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| Supplementary Table 1. Geometric means (95% CI) of F2-IsoP and 15-F2t-IsoP-M according to quartiles of antioxidant nutrients from combined dietary and supplemental sourcesa |
|   | F2-IsoPb | Ptrend |   | 15-F2t-IsoP-Mb | Ptrend |
| **Vitamin E (supplements + dietary, aTE)** |  | 0.064 |  |  | 0.004 |
| <11.13 | 1.51 (1.41, 1.62) |  |  | 0.75 (0.71, 0.79) |  |
| 11.13-24.97 | 1.53 (1.43, 1.63) |  |  | 0.76 (0.72, 0.80) |  |
| 24.98-48.80 | 1.42 (1.32, 1.51) |  |  | 0.69 (0.65, 0.73) |  |
| ≥48.81 | 1.34 (1.25, 1.43) |  |  | 0.65 (0.62, 0.69) |  |
| **Vitamin C (supplements + dietary, mg)** |  | 0.005 |  |  | 0.004 |
| <87.15 | 1.52 (1.42, 1.63) |  |  | 0.76 (0.72, 0.80) |  |
| 87.15-139.29 | 1.52 (1.42, 1.62) |  |  | 0.72 (0.68, 0.76) |  |
| 139.30-320.19 | 1.38 (1.29, 1.48) |  |  | 0.69 (0.65, 0.73) |  |
| ≥320.20 | 1.37 (1.28, 1.47) |  |  | 0.68 (0.64, 0.71) |  |
| **Beta-carotene (supplements + dietary, mcg)** |  | <0.001 |  |  | 0.002 |
| <3099.05 | 1.62 (1.52, 1.74) |  |  | 0.81 (0.76, 0.85) |  |
| 3099.05-5069.69 | 1.52 (1.42, 1.62) |  |  | 0.73 (0.69, 0.77) |  |
| 5069.70-8332.64 | 1.39 (1.30, 1.48) |  |  | 0.68 (0.64, 0.71) |  |
| ≥8332.65 | 1.27 (1.19, 1.36) |  |  | 0.64 (0.61, 0.68) |  |
| **Vitamin A (supplements + dietary, RAE)** |  | <0.001 |  |  | <0.001 |
| <738.90 | 1.49 (1.39, 1.59) |  |  | 0.76 (0.72, 0.81) |  |
| 738.90-1380.75 | 1.50 (1.41, 1.61) |  |  | 0.73 (0.69, 0.77) |  |
| 1380.76-2161.84 | 1.48 (1.38, 1.58) |  |  | 0.71 (0.68, 0.75) |  |
| ≥2161.85 | 1.33 (1.24, 1.42) |  |  | 0.65 (0.61, 0.68) |  |
| **Selenium (supplements + dietary, mcg)** |  | 0.004 |  |  | 0.001 |
| <69.10 | 1.59 (1.47, 1.73) |  |  | 0.81 (0.76, 0.86) |  |
| 69.10-89.54 | 1.46 (1.36, 1.56) |  |  | 0.68 (0.65, 0.72) |  |
| 89.54-118.69 | 1.48 (1.38, 1.58) |  |  | 0.71 (0.67, 0.75) |  |
| ≥118.70 | 1.27 (1.17, 1.39) |  |  | 0.65 (0.61, 0.70) |  |
| **Zinc (supplements + dietary, mg)** |  | 0.005 |  |  | <0.001 |
| <9.50 | 1.52 (1.42, 1.64) |  |  | 0.78 (0.73, 0.82) |  |
| 9.50-16.10 | 1.47 (1.37, 1.57) |  |  | 0.71 (0.67, 0.75) |  |
| 16.10-24.09 | 1.47 (1.38, 1.57) |  |  | 0.71 (0.68, 0.75) |  |
| ≥24.10 | 1.33 (1.24, 1.42) |  |  | 0.65 (0.61, 0.69) |  |
| Abbreviations: F2-IsoP, F2-isoprostanes; 15-F2t-IsoP-M, 2,3-dinor-5,6-dihydro-15-F2t-isoprostane |
