**S2 Table. Odds ratios and 95% confidence intervals of type 2 diabetes according to quintile categories of intake of carbohydrate, fat, and protein in men**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Q1 (low)** | **Q2** | **Q3** | **Q4** | **Q5 (high)** | ***P* for trenda** |
| No of subjects | 5559 | 5560 | 5560 | 5560 | 5560 |  |
| Carbohydrate |  |  |  |  |  |  |
| Median (range) (% of energy) | 40.2 (8.9-44.8) | 48.0 (44.8-50.7) | 53.1 (50.7-55.5) | 58.2 (55.5-61.1) | 65.3 (61.1-87.6) |  |
| No of cases | 122 | 147 | 143 | 143 | 136 |  |
| Multivariable modelb + proteinc | 1.00 (reference) | 1.26 (0.96, 1.65) | 1.22 (0.90, 1.65) | 1.24 (0.88, 1.74) | 1.19 (0.79, 1.78) | 0.47 |
| Multivariable modelb + fatc | 1.00 (reference) | 1.24 (0.93, 1.64) | 1.18 (0.84, 1.65) | 1.18 (0.79, 1.76) | 1.11 (0.66, 1.86) | 0.74 |
| Fat |  |  |  |  |  |  |
| Median (range) (% of energy) | 14.4 (1.4-17.2) | 19.2 (17.2-21.1) | 22.8 (21.1-24.6) | 26.4 (24.6-28.8) | 32.4 (28.8-74.4) |  |
| No of cases | 131 | 147 | 137 | 148 | 128 |  |
| Multivariable modelb + proteinc | 1.00 (reference) | 1.13 (0.87, 1.46) | 1.04 (0.78, 1.37) | 1.13 (0.83, 1.53) | 0.94 (0.65, 1.37) | 0.71 |
| Multivariable modelb + carbohydratec | 1.00 (reference) | 1.13 (0.87, 1.46) | 1.03 (0.76, 1.39) | 1.11 (0.79, 1.56) | 0.90 (0.57, 1.43) | 0.73 |
| Animal fat |  |  |  |  |  |  |
| Median (range) (% of energy) | 6.6 (0.0-8.5) | 9.9 (8.5-11.1) | 12.4 (11.1-13.8) | 15.3 (13.8-17.2) | 20.3 (17.2-60.9) |  |
| No of cases | 117 | 156 | 140 | 131 | 147 |  |
| Multivariable modelb + protein and plant fatc | 1.00 (reference) | 1.47 (1.14, 1.90) | 1.33 (1.00, 1.76) | 1.27 (0.93, 1.73) | 1.46 (1.01, 2.11) | 0.20 |
| Multivariable modelb + carbohydrate and plant fatc | 1.00 (reference) | 1.46 (1.13, 1.90) | 1.32 (0.99, 1.75) | 1.24 (0.90, 1.72) | 1.40 (0.92, 2.12) | 0.34 |
| Multivariable modelb + protein and carbohydratec | 1.00 (reference) | 1.46 (1.12, 1.90) | 1.32 (0.99, 1.77) | 1.27 (0.91, 1.77) | 1.51 (0.99, 2.31) | 0.21 |
| Plant fat |  |  |  |  |  |  |
| Median (range) (% of energy) | 6.2 (0.9-7.4) | 8.3 (7.4-9.0) | 9.8 (9.0-10.6) | 11.4 (10.6-12.6) | 14.2 (12.6-55.1) |  |
| No of cases | 148 | 151 | 133 | 144 | 115 |  |
| Multivariable modelb + protein and animal fatc | 1.00 (reference) | 0.97 (0.76, 1.24) | 0.86 (0.66, 1.12) | 0.91 (0.69, 1.20) | 0.71 (0.52, 0.97) | 0.030 |
| Multivariable modelb + carbohydrate and animal fatc | 1.00 (reference) | 0.98 (0.77, 1.25) | 0.86 (0.66, 1.13) | 0.91 (0.69, 1.21) | 0.71 (0.50, 0.996) | 0.054 |
| Multivariable modelb + protein and carbohydratec | 1.00 (reference) | 0.97 (0.76, 1.24) | 0.85 (0.65, 1.11) | 0.89 (0.67, 1.18) | 0.68 (0.48, 0.94) | 0.021 |
| Protein |  |  |  |  |  |  |
