**Table S1.** Descriptive characteristics of study participants (anthropometric measurements and biochemical data) a,b

|  |  |  |
| --- | --- | --- |
|  |  | **Characteristics** |
| **± SD** | **Mean** | Overall (n=401) |
| 13.85 | 60.29 | Weight (kg) |
| 5.59 | 158.62 | Height (cm) |
| 6.04 | 24.05 | BMI (kg/m²) |
| 11.49 | 75.05 | Waist (cm) |
| 12.70 | 101.49 | Hip (cm) |
| 0.17 | 0.75 | Waist-to-hip ratio |
| 7.72 | 35.11 | Fat (%) |
| 13.59 | 53.47 | Muscle (%) |
| 3.31 | 2.62 | Hs-CRP (mg/l) c |

a Body mass index (BMI), High sensitivity C reactive protein (hs-CRP). b Data are mean ± standard deviation (SD).

c Hs-CRP were collected from 289 participants.

**Table S2.** Descriptive characteristics of study participants (socio-demographic, dietary habits, and physical activity). a,b

|  |  |  |
| --- | --- | --- |
|  | | **Characteristics** |
| **%** | **No.** | Overall (n=401) |
|  |  | ***Socio-demographic information*** |
| 21.66 ± 3.12 | | *Age (*mean ± SD) (years) |
|  |  | *Academic level* |
| 25.5% | 102 | Level 1-3 |
| 47.9% | 192 | Level 4-6 |
| 26.7% | 107 | Level 7-9 |
|  |  | *College* |
| 39.4 % | 158 | Medical |
| 60.6 % | 243 | Non-Medical |
|  |  | *Family Income Per Month (Saudi Riyal (SR))c* |
| 4.7 % | 19 | < 5,000 |
| 24.7 % | 99 | 5,000- < 10,000 |
| 29.9 % | 120 | 10,000 – < 19,000 |
| 40.7 % | 163 | ≥ 19,000 |
|  |  | ***Medical history*** |
|  |  | *The presence of any medical condition* |
| 10.0 % | 40 | Yes |
| 90.0 % | 361 | No |
|  |  | ***Dietary habits*** |
|  |  | *Previous weight loss diet* |
| 36.9 % | 148 | Yes |
| 63.1 % | 253 | No |
|  |  | *Special weight loss diet* |
| 2.7 % | 11 | Atkins |
| 11.0 % | 44 | Calories count diet |
| 12.2 % | 49 | Healthy diet |
| 4.0 % | 16 | Low carbohydrate diet |
| 6.0 % | 23 | Other d |
| 1.63 ± 0.48 | | *Previous weight loss /kg (mean ± SD)* |
|  |  | *Breakfast consumption* |
| 52.1 % | 209 | Always |
| 42.1 % | 169 | Occasionally |
| 5.7 % | 23 | Never |
|  |  | *Snack before lunch* |
| 18.2 % | 73 | Always |
| 50.4 % | 202 | Occasionally |
| 31.4 % | 126 | Never |
|  |  | *Lunch consumption* |
| 59.1 % | 237 | Always |
| 37.2 % | 149 | Occasionally |
| 3.7 % | 15 | Never |
|  |  | *Snack before dinner* |
| 30.9 % | 124 | Always |
| 46.4 % | 186 | Occasionally |
| 22.7 % | 91 | Never |
|  |  | *Dinner consumption* |
| 35.7 % | 143 | Always |
| 55.4 % | 222 | Occasionally |
| 9.0 % | 36 | Never |
|  |  | *Snack at night* |
| 13.7 % | 55 | Always |
| 52.9 % | 212 | Occasionally |
| 33.4 % | 134 | Never |
|  |  | *Multitasks during the meal time* |
| 42.9 % | 172 | Always |
| 42.4 % | 170 | Occasionally |
| 14.7 % | 59 | Never |
|  |  | *Effects of environment* |
| 39.9 % | 160 | Always |
| 42.1 % | 169 | Occasionally |
| 18.0 % | 72 | Never |
|  |  | ***Physical activity (PA)*** |
|  |  | *The intensity of PA* |
| 34.9 % | 140 | Low |
| 57.9 % | 232 | Moderate |
| 7.2 % | 29 | High |
|  |  | *Frequency of PA/week* |
| 27.8% | 111 | < 4 times |
| 43.8% | 175 | 4-6 times |
| 28.5% | 114 | Daily |
| 61.09 ± 43.45 | | *Duration of PA (minutes/day) (*mean ± SD) |
|  | |  |

