**Supplemental Table 1. Pearson Correlation Coefficients between nutrients in AA and EA women**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Natural Food Folate** | **Synthetic Folate** | **Methionine** | **vitamin B6** |
| **AA women** |  |  |  |  |
| Synthetic Folate (folic acid) | 0.33 |  |  |  |
| Methionine | 0.58 | 0.51 |  |  |
| Vitamin B-6 | 0.73 | 0.75 | 0.78 |  |
| Vitamin B-12 | 0.60 | 0.34 | 0.57 | 0.54 |
| **EA women** |  |  |  |  |
| Synthetic Folate (folic acid) | 0.26 |  |  |  |
| Methionine | 0.59 | 0.40 |  |  |
| Vitamin B-6 | 0.70 | 0.74 | 0.73 |  |
| Vitamin B-12 | 0.50 | 0.48 | 0.63 | 0.65 |

**Supplemental Table 2.** **Association between dietary intake of folate, vitamin B6, B12, methionine and breast cancer risk among AA and EA women combined in the WCHS**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Ca**  **(n)** | **Co**  **(n)** | **OR1** | **95% CI2** | ***P for linear trend*** |
| **Total dietary folate (DFE), mcg/day** | | | | |  |
| Q1 (≤334.8) | 411 | 378 | 1.00 |  | 0.80 |
| Q2 (334.9-468.8) | 351 | 378 | 0.82 | 0.66-1.03 |  |
| Q3 (468.9-636.4) | 333 | 373 | 0.86 | 0.67-1.10 |  |
| Q4 (>636.4) | 374 | 377 | 0.91 | 0.67-1.23 |  |
| *p for interaction3* |  |  | 0.93 | |  |
| **Natural folate from food, mcg/day** | | | | |  |
| Q1 (≤159.6) | 387 | 379 | 1.00 |  | 0.04 |
| Q2 (159.7-230.6) | 412 | 377 | 1.01 | 0.82-1.26 |  |
| Q3 (230.7-315.1) | 334 | 374 | 0.80 | 0.62-1.02 |  |
| Q4 (>315.1) | 336 | 376 | 0.78 | 0.58-1.04 |  |
| *p for interaction3* |  |  | 0.38 | |  |
| **Synthetic folate from fortified food, mcg/day** | | | | |  |
| Q1 (≤78.1) | 375 | 378 | 1.00 |  | 0.02 |
| Q2 (78.2-129.8) | 362 | 378 | 1.04 | 0.83-1.29 |  |
| Q3 (129.9-188.6) | 316 | 374 | 0.94 | 0.74-1.19 |  |
| Q4 (>188.6) | 416 | 376 | 1.32 | 1.02-1.70 |  |
| *p for interaction3* |  |  | 0.90 | |  |
| **Vitamin B6, mg/day** | | | | |  |
| Q1 (≤1.17) | 399 | 379 | 1.00 |  | 0.96 |
| Q2 (1.18-1.63) | 364 | 378 | 0.92 | 0.73-1.15 |  |
| Q3 (1.64-2.13) | 310 | 373 | 0.84 | 0.65-1.08 |  |
| Q4 (>2.13) | 396 | 376 | 1.04 | 0.76-1.41 |  |
| *p for interaction3* |  |  | 0.66 | |  |
| **Vitamin B12, mcg/day** | | | | |  |
| Q1 (≤3.13) | 398 | 378 | 1.00 |  | 0.90 |
| Q2 (3.14-4.93) | 369 | 379 | 0.94 | 0.76-1.17 |  |
| Q3 (4.94-7.08) | 316 | 374 | 0.84 | 0.66-1.06 |  |
| Q4 (>7.08) | 386 | 375 | 1.00 | 0.78-1.29 |  |
| *p for interaction3* |  |  | 0.65 | |  |
| **Methionine, g/day** | | | | |  |
| Q1 (≤1.03) | 388 | 379 | 1.00 |  | 0.76 |
| Q2 (1.04-1.47) | 405 | 376 | 1.10 | 0.88-1.37 |  |
| Q3 (1.48-1.96) | 325 | 378 | 0.88 | 0.68-1.14 |  |
| Q4 (>1.96) | 351 | 373 | 1.06 | 0.76-1.48 |  |
| *p for interaction3* |  |  | 0.37 | |  |

Abbreviations: Ca, Cases; Co, Controls; OR, Odds ratio; 95% CI, 95% confidence interval.

1, 2 Models are adjusted for age, race, ethnicity, country of origin, education, BMI, age at menarche, menopausal status (when not stratified by this variable), menopausal status, parity, age at first birth, breastfeeding status, family history of breast cancer, OC use, history of benign breast disease, HRT use, smoking status, alcohol consumption, and total energy intake.

