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| Supplementary Table 1. The factor loadings scores of primary food items in dietary patterns a |
| **Vegetable pattern** | **Sweet foods pattern** | **Animal foods pattern** |
| **Food items** | **Factor loadings** | **Food items** | **Factor loadings** | **Food items** | **Factor loadings** |
| celery | 0.61 | strawberry, kiwi fruit, persimmon | 0.60 | animal offal (except for animal liver) | 0.62 |
| cucumber | 0.59 | pineapple | 0.58 | animal blood | 0.55 |
| Chinese cabbage | 0.58 | western-style pastry, cakes | 0.57 | animal liver | 0.54 |
| pumpkin, carrot | 0.57 | grape | 0.57 | preserved egg | 0.51 |
| tomato (including the ketchup) | 0.55 | sweets, candied fruits  | 0.52 | sausage | 0.48 |
| mushroom | 0.54 | peach | 0.52 | seafood (shellfish, squid, shrimp) | 0.47 |
| green vegetable | 0.54 | Chinese cakes | 0.52 | sea fish | 0.46 |
| eggplant | 0.53 | ice cream | 0.48 | pork skin | 0.46 |
| radish (expect for carrot) | 0.53 | banana | 0.47 | freshwater fish | 0.45 |
| bell peppers | 0.52 | cookies | 0.47 | instant noodle | 0.44 |
| Chinese watermelon | 0.52 | watermelon | 0.44 | wonton | 0.41 |
| potato (except for sweet potato) | 0.50 | pear | 0.43 | beer | 0.40 |
| soya bean products | 0.49 | fruit juice, vegetable juice | 0.40 | strong liquor | 0.40 |
| sweet potato | 0.46 | other kinds of fruit | 0.38 | Chinese sauerkraut  | 0.39 |
| hot pepper | 0.45 | walnut | 0.36 | salted eggs | 0.37 |
| raw vegetables (except for tomato) | 0.45 | orange | 0.33 | low-alcohol liquor | 0.37 |
| onion | 0.45 | apple | 0.32 | miscellaneous sauce noodles | 0.36 |
| other types of beans | 0.44 | nuts | 0.31 | preserved bean curd | 0.35 |
| garlic | 0.44 | salted eggs | 0.30 | carbonated beverage | 0.34 |
| lotus root | 0.43 | lotus root | 0.30 | leek | 0.34 |
| a For simplicity, only the top 20 food groups of factor loading scores of each pattern are shown. |

Supplementary Table 2. Associations between major sources of dietary fiber per 1,000 kcal intake and depressive symptoms by gender a

