**Supplementary Table** **1** Distribution of food groups across tertiles of energy-adjusted dietary inflammatory index (E-DII) for controls (n=466).

|  |  |  |
| --- | --- | --- |
| Food groups (g per 1000 kcal) | Tertiles of E-DII (median, IQR) | *P* trend |
| I (-5.40, -1.84) | II (-1.94, -0.63) | III (-0.63, 3.19) |
| Total grains | 162.06 (58.28) | 185.11 (61.03) | 205.85 (57.11) | <0.001  |
| Whole grains | 12.40 (25.79) | 7.05 (12.70) | 7.65 (13.11) | 0.001  |
| Tuber | 32.59 (9.88) | 31.29 (10.50) | 32.98 (9.42) | 0.231 |
| Leaf Vegetables | 225.43 (138.00) | 151.11 (77.81) | 106.85 (67.40) | <0.001  |
| Starchy vegetables | 158.91 (119.95) | 125.65 (93.00) | 104.21 (82.50) | <0.001 |
| Nuts and seeds | 17.28 (25.03) | 11.35 (20.95) | 10.00 (18.70) | 0.030  |
| Fruits | 419.64 (243.82) | 354.99 (222.17) | 252.05 (157.53) | <0.001 |
| Dairy and products | 200.26 (198.22) | 202.12 (211.91) | 181.78 (222.98) | 0.670 |
| Egg | 56.89 (64.20) | 55.09 (51.61) | 53.81 (46.77) | 0.098 |
| Fish and seafood | 8.16 (16.76) | 6.62 (12.16) | 5.32 (9.02) | 0.005  |
| Poultry | 74.72 (77.80) | 60.30 (63.64) | 58.53 (53.47) | 0.002  |
| Red meat | 48.50 (66.32) | 41.46 (47.96) | 39.75 (43.34) | 0.004 |

**Supplementary Table 2** Distribution of food groups and nutrients between case and control.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Case (median, IQR) | Control (median, IQR) | *P* value |
| Food groups (per 1000kcal) |
| Total grains, g | 182.93 (80.40) | 185.44 (64.81) | 0.766 |
| Whole grains, g  | 6.84 (14.81) | 8.41 (15.39) | 0.138 |
| Tuber, g | 32.46 (10.15) | 32.32 (9.92) | <0.001 |
| Leaf vegetables, g | 133.27 (91.18) | 149.94 (114.70) | 0.002 |
| Starchy vegetables, g | 115.36 (104.42) | 127.54 (106.22) | 0.011 |
| Nuts and seeds, g | 7.83 (18.93) | 12.68 (21.06) | 0.010 |
| Fruits, g | 278.05 (218.89) | 328.50 (239.02) | <0.001 |
| Dairy and products, g | 141.35 (217.36) | 189.85 (217.16) | 0.012 |
| Egg, g | 51.90 (54.25) | 55.32 (52.30) | <0.001 |
| Fish and seafood, g  | 4.32 (10.25) | 6.54 (12.54) | <0.001 |
| Poultry, g | 4.29 (8.46) | 64.06 (61.27) | <0.001 |
| Red meat, g | 26.65 (41.04) | 43.84 (51.05) | <0.001 |
| Nutrients (per 1000kcal) |
| Soluble fiber, g | 11.68 (5.49) | 2448.91 (54.17) | <0.001 |
| Carbohydrate, g | 253.67 (40.19) | 249.15 (43.54) | 0.227 |
| Protein, g | 63.40 (13.19) | 66.43 (13.55) | <0.001 |
| Total fat, g | 76.48 (17.12) | 75.64 (16.79) | 0.583 |
| Cholesterol, g | 370.49 (297.05) | 414.39 (292.30) | <0.001 |
| SFA, g | 17.07 (5.02) | 17.55 (5.22) | 0.126 |
| MUFA, g | 25.86 (9.04) | 25.45 (9.09) | 0.944 |
| PUFA, g | 21.97 (8.88) | 20.85 (8.79) | 0.174 |
| Ca, mg | 544.65 (288.42) | 629.48 (204.74) | <0.001 |
| Mg, mg | 353.93 (142.05) | 407.19 (92.09) | <0.001 |
| Fe, mg | 17.77 (6.38) | 19.99 (3.44) | <0.001 |
| Zn, mg | 8.93 (3.67) | 10.53 (2.04) | <0.001 |
| Se, mg | 40.91 (20.72) | 46.47 (12.51) | <0.001 |
| β-carotene, μg | 2783.82 (1773.54) | 3331.76 (2074.00) | <0.001 |
| Vitamin A, μgRE | 713.00 (434.60) | 851.08 (435.04) | <0.001 |
| Vitamin C, mg | 117.14 (60.88) | 138.68 (64.49) | <0.001 |
