Supplementary Table S1. Food frequency questionnaire with the score given by serving for each type of food according to the Spanish Society of Community Nutrition (SENC).

Food	No servings	Servings per month	Servings per week			Servings per day			
	0	1-3	1	2-4	5-6	1	2-3	4-6	>6
Water									
Water	0	1	2	3	4	5	6	7	8
Dairy									
Milk	0	3	4	5	6	7	8	2	1
Yogurt	0	3	4	5	6	7	8	2	1
Fresh cheese	0	5	6	7	8	4	3	2	1
Fruits and vegetables									
Raw vegetables	0	4	5	6	7	8	3	2	1
Cooked vegetables	0	4	5	6	7	8	3	2	1
Fresh fruit	0	3	4	5	6	7	8	2	1
Whole grains and potatoes									
Whole wheat bread	0	3	4	5	6	7	8	2	1
Unsweetened cereals	0	4	5	6	7	8	6	2	1
Whole wheat pasta	0	5	6	7	8	4	3	2	1
Whole wheat rice	0	5	6	7	8	4	3	2	1
Patatoes	0	5	6	7	8	4	3	2	1
Oil									
Olive oil	0	3	4	5	6	7	8	2	1
Meat									
Cooked beef	0	7	8	6	5	4	3	2	1
Cooked pork	0	7	8	6	5	4	3	2	1
Cooked chicken/turkey	0	6	7	8	5	4	3	2	1
Eggs									
Egg	0	6	7	8	5	4	3	2	1
Fish									
White fish	0	6	7	8	5	4	3	2	1
Blue fish	0	6	7	8	5	4	3	2	1
Legumes									
Lentils	0	7	8	6	5	4	3	2	1
Chickpeas	0	7	8	6	5	4	3	2	1
Beans	0	7	8	6	5	4	3	2	1
Sweet									
Sugar	8	7	6	5	4	3	2	1	0
Jam	8	7	6	5	4	3	2	1	0
Cocoa	8	7	6	5	4	3	2	1	0
Nutella	8	7	6	5	4	3	2	1	0
Sweet snacks									
Cake, biscuits	8	7	6	5	4	3	2	1	0
Chocolates	8	7	6	5	4	3	2	1	0
Cookies, pastries	8	7	6	5	4	3	2	1	0
Candy	8	7	6	5	4	3	2	1	0
Salty snacks									
Nuts	8	7	6	5	4	3	2	1	0
Chips	8	7	6	5	4	3	2	1	0
Soft drinks									
Soda	8	7	6	5	4	3	2	1	0
Sport drink	8	7	6	5	4	3	2	1	0
Packaged juice	8	7	6	5	4	3	2	1	0
Precooked									
Croquette, small pie...	8	7	6	5	4	3	2	1	0
Pizza	8	7	6	5	4	3	2	1	0
Hamburguer	8	7	6	5	4	3	2	1	0
Fat and oil									
Butter	8	7	6	5	4	3	2	1	0
Margarine	8	7	6	5	4	3	2	1	0
Sunflower oil	8	7	6	5	4	3	2	1	0
Lunchmeat									
Lunchmeat	8	7	6	5	4	3	2	1	0

Supplementary Table S2. Characteristics, adherence to dietary and physical activity recommendations, body mass, and cardiometabolic risk markers by BMI category.

