**Table S1.** Characteristics of the individuals excluded versus included in the analysis

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | | **Analytic sample (n = 4,076)** | | **Missing data**  **(n = 4,040)** | | |
|  |  | | | No health assessment  (n = 2,260) | | No valid blood sample or missing data on other covariates  (n = 1,780) |
| **Mean (SD)/%** | | | | | | |
| **Age** | | | 62.0 (8.4) | 65.5 (10.6) | 65.6 (10.7) | |
| **Sex (female)** | | | 53.6 | 54.4 | 55.4 | |
| **Education (highest level)**  None/primary  Secondary  Tertiary/higher | | | 21.2  42.4  36.4 | 41.9  37.3  20.8 | 37.3  37.9  24.7 | |
| **Fair/poor self-rated health** | | | 18.1 | 26.4 | 30.1 | |
| **2 or more chronic conditions** | | | 47.6 | 47.7 | 55.4 | |
| **Rural location** | | | 44.5 | 51.6 | 51.4 | |
| **MoCA score** | | | 25.2 (3.2) | - a | 23.5 (4.4) | |
| **Semantic fluency** | | | 21.7 (6.9) | 18.9 (7.1) | 19.0 (6.9) | |

Note. MoCA = Montreal Cognitive Assessment. a MoCA was administered as part of

the health assessment

**Table S2. Demographic and health characteristics by quartile of Lutein and Zeaxanthin**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Lutein (quartiles)**  **Mean (SD)** | | | | | **Zeaxanthin (quartiles)**  **Mean (SD)** | | | | |
|  | ***1st*** | ***2nd*** | ***3rd*** | ***4th*** | ***p*** | ***1st*** | ***2nd*** | ***3rd*** | ***4th*** | ***p*** |
| **Age** | 62.4 (8.5) | 61.5 (8.1) | 62.0 (8.4) | 62.2 (8.6) | .14 | 63.6 (8.4) | 62.4 (8.8) | 61.3 (8.2) | 60.6 (8.0) | <.001 |
| **Female sex (n = 2186)** | 20.5 | 23.2 | 26.7 | 29.6 | <.001 | 21.5 | 25.1 | 26.0 | 27.4 | <.001 |
| **Education (highest level)**  None/primary (n = 862)  Secondary (n = 1730)  Tertiary/higher  (n = 1484) | 28.9  44.2  26.9 | 19.9  46.6  33.5 | 20.5  41.9  37.6 | 15.5  37.2  47.3 | <.001 | 31.6  44.0  24.4 | 21.8  43.2  34.9 | 16.7  43.6  39.7 | 14.5  38.9  46.6 | <.001 |
| **Smoker**  Never (n = 1884)  Past (n = 1605)  Current (n = 587) | 38.0  41.5  20.5 | 46.1  37.1  16.8 | 50.3  37.3  12.4 | 50.1  41.7  8.2 | <.001 | 39.9  40.5  19.6 | 45.5  38.8  15.7 | 50.6  37.0  12.4 | 48.8  41.3  9.9 | <.001 |
| **Exercise**  None/low (n = 1121)  Moderate (n = 1477)  High (n = 1478) | 32.0  35.7  32.2 | 29.1  35.5  35.3 | 26.6  34.6  38.8 | 22.4  39.1  38.4 | <.001 | 32.7  34.9  32.5 | 30.2  35.7  34.1 | 23.2  36.6  40.2 | 23.8  37.8  38.3 | <.001 |
| **BMI** | 30.0 (5.6) | 29.2 (4.9) | 27.9 (4.5) | 27.1 (4.0) | .001 | 29.4 (5.3) | 29.1 (5.1) | 28.3 (4.6) | 27.3 (4.2) | <.001 |
| **Hypertension (n = 2374)** | 28.1 | 25.8 | 23.9 | 22.2 | <.001 | 28.4 | 26.5 | 23.4 | 21.6 | <.001 |
| **Diabetes (n = 306)** | 42.5 | 29.1 | 14.4 | 14.0 | <.001 | 40.8 | 28.8 | 19.3 | 11.1 | <.001 |
| **Cataracts (n = 353)** | 28.6 | 22.9 | 24.4 | 24.1 | .23 | 35.1 | 26.6 | 22.4 | 15.9 | <.001 |
| **Glaucoma (n = 80)** | 30.0 | 17.5 | 31.2 | 21.2 | .18 | 30.0 | 31.2 | 22.5 | 16.2 | .21 |
| **AMD (n = 56)** | 27.8 | 21.4 | 16.1 | 35.7 | .18 | 25.0 | 28.6 | 17.9 | 28.6 | .61 |
| **Supplement use**  **(n = 485)** | 17.5 | 20.4 | 28.9 | 33.2 | <.001 | 20.8 | 24.9 | 24.3 | 29.9 | .02 |

**Note.** AMD = Age-related macular degeneration