| aValues of F2-IsoP and 15-F2t-IsoPM are expressed in ng/mg creatinine |  |  |
| bAdjusted for age, BMI, race/ethnicity, physical activity, total energy intake, household income, current smoker |

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| Supplementary table 2. Geometric means (95% CI) of F2-IsoP and 15-F2t-IsoP-M according to quartiles of physical activity, alcohol, and dietary fat subgroups stratified by body mass indexa |
|  | F2-IsoPb |  | 15-F2t-IsoP-Mb |
|   | BMI 18.5-29.9 | Ptrend | BMI 30.0+ | Ptrend |   | Pinteraction |   | BMI 18.5-29.9 | Ptrend | BMI 30.0+ | Ptrend |   | Pinteraction |
| **N** | 637 |  | 237 |  |  |  |  | 637 |  | 237 |  |  |  |
| **Physical activity (total MET hrs per week)** |  | 0.002 |  | 0.188 |  | 0.922 |  |  | 0.033 |  | 0.934 |  | 0.383 |
| <28.12 | 1.49 (1.37, 1.61) |  | 2.01 (1.76, 2.29) |  |  |  |  | 0.71 (0.66, 0.76) |  | 1.01 (0.92, 1.11) |  |  |  |
| 28.12-44.19 | 1.34 (1.24, 1.44) |  | 1.68 (1.46, 1.93) |  |  |  |  | 0.64 (0.60, 0.68) |  | 0.86 (0.78, 0.96) |  |  |  |
| 44.20-65.88 | 1.45 (1.34, 1.56) |  | 1.51 (1.31, 1.75) |  |  |  |  | 0.66 (0.62, 0.71) |  | 0.80 (0.71, 0.89) |  |  |  |
| ≥65.89 | 1.25 (1.16, 1.34) |  | 1.55 (1.28, 1.86) |  |  |  |  | 0.61 (0.57, 0.65) |  | 0.95 (0.83, 1.09) |  |  |  |
| **Alcohol intake (g/day)** |  | 0.354 |  | 0.045 |  | 0.172 |  |  | 0.503 |  | 0.859 |  | 0.975 |
| <0.23 | 1.46 (1.34, 1.59) |  | 1.92 (1.69, 2.17) |  |  |  |  | 0.69 (0.64, 0.74) |  | 0.99 (0.90, 1.09) |  |  |  |
| 0.23-1.84 | 1.40 (1.29, 1.52) |  | 1.72 (1.51, 1.97) |  |  |  |  | 0.64 (0.60, 0.69) |  | 0.89 (0.80, 0.98) |  |  |  |
| 1.85-7.99 | 1.32 (1.23, 1.42) |  | 1.57 (1.33, 1.84) |  |  |  |  | 0.62 (0.58, 0.66) |  | 0.82 (0.73, 0.93) |  |  |  |
| ≥8.0 | 1.34 (1.25, 1.43) |  | 1.47 (1.22, 1.78) |  |  |  |  | 0.66 (0.62, 0.70) |  | 0.85 (0.74, 0.98) |  |  |  |
| **Total dietary N-6 fatty acids (g)** |  | 0.757 |  | 0.774 |  | 0.808 |  |  | 0.845 |  | 0.901 |  | 0.978 |
| <9.43 | 1.36 (1.27, 1.47) |  | 1.64 (1.39, 1.94) |  |  |  |  | 0.67 (0.62, 0.71) |  | 0.92 (0.81, 1.04) |  |  |  |
| 9.43-12.63 | 1.41 (1.32, 1.52) |  | 1.65 (1.41, 1.93) |  |  |  |  | 0.63 (0.60, 0.68) |  | 0.83 (0.74, 0.94) |  |  |  |
| 12.64-17.43 | 1.35 (1.25, 1.45) |  | 1.99 (1.71, 2.32) |  |  |  |  | 0.64 (0.60, 0.68) |  | 0.98 (0.88, 1.10) |  |  |  |
| ≥17.44 | 1.34 (1.23, 1.45) |  | 1.61 (1.41, 1.84) |  |  |  |  | 0.66 (0.62, 0.71) |  | 0.88 (0.80, 0.98) |  |  |  |