				NW – OW		NW – OB		OW – OB	
	Normal weight (NW)	**Overweight (OW)**	**Obesity (OB)**	**ES**	**95% CI**	**ES**	**95% CI**	**ES**	**95% CI**
N	143 (26.0%)	131 (23.9%)	275 (20.1%)						
Age (years)	10.5 (8.7–12.6)	11.0 (9.6–12.6)	10.5 (8.2–12.2)	-0.11	-0.24 – 0.03	0.04	-0.08 – 0.15	0.15	0.03 – 0.27
Gender									
Female	67 (46.9%)	77 (58.8%)	152 (55.3%)	-12.0%	-24.0% – 0.6%	-8.4%	-19.0% – 2.2%	3.5%	-7.3% – 14.0%
Male	76 (53.1%)	54 (41.2%)	123 (44.7%)	12.0%	-0.6% – 24.0%	8.4%	-2.2% – 19.0%	-3.5%	-14.0% – 7.3%
Physical activity									
MVPA adherence	47 (32.9%)	37 (28.5%)	55 (20.0%)	4.4%	-7.3% – 16.0%	13.0%	3.3% – 22.0%	8.5%	-1.2% – 18.0%
Full PA adherence	13 (9.1%)	9 (6.9%)	16 (5.8%)	2.2%	-5.0% – 9.3%	3.3%	-2.7% – 9.3%	1.1%	-4.6% – 6.8%
Moderate PA (min/week)	240 (120–360)	210 (60–360)	120 (0–300)	0.08	-0.06 – 0.21	0.23	0.12 – 0.34	0.13	0.01 – 0.25
Vigorous PA (min/week)	0 (0–60)	0 (0–30)	0 (0–0)	0.02	-0.11 – 0.16	0.08	-0.03 – 0.20	0.06	-0.06 – 0.18
Dietary adherence									
Promoted foods (0-8 scale)	3.84 (3.21–4.34)	3.95 (3.28–4.42)	3.89 (3.26–4.42)	-0.07	-0.20 – 0.07	-0.05	-0.17 – 0.06	0.01	-0.11 – 0.13
Avoided foods (0-8 scale)	6.58 (6.26–6.84)	6.84 (6.39–7.13)	6.74 (6.32–7.11)	-0.24	-0.37 – -0.11	-0.17	-0.28 – -0.05	0.07	-0.05 – 0.19
Body composition									
Total fat mass (%)	25.2 (20.0–32.0)	39.4 (35.9–42.9)	44.4 (40.5–48.5)	-0.83	-0.87 – -0.77	-0.94	-0.96 – -0.92	-0.45	-0.56 – -0.33
Abdominal fat (%)	8.1 (6.5–15.4)	9.2 (7.9–17.3)	9.0 (8.2–9.8)	-0.21	-0.39 – -0.01	-0.14	-0.31 – 0.05	0.02	-0.13 – 0.18
Total lean mass (%)	74.4 (67.3–80.0)	59.3 (55.2–63.3)	54.0 (49.5–58.4)	0.83	0.77 – 0.87	0.94	0.92 – 0.96	0.42	0.30 – 0.53
FFMI (kg/m^2)	12.4 (11.6–13.8)	13.0 (12.1–14.4)	13.9 (12.9–15.5)	-0.16	-0.31 – -0.01	-0.44	-0.55 – -0.32	-0.31	-0.43 – -0.17
FMI (kg/m^2)	0.4 (0.3–0.6)	0.9 (0.8–1.0)	1.2 (1.0–1.5)	-0.86	-0.90 – -0.81	-0.95	-0.96 – -0.94	-0.59	-0.68 – -0.49
Cardiometabolic risk markers									
Triacylglycerols (mg/dl)	52 (41–65)	63 (47–86)	69 (51–95)	-0.28	-0.40 – -0.15	-0.39	-0.49 – -0.29	-0.11	-0.23 – 0.01
Cholesterol (mg/dl)	164 (147–184)	161 (143–182)	162 (140–178)	0.08	-0.06 – 0.21	0.09	-0.03 – 0.20	0.00	-0.12 – 0.12
HDL-c (mg/dl)	60 (51–69)	49 (41–57)	45 (39–53)	0.46	0.35 – 0.57	0.59	0.51 – 0.66	0.16	0.04 – 0.27
LDL-c (mg/dl)	91 (78–106)	95 (79–108)	96 (79–111)	-0.06	-0.20 – 0.08	-0.10	-0.22 – 0.02	-0.04	-0.16 – 0.08
Insulin (mU I/L)	6.8 (4.0–10.8)	10.4 (5.7–14.3)	13.1 (8.7–19.2)	-0.26	-0.39 – -0.13	-0.49	-0.58 – -0.40	-0.26	-0.37 – -0.14
HOMA-IR	1.36 (0.81–2.29)	1.96 (1.11–3.05)	2.68 (1.70–3.91)	-0.24	-0.37 – -0.10	-0.47	-0.56 – -0.37	-0.24	-0.36 – -0.12
SBP (mmHg)	102 (95–109)	107 (100–116)	114 (105–121)	-0.27	-0.39 – -0.14	-0.51	-0.59 – -0.41	-0.26	-0.37 – -0.14
DBP (mmHg)	61 (57–68)	63 (57–69)	68 (62–74)	-0.10	-0.23 – 0.04	-0.40	-0.49 – -0.29	-0.28	-0.39 – -0.16

BMI: body mass index; MVPA: Moderate-to-vigorous physical activity; PA: physical activity; FFMI: fat-free mass index; FMI: fat mass index; HDL-c: high-density lipoprotein cholesterol; LDL-c: low-density lipoprotein cholesterol; HOMA-IR: homeostatic model assessment insulin resistance; SBP: systolic blood pressure; DBP: diastolic blood pressure; ES: effect size; CI: confidence interval.