a Continuous variable are presented as (mean ± standard deviation (SD)). b Categorical and binary variables are presented as percentages (%).

c 1 SR = 3.75 United States dollar. d Other diet refers to (Dates and Laban, Detox diet, High protein diet, intermittent fasting, Low calories diet, Low CHO and fat diet, Low fat diet, and Vegetarian diet).

**Table S3.** Mean (SD) daily intakes of macro-micronutrients of study participants, n=401 a,b

|  |  |  |
| --- | --- | --- |
|  |  | **Characteristics** |
| **± SD** | **Mean** | Overall (n=401) |
| 670.23 | 2051.5 | Energy (Kcal/day) |
| 23.52 | 50.1 | Carbohydrate (% E) a |
| a1.27 | 22.0 | Protein (% E) a |
| 12.28 | 21.4 | Fat (% E) a |
| 45.81 | 107.4 | Cholesterol (mg) b |
| 8.69 | 13.11 | SFA (% of total fat) b |
| 4.42 | 3.48 | PUFA (% of total fat) b |
| 2.59 | 3.54 | MUFA (% of total fat) b |
| 0.44 | 1.32 | Trans (% of total fat) b |
| 2.70 | 6.4 | Fiber (gm) b |
| 72.33 | 88.7 | Vit A (RE) b |
| 4.70 | 9.3 | Vit C (mg) b |
| 1.31 | 1.7 | Vit E (mg) b |
| 1.33 | 1.5 | Vit D (µg) b |
| 0.07 | 0.1 | B12 (µg) b |
| 0.05 | 0.1 | B6 (mg) b |
| 0.04 | 0.1 | Thiamine (mg) b |
| 0.05 | 0.1 | Riboflavin (mg) b |
| 75.07 | 96.2 | Folic acid (µg) b |
| 0.79 | 1.0 | Niacin (mg) b |
| 98.84 | 223.2 | CA (mg) a,b |
| 0.83 | 1.4 | Iron (mg) b |
| 1.04 | 2.0 | NA (gm) a,b |
| 0.67 | 1.4 | K (gm) a,b |
| 0.82 | 1.3 | Zinc (mg) b |
| 30.12 | 48.1 | Mg (mg) a,b |
| 4.87 | 9.1 | Selenium (µg) b |
| 23.57 | 33.1 | Manganese (mg) b |
|  |  |  |

a Percentage of daily energy intake (% E), saturated fatty acid (SFA %), Polyunsaturated fatty acid (PUFA %), Monounsaturated fatty acid (MUFA %), calcium (CA), sodium (NA), potassium (K), magnesium (Mg). bAll the micronutrients were calculated per 1000 kcal.