| **Total dietary N-3 fatty acids (g)** |  | 0.915 |  | 0.814 |  | 0.868 |  |  | 0.493 |  | 0.855 |  | 0.881 |
| <1.05 | 1.36 (1.25, 1.46) |  | 1.71 (1.45, 2.00) |  |  |  |  | 0.68 (0.63, 0.72) |  | 0.91 (0.80, 1.02) |  |  |  |
| 1.05-1.43 | 1.41 (1.32, 1.52) |  | 1.80 (1.53, 2.11) |  |  |  |  | 0.65 (0.61, 0.69) |  | 0.88 (0.77, 0.99) |  |  |  |
| 1.44-1.93 | 1.34 (1.24, 1.44) |  | 1.67 (1.44, 1.93) |  |  |  |  | 0.62 (0.59, 0.67) |  | 0.91 (0.82, 1.02) |  |  |  |
| ≥1.94 | 1.36 (1.26, 1.48) |  | 1.69 (1.47, 1.95) |  |  |  |  | 0.66 (0.61, 0.70) |  | 0.91 (0.82, 1.02) |  |  |  |
| **Saturated fat (g)** |  | 0.589 |  | 0.264 |  | 0.503 |  |  | 0.286 |  | 0.727 |  | 0.589 |
| <13.63 | 1.37 (1.28, 1.47) |  | 1.70 (1.41, 2.05) |  |  |  |  | 0.65 (0.61, 0.70) |  | 0.93 (0.81, 1.07) |  |  |  |
| 13.63-18.50 | 1.36 (1.27, 1.47) |  | 1.62 (1.39, 2.11) |  |  |  |  | 0.62 (0.58, 0.66) |  | 0.83 (0.74, 0.93) |  |  |  |
| 18.51-25.05 | 1.35 (1.26, 1.45) |  | 1.56 (1.33, 1.83) |  |  |  |  | 0.66 (0.62, 0.70) |  | 0.92 (0.82, 1.04) |  |  |  |
| ≥25.06 | 1.39 (1.28, 1.51) |  | 1.88 (1.66, 2.12) |  |  |  |  | 0.67 (0.62, 0.72) |  | 0.93 (0.85, 1.02) |  |  |  |
| **Mono-unsaturated fat (g)** |  | 0.931 |  | 0.799 |  | 0.899 |  |  | 0.798 |  | 0.927 |  | 0.682 |
| <18.06 | 1.39 (1.29, 1.50) |  | 1.65 (1.39, 1.96) |  |  |  |  | 0.66 (0.62, 0.70) |  | 0.91 (0.80, 1.04) |  |  |  |
| 18.06-24.37 | 1.32 (1.23, 1.42) |  | 1.64 (1.40, 1.92) |  |  |  |  | 0.62 (0.58, 0.66) |  | 0.88 (0.78, 1.00) |  |  |  |
| 24.38-32.86 | 1.39 (1.29, 1.49) |  | 1.73 (1.47, 2.02) |  |  |  |  | 0.66 (0.62, 0.71) |  | 0.93 (0.82, 1.04) |  |  |  |
| ≥32.87 | 1.37 (1.26, 1.49) |  | 1.78 (1.57, 2.02) |  |  |  |  | 0.66 (0.61, 0.71) |  | 0.90 (0.82, 0.99) |  |  |  |
| **Poly-unsaturated fat (g)** |  | 0.792 |  | 0.754 |  | 0.835 |  |  | 0.828 |  | 0.873 |  | 0.990 |
| <10.67 | 1.37 (1.27, 1.48) |  | 1.63 (1.37, 1.93) |  |  |  |  | 0.66 (0.62, 0.71) |  | 0.93 (0.81, 1.05) |  |  |  |
| 10.67-14.27 | 1.42 (1.32, 1.52) |  | 1.70 (1.46, 1.98) |  |  |  |  | 0.63 (0.59, 0.67) |  | 0.83 (0.74, 0.94) |  |  |  |
| 14.28-19.49 | 1.35 (1.28, 1.46) |  | 1.95 (1.67, 2.27) |  |  |  |  | 0.65 (0.61, 0.69) |  | 0.98 (0.87, 1.10) |  |  |  |
| ≥19.50 | 1.33 (1.22, 1.44) |  | 1.61 (1.41, 1.84) |  |  |  |  | 0.66 (0.61, 0.71) |  | 0.89 (0.80, 0.98) |  |  |  |
