**Table S1. Comparison of baseline characteristics of vegetarians and non-vegetarians in the original cohort**

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Vegetarian | Non-vegetarian | *P* value |
| (N=8183) | (N=306850) |
| Mean ± SD | Mean ± SD |
| or % | or % |
| Male (%) | 25.0 | 40.1 | <.0001 |
| Age (years) | 48.9±14.4 | 40.4±13.6 | <.0001† |
| Age (%) |  |  |  |
| 20-39 | 29.8 | 56.6 | <.0001 |
| 40-54 | 32.6 | 25.0 |  |
| 55-64 | 22.1 | 12.0 |  |
| 65-98 | 15.5 | 6.4 |  |
| WC (cm) | 75.5±9.6 | 75.9±10.4 | 0.00035 |
| WC (male≥90, female≥80, % ) | 21.7 | 18.4 | <.0001 |
| BMI (kg/m2) | 22.8±3.4 | 22.9±3.6 | 0.0050 |
| BMI (≥27, %) | 10.9 | 12.4 | <.0001 |
| SBP (mm Hg) | 122.5±21.9 | 119.5±19.1 | <.0001 |
| SBP (≥130, %) | 35.3 | 28.4 | <.0001 |
| DBP (mm Hg) | 72.0±12.0 | 71.9±11.6 | 0.24 |
| DBP (≥85, %) | 27.3 | 21.4 | <.0001 |
| FBG (mg/dl) | 99.8±24. 9 | 98.5±21.9 | 0.0073† |
| FBG (≥100, %) | 32.0 | 30.3 | 0.0008 |
| TG (mg/dl) | 121.2±82.5 | 109.3±83.8 | <.0001† |
| TG (≥150, %) | 24.8 | 18.6 | <.0001 |
| TC (mg/dl) | 182.8±38.0 | 194.1±36.8 | <.0001† |
| TC (≥200, %) | 29.9 | 40.5 | <.0001 |
| HDL (mg/dl) | 51.5±14.2 | 53.4±14.9 | <.0001† |
| HDL (male<40, female<50, %) | 41.0 | 32.3 | <.0001 |
| LDL (mg/dl) | 107.9±31.8 | 119.6±32.0 | <.0001† |
| LDL (≥130, %) | 23.4 | 35.2 | <.0001 |
| TC/HDL ratio | 3.8±1.2 | 3.9±1.3 | <.0001† |
| TC/HDL ratio (≥5, %) | 15.9 | 18.7 | <.0001 |
| LTPA (MET-h, %) |  |  |  |
| Inactive | 49.0 | 52.0 | <.0001 |
| Low | 19.6 | 21.3 |  |
| Median | 19.8 | 16.6 |  |
| High | 7.9 | 6.3 |  |
| Very high | 3.7 | 3.8 |  |
| Drink (%) |  |  |  |
| Non-drinker | 92.3 | 82.6 | <.0001 |
| Occasional | 7.4 | 15.8 |  |
| Regular | 0.3 | 1.6 |  |
| Education (%) |  |  |  |
| Middle school or below | 46.3 | 23.7 | <.0001 |
| High school or junior college | 34.7 | 43.8 |  |
| College or higher | 19.0 | 32.5 |  |
| Site |  |  |  |
| Taipei | 43.5 | 52.6 | <.0001 |
| Taoyuan | 24.4 | 17.6 |  |
| Taichung | 14.1 | 13.7 |  |
| Kaohsiung | 18.0 | 16.1 |  |

WC: waist circumference

BMI: body mass index

SBP: systolic blood pressure

DBP: diastolic blood pressure

FBG: fast blood glucose

TG: triglycerides

HDL: high density lipoprotein

LDL: low density lipoprotein

TC: total cholesterol

LTPA: leisure-time physical activity (MET: 1 MET= 1 kcal per h per kg of body weight and

MET-h: product of intensity (MET) and duration of exercise (h))

\*: T-test or Chi-square test was conducted to detect the differences between vegetarians and non-vegetarians

† Wilcoxon test was used to detect the differences between vegetarians and non-vegetarians where the continuous variables may not be normally distributed.