Median (Inter quartile range), N (%). ES for continuous variables are reported as Rank-Biseral Correlation that ranges from -1 to 1 and indicates the probability that a participant from the second group has a higher value that a participant from the first group. ES for categorial variables was reported as the difference in percentage between groups.

MVPA adherence refers to the number of participants who met the recommendations for 60 min/day of MVPA. Full PA adherence refers to the number of participants who met the recommendations for 60 min/day of MVPA and three days of vigorous PA. Promoted and avoided foods scales correspond to the degree of adherence to food consumption recommendations.

Supplementary Table S3. Characteristics, adherence to dietary and physical activity recommendations, body mass, and cardiometabolic risk markers by prevalence or not of metabolic syndrome.

	No metabolic syndrome	Metabolic syndrome	ES	95% CI
N	174 (69.6%)	76 (30.4%)		
Age (years)	10.6 (8.7–12.3)	11.1 (8.4–12.7)	-0.04	-0.18 – 0.10
Gender[2]				
Female	236 (52.7%)	47 (61.8%)	-9.2%	-22.0% – 3.5%
Male	212 (47.3%)	29 (38.2%)	9.2%	-3.5% – 22.0%
Physical activity				
MVPA adherence	118 (26.4%)	19 (25.0%)	1.4%	-9.9% – 13%
Full PA adherence	33 (7.4%)	5 (6.6%)	0.8%	-6.0% – 7.7%
Moderate PA (min/week)	180 (60–300)	120 (0–300)	0.15	0.01 – 0.29
Vigorous PA (min/week)	0 (0–30)	0 (0–15)	0.01	-0.13 – 0.14
Dietary adherence				
Promoted foods (0-8 scale)	3.95 (3.26–4.42)	3.68 (3.26–4.32)	0.07	-0.07 – 0.20
Avoided foods (0-8 scale)	6.68 (6.32–7.05)	6.74 (6.37–7.07)	-0.02	-0.15 – 0.12
Body composition				
Total fat mass (%)	8.9 (7.8–10.4)	9.1 (8.6–9.9)	-0.59	-0.70 – -0.45
Abdominal fat (%)	60.5 (55.0–69.0)	53.1 (48.6–56.9)	-0.13	-0.33 – 0.08
Total lean mass (%)	13.2 (12.1–14.5)	14.6 (13.1–16.0)	0.57	0.43 – 0.68
FFMI (kg/m^2)	0.9 (0.6–1.1)	1.4 (1.1–1.6)	-0.36	-0.51 – -0.18
FMI (kg/m^2)	8.9 (7.8–10.4)	9.1 (8.6–9.9)	-0.68	-0.77 – -0.56
Cardiometabolic risk markers				
Triacylglycerols (mg/dl)	56 (44–75)	96 (65–130)	-0.54	-0.64 – -0.44
Cholesterol (mg/dl)	160 (142–180)	171 (154–184)	-0.16	-0.30 – -0.02
HDL-c (mg/dl)	51 (43–62)	40 (33–48)	0.46	0.34 – 0.56
LDL-c (mg/dl)	92 (78–108)	100 (90–119)	-0.23	-0.36 – -0.09
Insulin (mU I/L)	9.6 (5.3–14.7)	15.7 (10.6–21.9)	-0.46	-0.57 – -0.34
HOMA-IR	1.86 (1.05–3.03)	3.20 (2.15–4.97)	-0.48	-0.59 – -0.35
SBP (mmHg)	106 (100–114)	123 (116–127)	-0.69	-0.75 – -0.61
DBP (mmHg)	64 (58–70)	75 (70–80)	-0.69	-0.76 – -0.61

BMI: body mass index; MVPA: Moderate-to-vigorous physical activity; PA: physical activity; FFMI: fat-free mass index; FMI: fat mass index; HDL-c: high-density lipoprotein cholesterol; LDL-c: low-density lipoprotein cholesterol; HOMA-IR: homeostatic model assessment insulin resistance; SBP: systolic blood pressure; DBP: diastolic blood pressure; ES: effect size; CI: confidence interval.

