486.7	1072.4 \pm 953.8	741.4 \pm 285.1	0.043	334.8 \pm 217.3	505.1 \pm 213.5**	469.3 \pm 307.7	423.9 \pm 259.8	0.064
Fish and shellfish	113.5 \pm 78.1	93.8 \pm 46.0	94.5 \pm 67.5	94.7 \pm 57.9	0.570	44.6 \pm 24.6	43.0 \pm 17.7	42.3 \pm 24.8	47.1 \pm 19.5	0.832
Meats	60.5 \pm 43.7	53.6 \pm 32.1	49.8 \pm 49.8	49.2 \pm 45.4	0.738	23.7 \pm 13.2	23.9 \pm 11.7	20.4 \pm 14.5	23.2 \pm 16.3	0.757
Eggs	33.9 \pm 21.4	27.3 \pm 21.3	35.6 \pm 21.9	33.6 \pm 24.0	0.495	14.3 \pm 8.9	12.7 \pm 10.0	16.2 \pm 9.2	17.3 \pm 12.9	0.333
Dairy products	470.0 \pm 220.3	386.2 \pm 143.4	421.3 \pm 173.7	377.6 \pm 126.8	0.150	197.9 \pm 89.6	185.1 \pm 72.6	197.2 \pm 74.4	210.5 \pm 90.3	0.698
Water	368.1 \pm 293.9	279.2 \pm 246.4	607.9 \pm 501.6	501.7 \pm 496.3	0.011	156.3 \pm 142.7	142.1 \pm 137.3	305.0 \pm 285.6	296.1 \pm 336.9	0.011

BMI: Body mass Index

*Values are expressed as mean \pm standard deviation.

**Significant difference compared with the lowest BMI category between BMI categories (Dunnett's t-test) p<0.05

***Significant difference between BMI categories (analysis of variance).

Appendix Table 13. Mean \pm standard deviation (SD) of food group intakes estimated by a self-administered diet history questionnaire (DHQ) by group*

	Crude model (g/day)			Density model (g/1000kcal)		
	Intervention group (n=119)	Control group (n=116)	P-value**	Intervention group (n=119)	Control group (n=116)	P-value**
	Mean \pm SD	Mean \pm SD		Mean \pm SD	Mean \pm SD	
Cereals	515.3 \pm 214.1	500.7 \pm 177.6	0.569	212.2 \pm 58.6	214.3 \pm 65.9	0.794
Nuts	3.1 \pm 5.7	4.0 \pm 9.0	0.346	1.0 \pm 1.4	1.5 \pm 3.2	0.159
Potatoes	33.7 \pm 46.8	33.5 \pm 25.6	0.967	12.6 \pm 12.3	14.1 \pm 10.4	0.306
Sugars	13.1 \pm 8.5	13.3 \pm 7.6	0.849	5.3 \pm 3.0	5.7 \pm 3.0	0.381
Confectionaries	80.5 \pm 67.6	76.5 \pm 69.7	0.658	32.2 \pm 22.8	31.4 \pm 21.8	0.783
Animal fat	0.5 \pm 1.0	0.5 \pm 1.1	0.840	0.2 \pm 0.4	0.2 \pm 0.5	0.872
Vegetable oil	29.6 \pm 22.1	28.8 \pm 24.0	0.780	11.7 \pm 7.2	11.2 \pm 7.4	0.609
Pulses	58.3 \pm 39.6	64.6 \pm 35.6	0.205	24.1 \pm 14.8	28.3 \pm 17.3	0.045
Fruits	123.1 \pm 157.4	122.0 \pm 162.8	0.960	48.8 \pm 57.7	53.0 \pm 77.4	0.635
Green and yellow vegetables	119.2 \pm 92.0	124.5 \pm 79.1	0.636	49.7 \pm 35.9	53.4 \pm 33.0	0.409
Other vegetables	175.5 \pm 144.3	179.7 \pm 94.7	0.792	72.2 \pm 43.2	78.1 \pm 39.8	0.277
Mushrooms	14.9 \pm 13.5	14.9 \pm 13.9	1.000	6.2 \pm 5.5	6.4 \pm 6.0	0.771
Seaweeds	14.9 \pm 18.4	17.3 \pm 12.6	0.253	6.1 \pm 6.2	7.8 \pm 6.7	0.046
Seasonings	21.6 \pm 18.2	22.2 \pm 15.0	0.794	8.6 \pm 6.2	9.6 \pm 6.9	0.268
Alcoholic beverages	150.3 \pm 257.5	221.1 \pm 393.8	0.106	55.8 \pm 89.6	79.1 \pm 124.5	0.102
Nonalcoholic beverages	914.8 \pm 508.2	985.0 \pm 631.9	0.350	384.2 \pm 218.2	436.9 \pm 289.3	0.117
Fish and shellfish	103.6 \pm 62.2	109.6 \pm 70.8	0.495	41.6 \pm 19.6	44.3 \pm 22.5	0.328
Meats	69.2 \pm 58.0	66.9 \pm 55.8	0.760	25.8 \pm 14.6	26.3 \pm 16.8	0.801
Eggs	39.6 \pm 28.5	35.8 \pm 25.0	0.283	16.2 \pm 11.1	15.1 \pm 10.6	0.428
Dairy products	509.2 \pm 117.6	304.9 \pm 165.0	0.000	220.5 \pm 69.2	134.9 \pm 73.5	0.000
Water	441.6 \pm 441.4	461.4 \pm 458.2	0.736	189.1 \pm 197.2	218.0 \pm 259.9	0.339