| Vitamin E, mg | 28.92 (14.07) | 31.75 (12.45) | 0.004 |
| Vitamin D, μg | 2.18 (2.49) | 2.82 (3.08) | <0.001 |
| Vitamin B6, mg | 0.79 (0.35) | 0.95 (0.29) | <0.001 |
| Vitamin B12, μg | 0.30 (0.40) | 0.47 (0.47) | <0.001 |
| Folate, μg | 250.22 (112.49) | 296.17 (96.18) | <0.001 |
| Total anthocyanidins, mg | 52.77 (60.97) | 57.38 (68.25) | 0.122 |
| Total flavonoids, mg | 227.05 (171.47) | 236.72 (153.31) | 0.021 |

**Supplementary Table 3** Spearman’s correlation coefficient between inflammatory biomarkers and E-DII scores and food groups among study participants.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Food groups (per 1000kcal) | E-DII | *P* value | TNF-α (mg/dL) | *P* value | IFN-γ (mg/dL) | *P* value | IL-2 (mg/dL) | *P* value | IL-4 (mg/dL) | *P* value | IL-10 (mg/dL) | *P* value | IL-17A (mg/dL) | *P* value |
| E-DII | 1.000 |  | 0.084 | 0.165 | 0.194 | 0.001 | 0.083 | 0.157 | 0.135 | 0.021 | -0.010 | 0.866 | 0.092 | 0.120 |
| Total grains | 0.338 | <0.001 | 0.068 | 0.257 | 0.080 | 0.173 | -0.009 | 0.882 | 0.078 | 0.187 | 0.041 | 0.481 | 0.034 | 0.562 |
| Whole grains | -0.134 | <0.001 | 0.031 | 0.609 | 0.046 | 0.435 | 0.071 | 0.224 | 0.006 | 0.917 | 0.023 | 0.692 | 0.098 | 0.096 |
| Tuber | 0.057 | 0.085 | 0.037 | 0.542 | 0.024 | 0.682 | -0.109 | 0.063 | -0.016 | 0.783 | -0.037 | 0.521 | -0.060 | 0.310 |
| Leaf Vegetables | -0.663 | <0.001 | -0.089 | 0.138 | -0.154 | 0.008 | -0.133 | 0.023 | -0.070 | 0.234 | 0.007 | 0.909 | -0.112 | 0.058 |
| Starchy vegetables | -0.337 | <0.001 | 0.091 | 0.131 | -0.059 | 0.310 | 0.084 | 0.150 | -0.071 | 0.225 | -0.008 | 0.892 | -0.036 | 0.544 |
| Nuts and seeds | -0.140 | <0.001 | 0.056 | 0.353 | 0.100 | 0.087 | -0.017 | 0.766 | 0.088 | 0.134 | 0.057 | 0.323 | 0.113 | 0.055 |
| Fruits | -0.423 | <0.001 | -0.009 | 0.884 | -0.198 | 0.001 | -0.105 | 0.073 | -0.123 | 0.036 | -0.007 | 0.910 | -0.104 | 0.078 |
| Dairy and products | -0.004 | 0.908 | -0.034 | 0.569 | 0.010 | 0.864 | -0.036 | 0.536 | 0.049 | 0.402 | -0.008 | 0.894 | 0.012 | 0.835 |
| Egg | -0.101 | 0.002 | 0.043 | 0.472 | 0.045 | 0.442 | 0.025 | 0.668 | 0.081 | 0.167 | 0.076 | 0.192 | 0.067 | 0.255 |
| Fish and seafood  | -0.218 | <0.001 | -0.165 | 0.006 | -0.016 | 0.782 | -0.011 | 0.857 | 0.065 | 0.266 | -0.109 | 0.060 | 0.106 | 0.073 |
| Poultry | -0.201 | <0.001 | -0.142 | 0.018 | -0.040 | 0.496 | -0.166 | 0.004 | -0.040 | 0.496 | 0.035 | 0.550 | -0.006 | 0.917 |
| Red meat | -0.126 | <0.001 | -0.058 | 0.332 | 0.013 | 0.824 | -0.029 | 0.622 | 0.036 | 0.540 | 0.081 | 0.162 | 0.007 | 0.906 |

**Supplementary Table 4** Spearman’s correlation coefficient between inflammatory biomarkers and E-DII scores and nutrients among study participants.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Nutrients (per 1000kcal) | E-DII | *P* value | TNF-α (mg/dL) | *P* value | IFN-γ (mg/dL) | *P* value | IL-2 (mg/dL) | *P* value | IL-4 (mg/dL) | *P* value | IL-10 (mg/dL) | *P* value | IL-17A (mg/dL) | *P* value |
| E-DII | 1.000 |  | 0.084 | 0.165 | 0.194 | 0.001 | 0.083 | 0.157 | 0.135 | 0.021 | -0.010 | 0.866 | 0.092 | 0.120 |