**Table S2. Number of participants and records included in the study**

|  |  |  |
| --- | --- | --- |
|  | Number of participants (records) excluded | Number of participants (records) left |
| Whole database | - | 473,997 (918,718) |
| Exclusion those with inconsistent age, gender, IDs and examination and death dates | 654 (809) | 473,343 (917,909) |
| Exclusion those with inconsistent diet report | 56,997 (142,619) | 416,346 (775,290) |
| Exclusion smokers and those with age <20 | 101,313 (191,433) | 315,033 (583,857) |

**Table S3. Spearman correlation coefficients between individuals’ first two within-one-year observations**

|  |  |  |
| --- | --- | --- |
| Food Category | Estimate | p value |
| Rice and noodles | 0.38 | <.0001 |
| Whole grains | 0.34 | <.0001 |
| (Sweet) Breads | 0.39 | <.0001 |
| Beans | 0.41 | <.0001 |
| Light-green vegetables | 0.36 | <.0001 |
| Dark-green vegetables | 0.35 | <.0001 |
| Root vegetables | 0.34 | <.0001 |
| Fried rice and noodle products | 0.29 | <.0001 |
| Stir-fried rice or noodles | 0.45 | <.0001 |
| Fried vegetables | 0.33 | <.0001 |
| Fried food | 0.39 | <.0001 |
| Fruit | 0.46 | <.0001 |
| Jam and honey | 0.34 | <.0001 |
| Sugar drinks | 0.47 | <.0001 |
| Pickled vegetables | 0.35 | <.0001 |
| Instant noodles | 0.40 | <.0001 |

**Table S4. Average follow-up years stratified by dietary groups excluding subjects with only one visit**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Dietary group | Overall | Omnivore | Ovo\_laco | Lacto | Vegan |
| N | 6690 | 4778 | 624 | 173 | 159 |
| Average follow-up years | 2.12 | 2.09 | 2.25 | 2.27 | 2.21 |
| Range of follow-up years | [0.02,11.85] | [0.02,11.85] | [0.45,10.06] | [0.57,10.13] | [0.49,8.95] |

|  |  |  |  |
| --- | --- | --- | --- |
| Dietary group | Overall | Non-vegetarian | Vegetarian |
| N | 6690 | 4778 | 956 |
| Average follow-up years | 2.12 | 2.09 | 2.25 |
| Range of follow-up years | [0.02,11.85] | [0.02,11.85] | [0.45,10.13] |

**Table S5. Abnormality rates of individual metabolic traits at each visit in vegetarians**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variable | 1 | 2 | 3 | 4 | 5 | 6 |
| WC (male≥90, female≥80, % ) | 21.69 | 17.99 | 18.75 | 23.60 | 17.65 | 22.22 |
| BMI (≥27, %) | 10.93 | 8.79 | 8.33 | 7.87 | 5.88 | 11.11 |
| SBP (≥130, %) | 35.33 | 30.43 | 33.19 | 36.05 | 36.36 | 43.75 |
| DBP (≥85, %) | 27.28 | 24.65 | 23.83 | 31.40 | 39.39 | 31.25 |
| FBG (≥100, %) | 32.01 | 31.24 | 33.33 | 32.58 | 29.41 | 33.33 |
| TG (≥150, %) | 24.75 | 26.97 | 25.42 | 25.84 | 29.41 | 22.22 |
| TC (≥200, %) | 29.89 | 28.72 | 30.54 | 28.09 | 23.53 | 27.78 |
| HDL (male<40, female<50, %) | 40.96 | 36.56 | 31.65 | 40.23 | 41.18 | 38.89 |
| LDL (≥130, %) | 23.36 | 19.64 | 16.53 | 18.60 | 17.65 | 22.22 |
| TC/HDL ratio (≥5, %) | 15.86 | 12.63 | 10.97 | 12.64 | 17.65 | 22.22 |