| **Trans fat (g)** |  | 0.007 |  | 0.010 |  | 0.560 |  |  | 0.001 |  | 0.039 |  | 0.564 |
| <2.94 | 1.28 (1.19, 1.37) |  | 1.48 (1.24, 1.75) |  |  |  |  | 0.60 (0.57, 0.64) |  | 0.84 (0.74, 0.96) |  |  |  |
| 2.94-4.36 | 1.34 (1.24, 1.43) |  | 1.54 (1.29, 1.83) |  |  |  |  | 0.65 (0.61, 0.69) |  | 0.76 (0.67, 0.87) |  |  |  |
| 4.37-6.24 | 1.40 (1.30, 1.51) |  | 1.76 (1.53, 2.01) |  |  |  |  | 0.66 (0.61, 0.70) |  | 0.95 (0.85, 1.05) |  |  |  |
| ≥6.25 | 1.50 (1.39, 1.63) |  | 1.90 (1.68, 2.14) |  |  |  |  | 0.70 (0.66, 0.76) |  | 0.98 (0.89, 1.07) |  |  |  |
| **Total fat (g)** |  | 0.871 |  | 0.576 |  | 0.772 |  |  | 0.670 |  | 0.897 |  | 0.702 |
| <46.54 | 1.39 (1.29, 1.50) |  | 1.66 (1.39, 1.99) |  |  |  |  | 0.65 (0.61, 0.70) |  | 0.93 (0.81, 1.07) |  |  |  |
| 46.55-62.39 | 1.32 (1.23, 1.42) |  | 1.69 (1.45, 1.97) |  |  |  |  | 0.63 (0.59, 0.67) |  | 0.89 (0.79, 1.00) |  |  |  |
| 62.40-84.37 | 1.37 (1.28, 1.47) |  | 1.79 (1.52, 2.10) |  |  |  |  | 0.66 (0.62, 0.70) |  | 0.90 (0.80, 1.02) |  |  |  |
| ≥84.38 | 1.39 (1.28, 1.51) |  | 1.71 (1.51, 1.94) |  |  |  |  | 0.66 (0.62, 0.71) |  | 0.90 (0.82, 0.99) |  |  |  |
| **Total dietary short-chain N-3 fatty acids (g)** |  | 0.938 |  | 0.588 |  | 0.997 |  |  | 0.660 |  | 0.750 |  | 0.938 |
| <0.96 | 1.34 (1.25, 1.45) |  | 1.77 (1.51, 2.08) |  |  |  |  | 0.65 (0.61, 0.69) |  | 0.91 (0.81, 1.03) |  |  |  |
| 0.96-1.32 | 1.43 (1.33, 1.54) |  | 1.75 (1.48, 2.06) |  |  |  |  | 0.66 (0.62, 0.70) |  | 0.86 (0.76, 0.98) |  |  |  |
| 1.33-1.78 | 1.30 (1.21, 1.40) |  | 1.65 (1.42, 1.91) |  |  |  |  | 0.62 (0.58, 0.66) |  | 0.92 (0.82, 1.03) |  |  |  |
| ≥1.79 | 1.40 (1.29, 1.51) |  | 1.69 (1.47, 1.94) |  |  |  |  | 0.67 (0.63, 0.72) |  | 0.91 (0.82, 1.01) |  |  |  |
| **Total dietary long-chain N-3 fatty acids (g)** |  | 0.860 |  | 0.055 |  | 0.067 |  |  | 0.170 |  | 0.411 |  | 0.985 |
| <0.05 | 1.40 (1.30, 1.51) |  | 1.79 (1.54, 2.08) |  |  |  |  | 0.68 (0.64, 0.73) |  | 0.93 (0.83, 1.05) |  |  |  |
| 0.05-0.08 | 1.34 (1.25, 1.45) |  | 1.98 (1.72, 2.28) |  |  |  |  | 0.64 (0.60, 0.69) |  | 0.96 (0.86, 1.07) |  |  |  |
| 0.09-0.15 | 1.35 (1.25, 1.45) |  | 1.65 (1.41, 1.94) |  |  |  |  | 0.64 (0.60, 0.68) |  | 0.90 (0.79, 1.02) |  |  |  |
| ≥0.16 | 1.38 (1.28, 1.49) |  | 1.46 (1.26, 1.69) |  |  |  |  | 0.64 (0.60, 0.68) |  | 0.83 (0.74, 0.93) |  |  |  |