| Soluble fiber, g | -0.081 | 0.014 | -0.133 | 0.027 | -0.060 | 0.303 | -0.209 | <0.001 | -0.079 | 0.181 | 0.042 | 0.469 | -0.030 | 0.606 |
| Carbohydrate, g | -0.087 | 0.008 | 0.089 | 0.142 | -0.057 | 0.325 | -0.044 | 0.457 | -0.059 | 0.319 | -0.025 | 0.665 | -0.042 | 0.481 |
| Protein, g | -0.397 | <0.001 | 0.000 | 0.996 | -0.021 | 0.724 | 0.047 | 0.423 | 0.029 | 0.617 | -0.024 | 0.679 | 0.057 | 0.332 |
| Total fat, g | 0.179 | <0.001 | -0.050 | 0.406 | 0.024 | 0.684 | 0.033 | 0.569 | 0.039 | 0.510 | 0.002 | 0.977 | 0.056 | 0.345 |
| Cholesterol, g | -0.147 | <0.001 | 0.019 | 0.750 | 0.035 | 0.544 | 0.025 | 0.674 | 0.052 | 0.967 | 0.059 | 0.312 | 0.044 | 0.454 |
| SFA, g | 0.111 | 0.001 | -0.041 | 0.497 | 0.050 | 0.389 | 0.018 | 0.765 | 0.108 | 0.067 | 0.028 | 0.626 | 0.072 | 0.223 |
| MUFA, g | 0.152 | <0.001 | -0.063 | 0.293 | 0.061 | 0.294 | -0.040 | 0.498 | 0.044 | 0.457 | 0.067 | 0.250 | 0.034 | 0.571 |
| PUFA, g | 0.100 | 0.002 | -0.009 | 0.881 | 0.047 | 0.425 | 0.004 | 0.998 | 0.025 | 0.669 | 0.183 | 0.883 | 0.084 | 0.154 |
| Ca, mg | -0.393 | <0.001 | -0.370 | 0.759 | -0.099 | 0.088 | -0.091 | 0.120 | -0.037 | 0.529 | -0.013 | 0.829 | -0.039 | 0.513 |
| Mg, mg | -0.605 | <0.001 | -0.016 | 0.795 | -0.227 | <0.001 | -0.119 | 0.041 | -0.067 | 0.254 | -0.014 | 0.806 | -0.044 | 0.452 |
| Fe, mg | -0.515 | <0.001 | -0.038 | 0.527 | -0.090 | 0.123 | -0.087 | 0.138 | -0.050 | 0.395 | 0.064 | 0.268 | -0.009 | 0.876 |
| Zn, mg | -0.384 | <0.001 | -0.041 | 0.498 | -0.062 | 0.285 | -0.076 | 0.193 | -0.021 | 0.725 | 0.056 | 0.335 | 0.035 | 0.555 |
| Se, mg | 0.194 | <0.001 | -0.029 | 0.629 | -0.054 | 0.358 | -0.054 | 0.358 | 0.102 | 0.081 | 0.026 | 0.653 | 0.037 | 0.530 |
| β-carotene, μg | -0.720 | <0.001 | -0.081 | 0.179 | -0.192 | 0.001 | -0.110 | 0.059 | -0.060 | 0.307 | 0.024 | 0.686 | -0.123 | 0.037 |
| Vitamin A, μgRE | -0.620 | <0.001 | -0.102 | 0.090 | -0.131 | 0.024 | -0.071 | 0.226 | -0.036 | 0.539 | 0.021 | 0.717 | -0.103 | 0.082 |
| Vitamin C, mg | -0.734 | <0.001 | -0.077 | 0.202 | -0.222 | <0.001 | -0.121 | 0.039 | -0.129 | 0.028 | 0.031 | 0.599 | -0.108 | 0.067 |
| Vitamin E, mg | 0.119 | <0.001 | -0.032 | 0.590 | -0.030 | 0.607 | 0.034 | 0.558 | -0.027 | 0.652 | 0.028 | 0.635 | 0.041 | 0.483 |
| Vitamin D, μg | -0.320 | <0.001 | -0.023 | 0.705 | -0.032 | 0.578 | 0.070 | 0.234 | 0.024 | 0.687 | 0.029 | 0.618 | 0.052 | 0.378 |
| Vitamin B6, mg | -0.320 | <0.001 | -0.056 | 0.352 | -0.230 | <0.001 | -0.133 | 0.022 | -0.090 | 0.126 | -0.036 | 0.534 | -0.111 | 0.059 |
| Vitamin B12, μg | -0.089 | 0.007 | -0.047 | 0.434 | 0.050 | 0.392 | -0.014 | 0.812 | 0.092 | 0.116 | -0.015 | 0.793 | 0.078 | 0.184 |
| Folate, μg | -0.609 | <0.001 | -0.077 | 0.202 | -0.159 | 0.006 | -0.122 | 0.036 | -0.062 | 0.294 | 0.055 | 0.346 | -0.091 | 0.123 |
| Total anthocyanidins, mg | -0.211 | <0.001 | 0.066 | 0.275 | -0.031 | 0.597 | 0.127 | 0.030 | -0.071 | 0.229 | -0.002 | 0.967 | 0.052 | 0.380 |
| Total flavonoids, mg | -0.416 | <0.001 | 0.095 | 0.114 | -0.159 | 0.006 | -0.014 | 0.808 | -0.100 | 0.090 | -0.010 | 0.858 | 0.005 | 0.928 |