*Values are expressed as mean \pm standard deviation.

** Significant difference between randomized groups (analysis of variance).

Appendix Table 14. Mean \pm standard deviation (SD) of food group intakes estimated by a self-administered diet history questionnaire (DHD) by group**

	Men (n=116)										Women (n=119)									
	Crude model (g/day)					Density model (g/1000kcal)					Crude model (g/day)					Density model (g/1000kcal)				
	Intervention group (n=59)		Control group (n=57)		P value	Intervention group (n=59)		Control group (n=57)		P-value**	Intervention group (n=60)		Control group (n=59)		P value	Intervention group (n=60)		Control group (n=59)		P-value**
	Mean \pm SD	Mean \pm SD		Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD		Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD		Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD		
Cereals	616.0 \pm 237.0	574.8 \pm 197.9	0.313	227.5 \pm 55.7	220.3 \pm 70.2	0.541	416.4 \pm 127.9	429.1 \pm 118.9	0.576	197.1 \pm 57.9	208.5 \pm 61.4	0.300								
Nuts	3.1 \pm 5.4	3.7 \pm 5.6	0.564	1.0 \pm 1.2	1.3 \pm 1.6	0.307	3.2 \pm 6.0	4.4 \pm 11.4	0.480	1.1 \pm 1.6	1.8 \pm 4.2	0.279								
Potatoes	28.9 \pm 23.9	32.1 \pm 25.7	0.484	10.6 \pm 8.5	11.8 \pm 8.3	0.444	38.4 \pm 61.5	34.8 \pm 25.5	0.676	14.5 \pm 15.0	16.3 \pm 11.7	0.465								
Sugars	13.2 \pm 8.5	14.2 \pm 9.2	0.537	4.9 \pm 3.0	5.5 \pm 3.5	0.339	13.0 \pm 8.6	12.4 \pm 5.6	0.661	5.8 \pm 2.9	5.9 \pm 2.5	0.829								
Confectionaries	56.3 \pm 44.4	64.3 \pm 42.4	0.322	20.5 \pm 15.0	24.7 \pm 15.1	0.134	104.3 \pm 77.8	88.3 \pm 87.2	0.294	43.7 \pm 23.4	37.9 \pm 25.2	0.192								
Animal fat	0.5 \pm 1.0	0.5 \pm 0.9	0.899	0.2 \pm 0.4	0.2 \pm 0.3	0.601	0.5 \pm 0.9	0.6 \pm 1.3	0.710	0.2 \pm 0.4	0.3 \pm 0.7	0.600								
Vegetable oil	27.0 \pm 13.7	31.5 \pm 24.6	0.236	9.8 \pm 4.3	11.3 \pm 8.1	0.225	32.2 \pm 27.9	26.2 \pm 23.4	0.207	13.6 \pm 8.9	11.2 \pm 6.7	0.094								
Pulses	60.2 \pm 43.1	64.0 \pm 31.8	0.592	22.7 \pm 15.2	24.5 \pm 12.4	0.472	56.5 \pm 36.2	65.1 \pm 39.1	0.212	25.5 \pm 14.4	32.0 \pm 20.4	0.048								
Fruits	118.6 \pm 164.4	90.1 \pm 80.7	0.238	45.9 \pm 69.7	33.9 \pm 27.3	0.225	127.5 \pm 151.5	152.8 \pm 210.5	0.453	51.6 \pm 43.2	71.4 \pm 102.3	0.174								