| **Healthy Eating Index Scorec** |  | 0.182 |  | 0.687 |  | 0.422 |  |  | 0.174 |  | 0.677 |  | 0.127 |
| <53 | 1.39 (1.28, 1.52) |  | 1.76 (1.55, 2.00) |  |  |  |  | 0.67 (0.62, 0.72) |  | 0.89 (0.81, 0.98) |  |  |  |
| 53-62 | 1.45 (1.35, 1.56) |  | 1.74 (1.51, 2.01) |  |  |  |  | 0.68 (0.64, 0.72) |  | 0.92 (0.82, 1.02) |  |  |  |
| 63-71 | 1.31 (1.22, 1.40) |  | 1.77 (1.48, 2.11) |  |  |  |  | 0.63 (0.59, 0.67) |  | 1.02 (0.89, 1.16) |  |  |  |
| ≥72 | 1.34 (1.25, 1.44) |   | 1.52 (1.27, 1.83) |   |   |   |   | 0.64 (0.60, 0.68) |   | 0.80 (0.70, 0.92) |   |   |   |
| Abbreviations: F2-IsoP, F2-isoprostanes; 15-F2t-IsoP-M, 2,3-dinor-5,6-dihydro-15-F2t-isoprostane; BMI, body mass index, kg/m2 |
| aValues of F2-IsoP and 15-F2t-IsoPM are expressed in ng/mg creatinine |
| bAdjusted for age, race/ethnicity, physical activity, household income, current smoker, fruit and vegetables servings/day, and any multivitamin and/or supplement use |
| cAdjusted for age, race/ethnicity, physical activity, household income, current smoker, and any multivitamin and/or supplement use |

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| Supplementary table 3. Geometric means (95% CI) of F2-IsoP and 15-F2t-IsoP-M according to quartiles of fruits and vegetables servings and intake of dietary antioxidant nutrients stratified by body mass indexa |
|  | F2-IsoPb |  | 15-F2t-IsoP-Mb |
|   | BMI 18.5-29.9 | Ptrend | BMI 30.0+ | Ptrend |   | Pinteraction |   | BMI 18.5-29.9 | Ptrend | BMI 30.0+ | Ptrend |   | Pinteraction |
| **N** | 637 |  | 237 |  |  |  |  | 637 |  | 237 |  |  |  |
| **Fruit (servings/day)** |  | 0.009 |  | 0.593 |  | 0.377 |  |  | 0.156 |  | 0.463 |  | 0.960 |
| <0.6 | 1.51 (1.39, 1.64) |  | 1.66 (1.46, 1.89) |  |  |  |  | 0.69 (0.65, 0.75) |  | 0.87 (0.79, 0.95) |  |  |  |
| 0.6-1.0 | 1.40 (1.30, 1.51) |  | 1.97 (1.69, 2.30) |  |  |  |  | 0.65 (0.61, 0.69) |  | 0.99 (0.89, 1.12) |  |  |  |
| 1.1-1.9 | 1.35 (1.25, 1.46) |  | 1.57 (1.33, 1.86) |  |  |  |  | 0.66 (0.62, 0.71) |  | 0.97 (0.86, 1.10) |  |  |  |
| ≥2.0 | 1.28 (1.19, 1.36) |  | 1.65 (1.40, 1.95) |  |  |  |  | 0.62 (0.58, 0.66) |  | 0.81 (0.71, 0.92) |  |  |  |
| **Vegetable (servings/day)** |  | 0.005 |  | 0.002 |  | 0.337 |  |  | 0.003 |  | 0.002 |  | 0.354 |
| <1.6 | 1.55 (1.43, 1.69) |  | 1.97 (1.69, 2.30) |  |  |  |  | 0.70 (0.65, 0.75) |  | 0.96 (0.86, 1.08) |  |  |  |
