**Supplemental Table 3.** Associations between diet quality scores (DQI-65+, HEI-2015 and AHEI-2010) and biomarkers of nutrient intake for subjects aged ≥65y from UK NDNS years 2-6*1*.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Biomarkers of nutrient intake** | **FDQI-65+PA** | | **NFDQI-65+PA** | | **NFDQI-65** | | **HEI-2015** | | **AHEI-2010** | | |
| **B (95% CI)** | **P value** | **B (95% CI)** | **P value** | **B (95% CI)** | **P value** | **B (95% CI)** | **P value** | **B (95% CI)** | **P value** | |
| **Serum vitamin B12***2,3* **(pmol/L)** | 0.01 (0.01,0.02) | <0.001 | 0.01 (0.01,0.02) | <0.001 | 0.01 (0.01,0.02) | <0.001 | 0.01 (0.01,0.02) | <0.001 | 0.01 (0.01,0.02) | | <0.001 |
| 0.01 (0.00,0.01) | 0.006 | 0.01 (0.00,0.01) | 0.025 | 0.01 (0.00,0.01) | 0.060 | 0.01 (0.00,0.01) | 0.068 | 0.01 (0.00,0.01) | | 0.182 |
| **Plasma 25-hydroxy Vitamin D***4* **(nmol/L)** | 1.97 (1.18,2.76) | <0.001 | 2.12 (1.28,2.95) | <0.001 | 1.85 (0.99,2.71) | <0.001 | 2.05 (1.20,2.90) | <0.001 | 1.32 (0.38,2.25) | | 0.006 |
| 0.68 (-0.15,1.51) | 0.106 | 0.71 (-0.17,1.58) | 0.113 | 0.43 (-0.46,1.32) | 0.347 | 0.82 (-0.05,1.68) | 0.063 | -0.06 (-0.99,0.88) | | 0.906 |
| **Haemoglobin concentration***5* **(g/dL)** | 0.05 (0.00,0.11) | 0.052 | 0.02 (-0.04,0.08) | 0.460 | 0.01 (-0.05,0.07) | 0.689 | 0.03 (-0.03,0.08) | 0.407 | -0.05 (-0.12,0.01) | | 0.086 |
| 0.07 (0.01,0.12) | 0.025 | 0.03 (-0.03,0.09) | 0.387 | 0.02 (-0.05,0.08) | 0.631 | 0.03 (-0.04,0.09) | 0.425 | -0.06 (-0.13,0.01) | | 0.074 |
| **Plasma total homocysteine***2,6* **(μmol/L)** | -0.02 (-0.03,-0.01) | <0.001 | -0.02 (-0.02,-0.01) | <0.001 | -0.02 (-0.02,-0.01) | <0.001 | -0.01 (-0.02,-0.01) | <0.001 | -0.01 (-0.02,0.00) | | 0.003 |
| -0.02 (-0.03,-0.01) | <0.001 | -0.02 (-0.02,-0.01) | <0.001 | -0.02 (-0.02,-0.01) | <0.001 | -0.01 (-0.02,-0.01) | <0.001 | -0.01 (-0.02,0.00) | | 0.033 |
| **Plasma α-tocopherol***7* **(μmol/L)** | 0.36 (0.11,0.62) | 0.005 | 0.30 (0.03,0.58) | 0.028 | 0.39 (0.11,0.67) | 0.007 | 0.45 (0.17,0.73) | 0.002 | 0.60 (0.31,0.90) | | <0.001 |
| 0.24 (-0.05,0.52) | 0.099 | 0.14 (-0.16,0.44) | 0.353 | 0.24 (-0.06,0.55) | 0.119 | 0.32 (0.02,0.62) | 0.035 | 0.48 (0.16,0.80) | | 0.004 |
| **Plasma β-carotene***2,8* **(μmol/L)** | 0.04 (0.03,0.05) | <0.001 | 0.04 (0.03,0.06) | <0.001 | 0.04 (0.03,0.05) | <0.001 | 0.05 (0.03,0.06) | <0.001 | 0.04 (0.03,0.06) | | <0.001 |
| 0.03 (0.02,0.04) | <0.001 | 0.03 (0.02,0.04) | <0.001 | 0.03 (0.02,0.04) | <0.001 | 0.03 (0.02,0.05) | <0.001 | 0.03 (0.02,0.04) | | <0.001 |
| 1 Values are unstandardised B coefficients for continuous variables of change in dependent variable intake by 5% increase in DQI-65+, AHEI-2010 or HEI-2015 total score and OR for categorical variables indicating odds of health outcome based on standard unit increase in DQI-65+, AHEI-2010 or HEI-2015 total score; maximum score available 120 points (NFDQI-65, AHEI-2010, HEI-2015 scores adjusted to maximum 120 points for comparison); P-values are test for significance of relationship between DQI-65+, AHEI-2010 or HEI-2015 score and nutrient intake by linear regression for continuous variables or significance of OR by logistic regression for categorical variables; NDNS blood weights applied; two models presented adjusted for confounders by stepwise approach; models displayed linearly: model 1 adjusted for age and sex; model 2 adjusted for age, sex, BMI, waist circumference, smoking, supplement use (and iron medication for haemoglobin); AHEI-2010, Alternative Health Eating Index-2010; CI, confidence intervals; DQI-65+, Diet Quality Index for older adults; FDQI-65+PA, Food-based Diet Quality Index for older adults with physical activity; HEI-2015, Healthy Eating Index-2015; NDNS, National Diet and Nutrition Survey; NFDQI-65, Nutrient and Food-based Diet Quality Index for older adults; NFDQI-65+ PA, Nutrient and Food-based Diet Quality Index for older adults with physical activity; OR, odds ratio.  2 Dependent variable transformed by log10 to improve normality; unstandardised B coefficient and CI are log-increase in variable by 5% increase in total score.  3 *n*=382  4 *n*=374  5 *n*=326  6 *n*=306  7 *n*=378  8 *n*=377 | | | | | | | | | | | |