| Median (range) (% of energy) | 10.4 (3.2-11.5) | 12.2 (11.5-12.8) | 13.4 (12.8-14.1) | 14.7 (14.1-15.5) | 16.8 (15.5-38.2) |  |
| No of cases | 128 | 134 | 148 | 156 | 125 |  |
| Multivariable modelb + fatc | 1.00 (reference) | 1.14 (0.86, 1.50) | 1.38 (1.01, 1.87) | 1.54 (1.09, 2.19) | 1.36 (0.87, 2.14) | 0.09 |
| Multivariable modelb + carbohydratec | 1.00 (reference) | 1.11 (0.84, 1.45) | 1.32 (0.98, 1.77) | 1.45 (1.03, 2.04) | 1.25 (0.80, 1.96) | 0.16 |
| Animal protein |  |  |  |  |  |  |
| Median (range) (% of energy) | 3.9 (0.0-4.9) | 5.6 (4.9-6.3) | 7.0 (6.3-7.6) | 8.4 (7.6-9.3) | 10.8 (9.3-34.0) |  |
| No of cases | 121 | 150 | 143 | 145 | 132 |  |
| Multivariable modelb + fat and plant proteinc | 1.00 (reference) | 1.36 (1.04, 1.78) | 1.39 (1.02, 1.89) | 1.47 (1.03, 2.11) | 1.48 (0.93, 2.36) | 0.16 |
| Multivariable modelb + carbohydrate and plant proteinc | 1.00 (reference) | 1.32 (1.01, 1.71) | 1.32 (0.98, 1.78) | 1.38 (0.98, 1.94) | 1.35 (0.86, 2.12) | 0.26 |
| Multivariable modelb + fat and carbohydratec | 1.00 (reference) | 1.36 (1.04, 1.78) | 1.39 (1.03, 1.87) | 1.47 (1.04, 2.07) | 1.46 (0.94, 2.27) | 0.15 |
| Plant protein |  |  |  |  |  |  |
| Median (range) (% of energy) | 4.7 (0.9-5.3) | 5.7 (5.3-6.0) | 6.3 (6.0-6.6) | 6.9 (6.6-7.3) | 7.9 (7.3-21.7) |  |
| No of cases | 132 | 156 | 144 | 131 | 128 |  |
| Multivariable modelb + fat and animal proteinc | 1.00 (reference) | 1.17 (0.90, 1.52) | 1.08 (0.80, 1.45) | 1.00 (0.71, 1.41) | 0.94 (0.63, 1.42) | 0.54 |
| Multivariable modelb + carbohydrate and animal proteinc | 1.00 (reference) | 1.18 (0.90, 1.53) | 1.09 (0.80, 1.47) | 1.01 (0.72, 1.42) | 0.95 (0.63, 1.43) | 0.55 |
| Multivariable modelb + fat and carbohydratec | 1.00 (reference) | 1.17 (0.90, 1.52) | 1.06 (0.79, 1.43) | 0.97 (0.70, 1.35) | 0.88 (0.60, 1.30) | 0.29 |

Abbreviation: Q, quintile.

aBased on multiple logistic regression analysis, with the median intake of carbohydrate, fat, and protein assigned to the quintile categories of each intake.

bAdjusted for age (year), study area (11 areas), body mass index (<21, 21-22.9, 23-24.9, 25-26.9, or ≥27 kg/m2), smoking status (never, past, current with a consumption of <20 or ≥20 cigarettes/day), alcohol consumption (nondrinker, occasional drinker, or drinker with a consumption of <150 or ≥150 g ethanol/week), family history of diabetes mellitus (yes or no), total physical activity (quartile, metabolic equivalent-hour/day), history of hypertension (yes or no), total energy intake (kcal/day), coffee consumption (almost never, <1, 1, or ≥2 cups/day), magnesium intake (mg/day), calcium intake (mg/day), and vitamin D intake (μg/day).

cAdditionally adjusted for each macronutrient intake (% energy).