Median (Inter quartile range), N (%). ES for continuous variables are reported as Rank-Biseral Correlation that ranges from -1 to 1 and indicates the probability that a participant from the second group has a higher value that a participant from the first group. ES for categorial variables was reported as the difference in percentage between groups.

MVPA adherence refers to the number of participants who met the recommendations for 60 min/day of MVPA. Full PA adherence refers to the number of participants who met the recommendations for 60 min/day of MVPA and three days of vigorous PA. Promoted and avoided foods scales correspond to the degree of adherence to food consumption recommendations.

Supplementary Table S4. Characteristics, adherence to dietary recommendations, amount of physical activity, body mass, and cardiometabolic risk markers by adherence to 60 min/day of moderate-to-vigorous physical activity.

	No	Yes	ES	95% CI
N	409 (74.6%)	139 (25.4%)		
Age (years)	10.6 (8.4–12.3)	11.0 (9.1–12.5)	-0.10	-0.21 – 0.01
Gender				
Female	229 (56.0%)	66 (47.5%)	8.5%	-1.6% – 19.0%
Male	180 (44.0%)	73 (52.5%)	-8.5%	-19.0% – 1.6%
BMI category				
Normal weight	96 (23.5%)	47 (33.8%)	-10.0%	-20.0% – -1.0%
Overweight	93 (22.7%)	37 (26.6%)	-3.9%	-13.0% – 5.0%
Obesity	220 (53.8%)	55 (39.6%)	14.0%	4.3%– 24.0%
Physical activity				
Moderate PA (min/week)	120 (0–240)	420 (360–600)	-0.86	-0.89 – -0.83
Vigorous PA (min/week)	0 (0–0)	90 (0–255)	-0.51	-0.59 – -0.42
Dietary adherence				
Promoted foods (0-8 scale)	3.95 (3.26–4.42)	3.89 (3.26–4.47)	-0.01	-0.12 – 0.10
Avoided foods (0-8 scale)	6.68 (6.32–7.00)	6.74 (6.34–7.11)	-0.06	-0.17 – 0.05
Body composition				
Total fat mass (%)	3.95 (3.26–4.42)	3.89 (3.26–4.47)	0.34	0.22 – 0.45
Abdominal fat (%)	6.68 (6.32–7.00)	6.74 (6.34–7.11)	-0.01	-0.19 – 0.16
Total lean mass (%)	3.95 (3.26–4.42)	3.89 (3.26–4.47)	-0.37	-0.47 – -0.25
FFMI (kg/m^2)	6.68 (6.32–7.00)	6.74 (6.34–7.11)	-0.18	-0.30 – -0.05
FMI (kg/m^2)	3.95 (3.26–4.42)	3.89 (3.26–4.47)	0.27	0.15 – 0.39
Cardiometabolic risk markers				
Triacylglycerols (mg/dl)	60 (45–86)	62 (49–78)	-0.01	-0.12 – 0.10
Cholesterol (mg/dl)	160 (142–180)	165 (145–184)	-0.07	-0.18 – 0.04
HDL-c (mg/dl)	49 (41–59)	51 (42–62)	-0.09	-0.20 – 0.02
LDL-c (mg/dl)	93 (79–109)	96 (80–107)	-0.03	-0.14 – 0.08
Insulin (mU I/L)	10.9 (5.7–15.8)	9.9 (7.0–14.9)	0.03	-0.09 – 0.14
HOMA-IR	2.14 (1.10–3.28)	1.96 (1.34–3.04)	0.02	-0.10 – 0.13
SBP (mmHg)	109 (100–117)	109 (100–118)	0.01	-0.11 – 0.12
DBP (mmHg)	65 (60–71)	64 (56–70)	0.09	-0.02 – 0.21
Metabolic syndrome	57 (14.8%)	19 (13.9%)	0.9%	-6.4% – 8.2%

BMI: body mass index; PA: physical activity; FFMI: fat-free mass index; FMI: fat mass index; HDL-c: high-density lipoprotein cholesterol; LDL-c: low-density lipoprotein cholesterol; HOMA-IR: homeostatic model assessment insulin resistance; SBP: systolic blood pressure; DBP: diastolic blood pressure; ES: effect size; CI: confidence interval. Median (Inter quartile range), N (%). ES for continuous variables are reported as Rank-Biseral Correlation that ranges from -1 to 1 and indicates the probability that a participant from the second group has a higher value that a participant from the first group. ES for categorial variables was reported as the difference in percentage between groups.