| 1.6-2.6 | 1.38 (1.28, 1.48) |  | 1.81 (1.57, 2.10) |  |  |  |  | 0.69 (0.65, 0.73) |  | 1.00 (0.90, 1.12) |  |  |  |
| 2.7-4.2 | 1.31 (1.21, 1.41) |  | 1.73 (1.49, 2.00) |  |  |  |  | 0.59, 0.56, 0.63) |  | 0.92 (0.82, 1.03) |  |  |  |
| ≥4.3 | 1.28 (1.18, 1.38) |  | 1.39 (1.18, 1.63) |  |  |  |  | 0.63 (0.59, 0.67) |  | 0.75 (0.66, 0.84) |  |  |  |
| **Vitamin E (α-tocopherol, mg)** |  | <0.001 |  | 0.002 |  | 0.921 |  |  | <0.001 |  | 0.006 |  | 0.648 |
| <5.6 | 1.59 (1.45, 1.74) |  | 2.01 (1.68, 2.41) |  |  |  |  | 0.77 (0.71, 0.83) |  | 1.06 (0.93, 1.22) |  |  |  |
| 5.6-7.5 | 1.34 (1.24, 1.45) |  | 1.98 (1.71, 2.30) |  |  |  |  | 0.65 (0.60, 0.69) |  | 0.93 (0.83, 1.04) |  |  |  |
| 7.6-10.0 | 1.34 (1.25, 1.44) |  | 1.75 (1.49, 2.05) |  |  |  |  | 0.64 (0.60, 0.68) |  | 0.92 (0.82, 1.04) |  |  |  |
| ≥10.1 | 1.23 (1.12, 1.35) |  | 1.25 (1.04, 1.51) |  |  |  |  | 0.57 (0.53, 0.62) |  | 0.75 (0.65, 0.86) |  |  |  |
| **Vitamin C (mg)** |  | 0.023 |  | 0.038 |  | 0.588 |  |  | 0.096 |  | 0.120 |  | 0.580 |
| <55.4 | 1.49 (1.37, 1.62) |  | 1.95 (1.69, 2.25) |  |  |  |  | 0.69 (0.64, 0.74) |  | 0.97 (0.87, 1.09) |  |  |  |
| 55.4-84.1 | 1.44 (1.34, 1.56) |  | 1.62 (1.40, 1.87) |  |  |  |  | 0.69 (0.64, 0.74) |  | 0.90 (0.80, 1.00) |  |  |  |
| 84.2-121.7 | 1.32 (1.23, 1.42) |  | 1.83 (1.54, 2.16) |  |  |  |  | 0.63 (0.59, 0.67) |  | 0.87 (0.76, 0.99) |  |  |  |
| ≥121.8 | 1.25 (1.15, 1.35) |  | 1.44 (1.22, 1.71) |  |  |  |  | 0.61 (0.57, 0.65) |  | 0.85 (0.74, 0.96) |  |  |  |
| **Beta-carotene (mcg)** |  | <0.001 |  | <0.001 |  | 0.367 |  |  | 0.002 |  | 0.006 |  | 0.654 |
| <2448.50 | 1.53 (1.41, 1.66) |  | 1.83 (1.61, 2.10) |  |  |  |  | 0.75 (0.70, 0.80) |  | 0.94 (0.85, 1.04) |  |  |  |
| 2448.50-4111.89 | 1.39 (1.29, 1.50) |  | 1.97 (1.70, 2.29) |  |  |  |  | 0.67 (0.63, 0.72) |  | 1.01 (0.90, 1.14) |  |  |  |
| 4111.90-6999.74 | 1.35 (1.26, 1.46) |  | 1.68 (1.44, 1.97) |  |  |  |  | 0.60 (0.57, 0.64) |  | 0.88 (0.78, 1.00) |  |  |  |
| ≥6999.75 | 1.24 (1.15, 1.33) |  | 1.35 (1.15, 1.59) |  |  |  |  | 0.60 (0.56, 0.64) |  | 0.77 (0.68, 0.87) |  |  |  |
| **Vitamin A (RAE)** |  | <0.001 |  | 0.002 |  | 0.867 |  |  | 0.005 |  | 0.010 |  | 0.671 |
| <543.40 | 1.48 (1.36, 1.61) |  | 2.11 (1.82, 2.45) |  |  |  |  | 0.72 (0.67, 0.77) |  | 1.05 (0.94, 1.18) |  |  |  |
| 543.40-745.79 | 1.41 (1.31, 1.52) |  | 1.73 (1.49, 2.00) |  |  |  |  | 0.66 (0.62, 0.70) |  | 0.92 (0.82, 1.03) |  |  |  |