Green and yellow vegetable	111.0 \pm 88.4	114.8 \pm 81.4	0.809	42.1 \pm 34.3	41.9 \pm 25.3	0.967	127.2 \pm 95.5	133.8 \pm 76.2	0.678	57.1 \pm 36.1	64.5 \pm 35.9	0.263								
Other vegetables	162.5 \pm 96.6	168.9 \pm 99.1	0.725	62.3 \pm 37.3	64.0 \pm 32.0	0.788	188.2 \pm 179.2	190.1 \pm 89.8	0.943	81.9 \pm 46.6	91.7 \pm 42.0	0.232								
Mushrooms	12.4 \pm 12.3	11.8 \pm 11.9	0.783	4.7 \pm 4.4	4.3 \pm 4.0	0.627	17.4 \pm 14.3	17.9 \pm 15.1	0.837	7.6 \pm 6.1	8.4 \pm 6.9	0.516								
Seaweeds	11.8 \pm 11.9	13.2 \pm 9.4	0.473	4.5 \pm 4.7	5.0 \pm 3.6	0.534	18.0 \pm 22.8	21.2 \pm 14.1	0.361	7.8 \pm 7.1	10.6 \pm 7.7	0.040								
Seasonings	20.1 \pm 9.8	20.7 \pm 12.0	0.771	7.5 \pm 3.7	7.6 \pm 4.0	0.886	23.1 \pm 23.8	23.7 \pm 17.4	0.891	9.6 \pm 7.8	11.4 \pm 8.5	0.244								
Alcoholic beverages	262.7 \pm 313.7	384.6 \pm 496.0	0.119	92.8 \pm 101.4	130.3 \pm 147.4	0.115	39.8 \pm 103.8	63.1 \pm 135.5	0.295	19.5 \pm 57.0	29.6 \pm 68.6	0.381								
Nonalcoholic beverages	972.6 \pm 537.0	993.2 \pm 534.6	0.836	369.0 \pm 214.8	402.9 \pm 290.7	0.477	858.0 \pm 475.9	977.1 \pm 718.1	0.290	399.1 \pm 222.3	469.7 \pm 286.5	0.136								
Fish and shellfish	107.0 \pm 57.6	121.8 \pm 79.4	0.254	39.8 \pm 18.3	43.5 \pm 22.4	0.333	100.3 \pm 66.8	97.7 \pm 59.6	0.825	43.4 \pm 20.8	45.1 \pm 22.7	0.671								
Meats	82.3 \pm 61.7	84.4 \pm 68.8	0.868	28.7 \pm 13.7	30.0 \pm 19.6	0.665	56.3 \pm 51.5	50.1 \pm 32.0	0.432	22.9 \pm 15.1	22.7 \pm 12.8	0.924								
Eggs	46.0 \pm 31.6	40.0 \pm 28.3	0.285	17.2 \pm 11.9	15.0 \pm 10.7	0.292	33.3 \pm 23.6	31.8 \pm 20.7	0.714	15.1 \pm 10.2	15.1 \pm 10.7	0.981								
Dairy products	524.1 \pm 121.9	278.3 \pm 142.8	<.0001	203.1 \pm 61.2	112.0 \pm 71.2	<.0001	494.6 \pm 112.4	330.7 \pm 181.4	<.0001	237.6 \pm 72.7	157.1 \pm 69.4	<.0001								
Water	458.1 \pm 491.8	468.6 \pm 484.6	0.907	168.0 \pm 167.7	193.8 \pm 238.3	0.503	425.4 \pm 401.1	454.5 \pm 435.3	0.705	209.8 \pm 222.0	241.3 \pm 279.3	0.497								

*Values are expressed as mean \pm standard deviation.

** Significant difference between randomized groups (analysis of variance).