Promoted and avoided foods scales correspond to the degree of adherence to food consumption recommendations.

Supplementary Table S5. Characteristics, adherence to dietary recommendations, amount of physical activity, body mass, and cardiometabolic risk markers by full adherence to both 60 min/day of moderate-to-vigorous and three days of vigorous physical activity.

	No	Yes	ES	95% CI
N	510 (93.1%)	38 (6.9%)		
Age (years)	10.7 (8.6–12.3)	11.3 (9.4–13.1)	-0.16	-0.34 – 0.03
Gender				
Female	279 (54.7%)	16 (42.1%)	13.0%	-5.1% – 30.0%
Male	231 (45.3%)	22 (57.9%)	-13.0%	-30.0% – 5.1%
BMI category				
Normal weight	130 (25.5%)	13 (34.2%)	-8.7%	-26.0% – 8.2%
Overweight	121 (23.7%)	9 (23.7%)	0.0%	-14.0% – 14.0%
Obesity	259 (50.8%)	16 (42.1%)	8.7%	-9.0% – 26.0%
Physical activity				
Moderate PA (min/week)	150 (60–300)	330 (240–420)	-0.46	-0.60 – -0.30
Vigorous PA (min/week)	0 (0–0)	308 (240–405)	-0.95	-0.96 – -0.92
Dietary adherence				
Promoted foods (0-8 scale)	3.89 (3.26–4.42)	3.79 (3.39–4.25)	0.02	-0.17 – 0.21
Avoided foods (0-8 scale)	6.68 (6.32–7.05)	6.76 (6.49–7.05)	-0.07	-0.26 – 0.12
Body composition				
Total fat mass (%)	39.6 (32.4–45.1)	36.4 (29.4–43.0)	0.16	-0.04 – 0.35
Abdominal fat (%)	8.9 (8.0–10.1)	9.7 (8.6–15.4)	-0.22	-0.47 – 0.06
Total lean mass (%)	59.2 (52.9–66.4)	63.0 (55.5–69.9)	-0.19	-0.38 – 0.01
FFMI (kg/m^2)	13.2 (12.2–14.6)	14.6 (13.3–16.2)	-0.35	-0.52 – -0.16
FMI (kg/m^2)	0.9 (0.7–1.2)	1.0 (0.6–1.1)	0.04	-0.16 – 0.24
Cardiometabolic risk markers				
Triacylglycerols (mg/dl)	62 (46–86)	52 (46–72)	0.15	-0.04 – 0.33
Cholesterol (mg/dl)	162 (144–181)	161 (140–174)	0.08	-0.11 – 0.27
HDL-c (mg/dl)	49 (41–60)	50 (40–59)	0.00	-0.19 – 0.19
LDL-c (mg/dl)	94 (79–109)	95 (81–104)	0.02	-0.17 – 0.21
Insulin (mU I/L)	10.6 (5.8–15.6)	10.8 (7.7–16.2)	-0.09	-0.27 – 0.11
HOMA-IR	2.11 (1.14–3.26)	2.00 (1.39–2.91)	-0.01	-0.21 – 0.19
SBP (mmHg)	109 (100–118)	110 (100–121)	-0.01	-0.20 – 0.19
DBP (mmHg)	65 (59–71)	64 (52–69)	0.15	-0.04 – 0.35
Metabolic syndrome	71 (14.6%)	5 (13.2%)	-8.7%	-26.0% – 8.2%

BMI: body mass index; PA: physical activity; FFMI: fat-free mass index; FMI: fat mass index; HDL-c: high-density lipoprotein cholesterol; LDL-c: low-density lipoprotein cholesterol; HOMA-IR: homeostatic model assessment insulin resistance; SBP: systolic blood pressure; DBP: diastolic blood pressure; ES: effect size; CI: confidence interval. Median (Inter quartile range), N (%). ES for continuous variables are reported as Rank-Biseral Correlation that ranges from -1 to 1 and indicates the probability that a participant from the second group has a higher value that a participant from the first group. ES for categorial variables was reported as the difference in percentage between groups.

Promoted and avoided foods scales correspond to the degree of adherence to food consumption recommendations.