| 745.80-1074.64 | 1.39 (1.29, 1.50) |  | 1.67 (1.44, 1.95) |  |  |  |  | 0.63 (0.59, 0.68) |  | 0.86 (0.77, 0.97) |  |  |  |
| ≥1074.65 | 1.22 (1.12, 1.32) |  | 1.30 (1.09, 1.56) |  |  |  |  | 0.60 (0.56, 0.65) |  | 0.76 (0.66, 0.87) |  |  |  |
| **Selenium (mcg)** |  | 0.076 |  | <0.001 |  | 0.813 |  |  | 0.021 |  | 0.002 |  | 0.523 |
| <60.10 | 1.46 (1.32, 1.60) |  | 1.95 (1.58, 2.41) |  |  |  |  | 0.71 (0.65, 0.77) |  | 1.05 (0.89, 1.23) |  |  |  |
| 60.10-78.59 | 1.34 (1.24, 1.44) |  | 2.00 (1.70, 2.34) |  |  |  |  | 0.64 (0.60, 0.68) |  | 0.89 (0.79, 1.01) |  |  |  |
| 78.60-103.74 | 1.38 (1.28, 1.48) |  | 1.71 (1.47, 1.99) |  |  |  |  | 0.63 (0.59, 0.68) |  | 0.93 (0.83, 1.05) |  |  |  |
| ≥103.75 | 1.30 (1.16, 1.45) |  | 1.39 (1.15, 1.68) |  |  |  |  | 0.61 (0.56, 0.68) |  | 0.81 (0.70, 0.93) |  |  |  |
| **Zinc (mg)** |  | 0.008 |  | 0.229 |  | 0.277 |  |  | 0.028 |  | 0.619 |  | 0.369 |
| <7.0 | 1.49 (1.36, 1.63) |  | 2.05 (1.69, 2.48) |  |  |  |  | 0.72 (0.67, 0.78) |  | 1.04 (0.90, 1.20) |  |  |  |
| 7.0-9.4 | 1.43 (1.32, 1.54) |  | 1.80 (1.54, 2.10) |  |  |  |  | 0.67 (0.63, 0.72) |  | 0.87 (0.77, 0.98) |  |  |  |
| 9.5-12.5 | 1.31 (1.21, 1.41) |  | 1.67 (1.43, 1.95) |  |  |  |  | 0.63 (0.59, 0.67) |  | 0.90 (0.80, 1.01) |  |  |  |
| ≥12.6 | 1.26 (1.15, 1.39) |  | 1.43 (1.18, 1.74) |  |  |  |  | 0.59 (0.54, 0.64) |  | 0.84 (0.72, 0.97) |  |  |  |
| **Lutein + zeaxanthin (mcg)** |  | 0.002 |  | <0.001 |  | 0.091 |  |  | <0.001 |  | 0.001 |  | 0.515 |
| <1927.95 | 1.58 (1.46, 1.72) |  | 1.96 (1.72, 2.24) |  |  |  |  | 0.75 (0.70, 0.81) |  | 0.99 (0.90, 1.10) |  |  |  |
| 1927.95-3299.89 | 1.33 (1.24, 1.44) |  | 1.80 (1.55, 2.09) |  |  |  |  | 0.65 (0.61, 0.70) |  | 0.94 (0.84, 1.05) |  |  |  |
| 3299.90-6159.49 | 1.37 (1.28, 1.48) |  | 1.84 (1.56, 2.18) |  |  |  |  | 0.64 (0.60, 0.68) |  | 0.93 (0.82, 1.06) |  |  |  |
| ≥6159.50 | 1.23 (1.14, 1.33) |  | 1.28 (1.10, 1.49) |  |  |  |  | 0.58 (0.54, 0.62) |  | 0.75 (0.67, 0.84) |  |  |  |
| **Lycopene (mcg)** |  | 0.805 |  | 0.129 |  | 0.435 |  |  | 0.790 |  | 0.974 |  | 0.725 |
| <2570.50 | 1.40 (1.29, 1.52) |  | 1.67 (1.43, 1.96) |  |  |  |  | 0.67 (0.62, 0.72) |  | 0.88 (0.78, 0.99) |  |  |  |
| 2570.50-4153.29 | 1.31 (1.21, 1.41) |  | 1.79 (1.51, 2.13) |  |  |  |  | 0.64 (0.60, 0.68) |  | 0.88 (0.77, 1.00) |  |  |  |