**Table S6. Abnormality rates of individual metabolic traits at each visit in nonvegetarians**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| WC (male≥90, female≥80, % ) | 27.69 | 25.46 | 23.64 | 23.56 | 23.11 | 23.42 | 24.87 | 24.20 | 25.73 | 21.12 | 21.36 |
| BMI (≥27, %) | 15.40 | 14.05 | 14.14 | 13.31 | 13.55 | 13.75 | 14.12 | 13.01 | 16.48 | 14.66 | 13.59 |
| SBP (≥130, %) | 40.21 | 36.57 | 35.96 | 35.11 | 35.03 | 35.71 | 37.34 | 40.24 | 40.89 | 43.84 | 38.30 |
| DBP (≥85, %) | 31.99 | 28.69 | 27.54 | 27.93 | 26.76 | 27.84 | 29.29 | 30.85 | 34.24 | 32.88 | 31.91 |
| FBG (≥100, %) | 37.60 | 36.82 | 37.40 | 39.86 | 41.84 | 43.97 | 46.64 | 45.17 | 46.83 | 48.28 | 58.25 |
| TG (≥150, %) | 23.01 | 22.38 | 21.46 | 22.48 | 21.80 | 22.72 | 22.52 | 23.92 | 20.09 | 19.83 | 22.33 |
| TC (≥200, %) | 50.00 | 49.17 | 49.61 | 49.31 | 48.97 | 50.82 | 50.67 | 54.13 | 55.08 | 54.74 | 55.34 |
| HDL (male≥40, female≥50, %) | 34.78 | 30.21 | 26.45 | 23.57 | 22.65 | 22.07 | 22.91 | 22.60 | 24.72 | 30.17 | 32.04 |
| LDL (≥130, %) | 42.27 | 40.04 | 38.58 | 36.59 | 36.73 | 37.01 | 38.25 | 42.07 | 43.08 | 44.40 | 44.66 |
| TC/HDL ratio (≥5, %) | 20.98 | 17.76 | 14.69 | 13.71 | 12.43 | 13.29 | 14.02 | 15.68 | 13.83 | 16.81 | 22.33 |

**Table S7.** **Visit frequency by diet**

|  |  |  |
| --- | --- | --- |
| Visit | Vegetarian | Nonvegetarian |
| 1 | 8183 | 40915 |
| 2 | 956 | 14520 |
| 3 | 240 | 7552 |
| 4 | 89 | 4524 |
| 5 | 34 | 2827 |
| 6 | 18 | 1841 |
| 7 | 5 | 1190 |
| 8 | 3 | 715 |
| 9 | 0 | 443 |
| 10 | 0 | 232 |
| 11 | 0 | 103 |
| 12 | 0 | 25 |
| 13 | 0 | 9 |
| 14 | 0 | 6 |
| 15 | 0 | 4 |
| 16 | 0 | 4 |
| 17 | 0 | 3 |
| 18 | 0 | 1 |

**Table S8. Number** **of participants with missing data for individual abnormal traits at baseline**

|  |  |  |
| --- | --- | --- |
| Dietary group | Vegetarian | Nonvegetarian |
| Complete data (No. of total subjects) | 8183 | 40915 |
| WC (male≥90, female≥80) | 671 | 6387 |
| BMI (≥27) | 4 | 11 |
| SBP (≥130) | 269 | 1150 |
| DBP (≥85) | 269 | 1150 |
| FBG (≥100) | 4 | 63 |
| TG (≥150) | 9 | 24 |
| TC (≥200) | 4 | 18 |
| HDL (male<40, female<50) | 219 | 1924 |
| LDL (≥130) | 269 | 2233 |
| TC/HDL ratio (≥5) | 211 | 1897 |