**Table S4.** Diet quality using the HEI-2015 scorea

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **HEI-2015 score components** | **N** | **Mean** | **± SD** | **Minimum** | **Maximum** | **Standard for maximum score** | **Standard of minimum score of zero** |
| **TOTAL HEI-2015 SCOREb** | 401 | 63 | 10 | 32 | 94 | 100.00 | 0.00 |
| **Total fruitsc  (cup Eq/100 kcal)** | 401 | 4 | 5 | 0 | 5 | ≥ 0.8 c equivalents/ 1000 kcal | No fruit |
| **Whole fruitsd  (cup Eq/100 kcal)** | 401 | 4 | 2 | 0 | 5 | ≥ 0.4 c equivalents/ 1000 kcal | No whole fruit |
| **Total vegetablese**  **(cup Eq/100 kcal)** | 401 | 4 | 2 | 0 | 5 | ≥ 1.1 c equivalents/ 1000 kcal | No vegetables |
| **Greens and beanse**  **(cup Eq/100 kcal)** | 401 | 4 | 1 | 0 | 5 | ≥ 0.2 c equivalents/ 1000 kcal | No dark green vegetables or beans and peas |
| **Whole grains**  **(ounce Eq/100 kcal)** | 401 | 6 | 4 | 0 | 10 | ≥ 1.5 oz equivalents/ 1000 kcal | No whole grains |
| **Dairyf**  **(cup Eq/100 kcal)** | 401 | 5 | 3 | 0 | 10 | ≥ 1.3 c equivalents/ 1000 kcal | No dairy |
| **Total protein foodsg(ounce Eq/100 kcal)** | 401 | 5 | 1 | 1 | 5 | ≥ 2.5 oz equivalents/ 1000 kcal | No protein foods |
| **Seafoods and plant proteinsg,h**  **(oz Eq/100 kcal)** | 401 | 4 | 1 | 0 | 5 | ≥ 0.8 oz equivalents/ 1000 kcal | No seafood or plant proteins |
| **Refined grains**  **(ounce Eq/100 kcal)** | 401 | 1 | 3 | 0 | 10 | ≤ 1.8 oz equivalents/ 1000 kcal | ≥ 4.3 oz equivalents/1000 kcal |
| **Added sugar**  **(tsp Eq/100 kcal)** | 401 | 9 | 1 | 3 | 10 | ≤ 6.5% of energy | ≥ 26% of energy |
| **Fatty acidsi**  **(gm/100 kcal)** | 401 | 1 | 2 | 0 | 10 | (PUFA+MUFA)/SFA ≥ 2.5 | (PUFA+MUFA)/SFA ≤ 1.2 |
| **Sodiumj**  **(gm Eq/100 kcal)** | 401 | 10 | 0 | 3 | 10 | ≤ 1.1 gm equivalents/ 1000 kcal | ≥ 2 gm equivalents/1000 kcal |
| **Saturated fatj**  **(gm Eq/100 kcal)** | 401 | 6 | 4 | 0 | 10 | ≤ 8% of energy | ≥ 16% of energy |
| a Data are mean ± standard deviation (SD)  b Intakes between the minimum and maximum standards are scored proportionately.  c Includes 100% fruit juice.  d Includes all forms except juice.  e Includes legumes (beans and peas).  f Includes all milk products, such as fluid milk, yogurt, and cheese, and fortified soy beverages.  g Includes legumes (beans and peas).  h Includes seafood, nuts, seeds, soy products (other than beverages), and legumes (beans and peas).  I Ratio of poly- and monounsaturated fatty acids to saturated fatty acids.  j Saturated Fat and Sodium get a score of 8 for the intake levels that reflect the 2005 Dietary Guidelines, <8% of calories from saturated fat and 1.1 grams of sodium/1,000 kcal, respectively. Intakes between the standards for scores of 0 and 8 and between 8 and 10 are scored proportionately. | | | | | | | |

**Table S5.** Pearson’s partial correlation between the HEI-2015 score and outcome variables among study participants, n = 401.a,b,c

|  |  |
| --- | --- |
| Variable | HEI-2015 total score |
| Hs-CRP (mg/l) | -0.43 |
| Education level | -0.03 |
| College | 0.04 |
| Family income (SR) | 0.04 |
| Medical condition | -0.04 |
| Type of diet | 0.12 |
| Sleeping hours/day | -0.09 |
| Duration of PA (min/day) | 0.08 |
| BMI (kg/m2) | -0.23 |
| Waist | -0.05 |
| Hip | 0.02 |
| Waist-to-hip ratio | -0.11 |
| Fat % | 0.04 |
| Muscle % | -0.07 |

a High sensitivity C reactive protein (hs-CRP), Saudi riyals (SR), physical activity (PA),Body mass index (BMI). b Correlation were significant (p ≤ 0.05). c Hs-CRP were collected from 289 participants.