| 4153.30-6099.94 | 1.45 (1.35, 1.56) |  | 1.89 (1.62, 2.19) |  |  |  |  | 0.64 (0.60, 0.68) |  | 0.93 (0.83, 1.04) |  |  |  |
| ≥6099.94 | 1.31 (1.21, 1.43) |  | 1.56 (1.34, 1.81) |  |  |  |  | 0.65 (0.60, 0.70) |  | 0.92 (0.82, 1.03) |  |  |  |
| **Alpha-carotene (mcg)** |  | 0.096 |  | 0.178 |  | 0.873 |  |  | 0.504 |  | 0.692 |  | 0.547 |
| <238.40 | 1.44 (1.33, 1.56) |  | 1.65 (1.43, 1.90) |  |  |  |  | 0.70 (0.65, 0.75) |  | 0.90 (0.81, 1.00) |  |  |  |
| 238.40-442.19 | 1.40 (1.30, 1.51) |  | 1.98 (1.71, 2.29) |  |  |  |  | 0.64 (0.60, 0.68) |  | 0.96 (0.86, 1.08) |  |  |  |
| 442.20-839.49 | 1.33 (1.24, 1.44) |  | 1.60 (1.38, 1.86) |  |  |  |  | 0.66 (0.62, 0.71) |  | 0.84 (0.75, 0.94) |  |  |  |
| ≥839.50 | 1.31 (1.21, 1.41) |  | 1.64 (1.37, 1.96) |  |  |  |  | 0.61 (0.57, 0.65) |  | 0.91 (0.80, 1.05) |  |  |  |
| **Cryptoxanthin (mcg)** |  | 0.279 |  | 0.350 |  | 0.601 |  |  | 0.592 |  | 0.921 |  | 0.944 |
| <66.30 | 1.49 (1.37, 1.62) |  | 1.79 (1.57, 2.05) |  |  |  |  | 0.71 (0.66, 0.76 |  | 0.92 (0.83, 1.02) |  |  |  |
| 66.30-122.59 | 1.39 (1.29, 1.50) |  | 1.69 (1.46, 1.96) |  |  |  |  | 0.65 (0.61, 0.70) |  | 0.88 (0.79, 0.99) |  |  |  |
| 122.60-211.39 | 1.33 (1.23, 1.42) |  | 1.71 (1.43, 2.04) |  |  |  |  | 0.63 (0.59, 0.67) |  | 0.96 (0.84, 1.10) |  |  |  |
| ≥211.40 | 1.30 (1.20, 1.40) |  | 1.61 (1.35, 1.91) |  |  |  |  | 0.62 (0.58, 0.67) |  | 0.85 (0.75, 0.97) |  |  |  |
| **Total carotenoids (mcg)** |  | 0.004 |  | <0.001 |  | 0.219 |  |  | 0.002 |  | 0.012 |  | 0.692 |
| <8567.9 | 1.50 (1.39, 1.63) |  | 1.92 (1.66, 2.21) |  |  |  |  | 0.73 (0.68, 0.78) |  | 0.96 (0.86, 1.07) |  |  |  |
| 8567.9-12989.5 | 1.39 (1.28, 1.49) |  | 1.96 (1.70, 2.26) |  |  |  |  | 0.66 (0.62, 0.71) |  | 0.97 (0.87, 1.08) |  |  |  |
| 12989.6-20071.8 | 1.39 (1.30, 1.50) |  | 1.64 (1.38, 1.94) |  |  |  |  | 0.62 (0.59, 0.66) |  | 0.92 (0.80, 1.05) |  |  |  |
| ≥20071.9 | 1.21 (1.12, 1.31) |   | 1.36 (1.16, 1.59) |   |   |   |   | 0.60 (0.56, 0.64) |   | 0.77 (0.69, 0.87) |   |   |   |
| Abbreviations: F2-IsoP, F2-isoprostanes; 15-F2t-IsoP-M, 2,3-dinor-5,6-dihydro-15-F2t-isoprostane; BMI, body mass index, kg/m2 |
| aValues of F2-IsoP and 15-F2t-IsoPM are expressed in ng/mg creatinine |
| bAdjusted for age, race/ethnicity, physical activity, total energy intake, household income, current smoker; fruit and vegetable servings additionally adjusted for any multivitamin/supplement use |