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|  | Categories of dietary fiber intake | *P* value |
| **Men (n = 13,080)** | Level 1 | Level 2 | Level 3 | Level 4 |
| Fiber from cereals (median and IQR, g/1,000 kcal) | 0.82, 0.22 | 1.14, 0.15 | 1.49, 0.23 | 2.24, 0.75 |  |
| No. of participants  | 3,270 | 3,270 | 3,270 | 3,270 |  |
| No. of SDS ≥45 | 567 | 455 | 481 | 572 |  |
| Mean (standard deviation) of SDS scores | 36.62 (7.65) | 36.06 (7.36) | 36.23 (7.50) | 36.75 (7.75) |  |
|  Adjusted model 3 c | Reference |  0.83 (0.72, 0.95) b | 0.86 (0.75, 0.98) | 0.94 (0.82, 1.08) | 0.81 |
| Fiber from vegetables (median and IQR, g/1,000 kcal) | 1.25, 0.39 | 1.84, 0.27 | 2.48, 0.38 | 3.71, 1.26 |  |
| No. of participants  | 3,270 | 3,270 | 3,270 | 3,270 |  |
| No. of SDS ≥45 | 548 | 478 | 494 | 555 |  |
| Mean (standard deviation) of SDS scores | 36.92 (7.47) | 36.22 (7.52) | 36.12 (7.45) | 36.40 (7.82) |  |
|  Adjusted model 3 c | Reference | 0.85 (0.74, 0.98) | 0.83 (0.72, 0.96) | 0.79 (0.65, 0.96) | 0.02 |
| Fiber from fruits (median and IQR, g/1,000 kcal) | 1.80, 1.01 | 3.36, 0.77 | 5.26, 1.32 | 10.17, 5.03 |  |
| No. of participants  | 3,270 | 3,270 | 3,270 | 3,270 |  |
| No. of SDS ≥45 | 524 | 487 | 493 | 571 |  |
| Mean (standard deviation) of SDS scores | 36.74 (7.42) | 36.16 (7.52) | 36.29 (7.52) | 36.48 (7.81) |  |
|  Adjusted model 3 c | Reference | 0.93 (0.81, 1.07) | 0.90 (0.78, 1.04) | 0.89 (0.76, 1.05) | 0.24 |
| Fiber from soy foods (median and IQR, g/1,000 kcal) | 0.38, 0.20 | 0.77, 0.21 | 1.19, 0.25 | 2.10, 0.81 |  |
| No. of participants  | 3,270 | 3,270 | 3,270 | 3,270 |  |
| No. of SDS ≥45 | 609 | 527 | 466 | 473 |  |
| Mean (standard deviation) of SDS scores | 37.05 (7.75) | 36.51 (7.48) | 36.13 (7.46) | 35.97 (7.55) |  |
|  Adjusted model 3 c | Reference | 0.82 (0.72, 0.93) | 0.73 (0.63, 0.83) | 0.69 (0.60, 0.81) | <0.0001 |
| Fiber from tubers (median and IQR, g/1,000 kcal) | 0.09, 0.10 | 0.21, 0.06 | 0.32, 0.08 | 0.68, 0.32 |  |
| No. of participants  | 3,270 | 3,270 | 3,270 | 3,270 |  |
| No. of SDS ≥45 | 573 | 496 | 456 | 550 |  |
| Mean (standard deviation) of SDS scores | 37.01 (7.54) | 36.33 (7.45) | 36.08 (7.45) | 36.24 (7.81) |  |
|  Adjusted model 3 c | Reference | 0.88 (0.77, 1.01) | 0.75 (0.65, 0.86) | 0.88 (0.75, 1.01) | 0.15 |
| **Women (n = 11,226)** |  |  |  |  |  |
| Fiber from cereals (median and IQR, g/1,000 kcal) | 0.71, 0.22 | 1.01, 0.14 | 1.31, 0.18 | 1.94, 0.66 |  |
| No. of participants  | 2,807 | 2,806 | 2,806 | 2,807 |  |
| No. of SDS ≥45 | 520 | 463 | 475 | 586 |  |
| Mean (standard deviation) of SDS scores | 37.12 (7.73) | 36.78 (7.54) | 37.02 (7.57) | 37.87 (7.78) |  |
|  Adjusted model 3 c | Reference | 0.92 (0.80, 1.06) | 0.92 (0.80, 1.06) | 1.06 (0.92, 1.23) | 0.22 |
| Fiber from vegetables (median and IQR, g/1,000 kcal) | 1.22, 0.39 | 1.77, 0.25 | 2.36, 0.36 | 3.45, 1.20 |  |
| No. of participants  | 2,807 | 2,806 | 2,806 | 2,807 |  |
| No. of SDS ≥45 | 529 | 506 | 472 | 537 |  |
| Mean (standard deviation) of SDS scores | 37.52 (7.70) | 37.19 (7.71) | 36.85 (7.54) | 37.23 (7.71) |  |
|  Adjusted model 3 c | Reference | 0.91 (0.79, 1.05) | 0.80 (0.69, 0.93) | 0.77 (0.64, 0.93) | <0.01 |
| Fiber from fruits (median and IQR, g/1,000 kcal) | 2.17, 1.02 | 3.74, 0.73 | 5.62, 1.28 | 10.06, 4.83 |  |
| No. of participants  | 2,807 | 2,806 | 2,806 | 2,807 |  |
| No. of SDS ≥45 | 528 | 481 | 482 | 553 |  |
| Mean (standard deviation) of SDS scores | 37.51 (7.69) | 37.14 (7.49) | 36.83 (7.71) | 37.30 (7.75) |  |
|  Adjusted model 3 c | Reference | 0.88 (0.77, 1.02) | 0.88 (0.76, 1.02) | 0.91 (0.78, 1.08) | 0.52 |
| Fiber from soy foods (median and IQR, g/1,000 kcal) | 0.39, 0.21 | 0.77, 0.21 | 1.20, 0.25 | 2.04, 0.76 |  |
| No. of participants  | 2,807 | 2,806 | 2,806 | 2,807 |  |
| No. of SDS ≥45 | 584 | 497 | 482 | 481 |  |
| Mean (standard deviation) of SDS scores | 37.84 (7.80) | 37.33 (7.55) | 36.88 (7.58) | 36.73 (7.70) |  |
|  Adjusted model 3 c | Reference | 0.84 (0.73, 0.96) | 0.82 (0.72, 0.95) | 0.82 (0.70, 0.95) | 0.02 |
| Fiber from tubers (median and IQR, g/1,000 kcal) | 0.12, 0.07 | 0.23, 0.05 | 0.38, 0.12 | 0.71, 0.41 |  |
| No. of participants  | 2,807 | 2,806 | 2,806 | 2,807 |  |
| No. of SDS ≥45 | 555 | 449 | 490 | 550 |  |
| Mean (standard deviation) of SDS scores | 37.62 (7.69) | 36.90 (7.43) | 37.06 (7.67) | 37.21 (7.85) |  |
|  Adjusted model 3 c | Reference | 0.79 (0.69, 0.91) | 0.87 (0.75, 1.00) | 0.97 (0.84, 1.13) | 0.55 |

a SDS, self-rating depression scale; IQR, interquartile range.

b Odds ratios (95% confidence interval) (all such values).

c Adjusted for age, body mass index, type 2 diabetes, hypertension, hyperlipidemia, physical activity, smoking status, drinking status, educational level, household income, employment status, marital status, whether one visits friends, household composition, energy intake (kcal/d), family disease history (including cardiovascular disease, hypertension, and diabetes), and dietary pattern scores (including vegetables pattern, sweet foods pattern, and animal foods pattern).