3 *P*-value for the test for interaction between race and each nutrient

**Supplemental Table 3. Association between dietary intake of folate, vitamin B6, B12, methionine and breast cancer risk among AA and EA women combined by estrogen receptor (ER) status in the WCHS**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Nutrients** | **Cases** | | **Controls** | **ER+ vs. Controls** | | **ER- vs. Controls** | |
|  | **ER+**  **(n)** | **ER-**  **(n)** | **(n)** | **OR1** | **95% CI2** | **OR1** | **95% CI2** |
| **Total dietary folate DFE, mcg/day** | | | | | | | |
| Q1 (≤334.8) | 234 | 76 | 378 | 1.00 |  | 1.00 |  |
| Q2 (334.9-468.8) | 213 | 55 | 378 | 0.83 | 0.64-1.08 | 0.87 | 0.57-1.32 |
| Q3 (468.9-636.4) | 174 | 66 | 373 | 0.75 | 0.56-1.01 | 1.10 | 0.70-1.72 |
| Q4 (>636.4) | 197 | 61 | 377 | 0.78 | 0.55-1.11 | 1.14 | 0.65-1.98 |
| *p for linear trend* |  |  |  | 0.22 | | 0.48 | |
| **Natural folate from food, mcg/day** | |  |  |  |  |  |  |
| Q1 (≤159.6) | 228 | 66 | 379 | 1.00 |  | 1.00 |  |
| Q2 (159.7-230.6) | 229 | 75 | 377 | 0.90 | 0.70-1.17 | 1.25 | 0.84-1.86 |
| Q3 (230.7-315.1) | 192 | 58 | 374 | 0.73 | 0.55-0.98 | 1.03 | 0.66-1.62 |
| Q4 (>315.1) | 169 | 59 | 376 | 0.65 | 0.46-0.91 | 1.06 | 0.63-1.78 |
| *p for linear trend* |  |  |  | 0.008 | | 0.92 | |
| **Synthetic folate from fortified food, mcg/day** | | | | | | | |
| Q1 (≤78.1) | 216 | 71 | 378 | 1.00 |  | 1.00 |  |
| Q2 (78.2-129.8) | 205 | 58 | 378 | 0.99 | 0.77-1.28 | 0.97 | 0.64-1.45 |
| Q3 (129.9-188.6) | 170 | 60 | 374 | 0.84 | 0.63-1.11 | 1.06 | 0.69-1.63 |
| Q4 (>188.6) | 227 | 69 | 376 | 1.20 | 0.89-1.61 | 1.41 | 0.88-2.24 |
| *p for linear trend* |  |  |  | 0.19 | | 0.09 | |
| **Vitamin B6, mg/day** |  |  |  |  |  |  |  |
| Q1 (≤1.17) | 222 | 76 | 379 | 1.00 |  | 1.00 |  |
| Q2 (1.18-1.63) | 224 | 53 | 378 | 0.99 | 0.76-1.28 | 0.86 | 0.56-1.33 |
| Q3 (1.64-2.13) | 163 | 66 | 373 | 0.74 | 0.54-1.00 | 1.13 | 0.71-1.80 |
| Q4 (>2.13) | 209 | 63 | 376 | 0.94 | 0.65-1.37 | 1.20 | 0.68-2.12 |
| *p for linear trend* |  |  |  | 0.62 | | 0.38 | |
| **Vitamin B12, mcg/day** |  |  |  |  |  |  |  |
| Q1 (≤3.13) | 232 | 67 | 378 | 1.00 |  | 1.00 |  |
| Q2 (3.14-4.93) | 206 | 70 | 379 | 0.87 | 0.67-1.12 | 1.13 | 0.76-1.67 |
| Q3 (4.94-7.08) | 179 | 59 | 374 | 0.79 | 0.60-1.04 | 1.12 | 0.73-1.72 |
| Q4 (>7.08) | 201 | 62 | 375 | 0.90 | 0.66-1.22 | 1.01 | 0.63-1.62 |
| *p for linear trend* |  |  |  | 0.62 | | 0.89 | |
| **Methionine, g/day** |  |  |  |  |  |  |  |
| Q1 (≤1.03) | 211 | 72 | 379 | 1.00 |  | 1.00 |  |
| Q2 (1.04-1.47) | 251 | 69 | 376 | 1.24 | 0.96-1.62 | 1.11 | 0.74-1.68 |
| Q3 (1.48-1.96) | 159 | 58 | 378 | 0.79 | 0.58-1.09 | 0.99 | 0.61-1.59 |
| Q4 (>1.96) | 197 | 59 | 373 | 1.18 | 0.78-1.77 | 1.10 | 0.60-2.04 |
| *p for linear trend* |  |  |  | 0.99 | | 0.87 | |

Abbreviations: OR, Odds ratio; 95% CI, 95% confidence interval.

1, 2 Models are adjusted for age, race, ethnicity, country of origin, education, BMI, age at menarche, menopausal status, parity, age at first birth, breastfeeding status, family history of breast cancer, OC use, history of benign breast disease, HRT use, smoking status, alcohol consumption, and total energy intake.