**Table S9. Number of subjects for Table 2 in different dietary groups**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Dietary group | Overall | Omnivore | Vegan | Lacto | Ovo\_laco |
| Complete data | 49098 | 40915 | 1913 | 1855 | 4415 |
| WC (male≥90, female≥80, % ) | 44955 | 37418 | 1704 | 1652 | 4181 |
| BMI (≥27, %) | 49084 | 40905 | 1912 | 1855 | 4412 |
| SBP (≥130, %) | 47959 | 40026 | 1856 | 1791 | 4286 |
| DBP (≥85, %) | 47959 | 40026 | 1856 | 1791 | 4286 |
| FBG (≥100, %) | 49041 | 40862 | 1913 | 1854 | 4412 |
| TG (≥150, %) | 49075 | 40900 | 1912 | 1855 | 4408 |
| TC (≥200, %) | 49080 | 40901 | 1913 | 1854 | 4412 |
| HDL (male<40, female<50, %) | 47333 | 39355 | 1868 | 1817 | 4293 |
| LDL (≥130, %) | 47048 | 39115 | 1854 | 1804 | 4275 |
| TC/HDL ratio (≥5, %) | 47359 | 39373 | 1870 | 1819 | 4297 |

**Table S10. Number of subjects for Table 3 in different dietary groups**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Dietary group | Overall | Omnivore | Vegan | Lacto | Ovo\_laco |
| Complete data | 49098 | 40915 | 1913 | 1855 | 4415 |
| WC (male≥90, female≥80, % ) | 44944 | 37409 | 1703 | 1652 | 4180 |
| SBP (≥130, %) | 47949 | 40018 | 1856 | 1791 | 4284 |
| DBP (≥85, %) | 47949 | 40018 | 1856 | 1791 | 4284 |
| FBG (≥100, %) | 49028 | 40852 | 1912 | 1854 | 4410 |
| TG (≥150, %) | 49062 | 40890 | 1911 | 1855 | 4406 |
| TC (≥200, %) | 49067 | 40891 | 1912 | 1854 | 4410 |
| HDL (male<40, female<50, %) | 47321 | 39346 | 1867 | 1817 | 4291 |
| LDL (≥130, %) | 47035 | 39105 | 1853 | 1804 | 4273 |
| TC/HDL ratio (≥5, %) | 47346 | 39363 | 1869 | 1819 | 4295 |

**Table S11. Number of subjects for Table 4 in different dietary groups**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Dietary group | Overall | Omnivore | Vegan | Lacto | Ovo\_laco |
| Complete data | 49098 | 40915 | 1913 | 1855 | 4415 |
| Rice and noodles | 48630 | 40523 | 1894 | 1835 | 4378 |
| Whole grains | 48538 | 40452 | 1890 | 1831 | 4365 |
| (Sweet) Breads | 47365 | 39454 | 1835 | 1785 | 4291 |
| Beans | 48902 | 40741 | 1910 | 1851 | 4400 |
| Light-green vegetables | 48695 | 40579 | 1894 | 1839 | 4383 |
| Dark-green vegetables | 48672 | 40556 | 1894 | 1836 | 4386 |
| Root vegetables | 47633 | 39665 | 1849 | 1801 | 4318 |
| Fried rice and noodle products | 48506 | 40418 | 1889 | 1831 | 4368 |
| Stir-fried rice or noodles | 10792 | 9657 | 340 | 377 | 418 |
| Fried vegetables | 48524 | 40429 | 1891 | 1827 | 4377 |
| Fried food | 47270 | 39374 | 1829 | 1779 | 4288 |
| Fruit | 48637 | 40533 | 1889 | 1838 | 4377 |
| Jam and honey | 47257 | 39357 | 1826 | 1780 | 4294 |
| Sugar drinks | 47276 | 39379 | 1825 | 1779 | 4293 |
| Pickled vegetables | 47287 | 39371 | 1836 | 1787 | 4293 |
| Instant noodles | 47258 | 39347 | 1826 | 1787 | 4298 |