Supplementary Table 3. Linear associations between dietary fiber per 1,000 kcal intake and depressive symptoms by gender

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| **Men (n = 13,080)** | β a | standard error | *P* |
| Total dietary fiber | -0.009 | 0.007 | 0.18 |
| Soluble dietary fiber | -0.011 | 0.008 | 0.15 |
| Insoluble dietary fiber | -0.011 | 0.017 | 0.54 |
| Fiber from cereals | 0.004 | 0.034 | 0.91 |
| Fiber from vegetables | 0.012 | 0.039 | 0.76 |
| Fiber from fruits | 0.001 | 0.007 | 0.97 |
| Fiber from soy foods | -0.148 | 0.036 | < 0.0001 |
| Fiber from tubers | -0.008 | 0.080 | 0.92 |
| **Women (n = 11,226)** |  |  |  |
| Total dietary fiber | -0.004 | 0.007 | 0.54 |
| Soluble dietary fiber | -0.007 | 0.009 | 0.40 |
| Insoluble dietary fiber | 0.003 | 0.019 | 0.85 |
| Fiber from cereals | 0.068 | 0.038 | 0.07 |
| Fiber from vegetables | -0.072 | 0.039 | 0.06 |
| Fiber from fruits | 0.001 | 0.007 | 0.93 |
| Fiber from soy foods | -0.069 | 0.035 | 0.04 |
| Fiber from tubers | 0.154 | 0.079 | 0.08 |

a Adjusted for age, body mass index, type 2 diabetes, hypertension, hyperlipidemia, physical activity, smoking status, drinking status, educational level, household income, employment status, marital status, whether one visits friends, household composition, energy intake (kcal/d), family disease history (including cardiovascular disease, hypertension, and diabetes), and dietary pattern scores (including vegetables pattern, sweet foods pattern, and animal foods pattern).

Supplementary Table 4. Associations between different types of dietary fiber per 1,000 kcal intake and leukocyte count by gender

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|  | Categories of dietary fiber intake | *P* for trend a |
| **Men (n = 13,080)** | Level 1 | Level 2 | Level 3 | Level 4 |  |
| Total dietary fiber  |  |  |  |  |  |
|  Adjusted model 3 c |  6.55 (6.05, 7.08) b | 6.54 (6.05, 7.07) | 6.59 (6.09, 7.13) | 6.57 (6.07, 7.10) | 0.45 |
| Soluble dietary fiber  |  |  |  |  |  |
|  Adjusted model 3 c | 6.55 (6.06, 7.09) | 6.52 (6.03, 7.06) | 6.55 (6.06, 7.09) | 6.62 (6.12, 7.16) | 0.07 |
| Insoluble dietary fiber  |  |  |  |  |  |
|  Adjusted model 3 c | 6.59 (6.09, 7.13) | 6.54 (6.05, 7.08) | 6.56 (6.07, 7.10) | 6.54 (6.05, 7.08) | 0.39 |
| **Women (n = 11,226)** |  |  |  |  |  |
| Total dietary fiber  |  |  |  |  |  |
|  Adjusted model 3 c | 7.96 (6.25, 10.14) | 8.01 (6.27, 10.19) | 7.97 (6.24, 10.16) | 8.01 (6.27, 10.23) | 0.46 |
| Soluble dietary fiber  |  |  |  |  |  |
|  Adjusted model 3 c | 7.95 (6.23, 10.13) | 7.94 (6.23, 10.13) | 7.96 (6.24, 10.16) | 8.02 (6.28, 10.25) | 0.11 |
| Insoluble dietary fiber  |  |  |  |  |  |
|  Adjusted model 3 c | 7.94 (6.22, 10.13) | 7.95 (6.23, 10.14) | 7.95 (6.23, 10.14) | 8.01 (6.28, 10.22) | 0.27 |

a Analysis of covariance.

b Adjusted mean (95% confidence interval) of leukocyte count (×109/L) (all such values).

c Adjusted for age, body mass index, type 2 diabetes, hypertension, hyperlipidemia, physical activity, smoking status, drinking status, educational level, household income, employment status, marital status, whether one visits friends, household composition, energy intake (kcal/d), family disease history (including cardiovascular disease, hypertension, and diabetes), and dietary pattern scores (including vegetables pattern, sweet foods pattern, and animal foods pattern).