Supplementary Table 1. Status of U.S. older adults (≥60y) for selected nutritional biomarkers by sex and weight status, adjusted for race and Hispanic origin, estimated from NHANES 2011-2014

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Men (n=1,462) | | | | | | Women (n=1,507) | | | | | |
|  | Healthy weight  (n=378) | | Over-weight  (n=602) | | Obese  (n=482) | | Healthy weight  (n=399) | | Over-weight  (n=453) | | Obese  (n=655) | |
|  | % or Mean | SE | % or Mean | SE | % or Mean | SE | % or Mean | SE | % or Mean | SE | % or Mean | SE |
| Serum 25(OH)D\* |  |  |  |  |  |  |  |  |  |  |  |  |
| %<40 nmol/L | 6.3 | 1.4 | 5.7 | 1.3 | 8.8 | 1.9 | 6.2 | 1.7 | 7.2 | 2.0 | 10.9 | 1.9 |
| Concentration (nmol/L) | 81.9a | 1.6 | 78.2a | 1.4 | 72.3b | 1.6 | 92.5a | 3.0 | 87.2a | 2.6 | 79.2b | 1.6 |
| Serum Folate† |  |  |  |  |  |  |  |  |  |  |  |  |
| %<7 nmol/L | 0.1§ | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2§ | 0.2 | 0.1§ | 0.1 |
| Concentration (nmol/L) | 56.7 | 2.9 | 51.2 | 1.3 | 52.8 | 2.5 | 64.6a | 2.0 | 67.6a | 2.6 | 56.6b | 1.7 |
| Red blood cell folate† |  |  |  |  |  |  |  |  |  |  |  |  |
| %<305 nmol/L | 1.7§ | 1.4 | 0.1§ | 0.1 | 0.0 | 0.0 | 0.8 | 0.3 | 0.7§ | 0.3 | 0.1§ | 0.1 |
| Concentration (nmol/L) | 1,329a,b | 54 | 1,334a | 33 | 1,461b | 42 | 1,418a | 35 | 1,575b | 43 | 1,515a,b | 44 |
| Serum vitamin B12 |  |  |  |  |  |  |  |  |  |  |  |  |
| %<150 pmol/L | 3.7 | 1.4 | 5.2 | 1.4 | 4.3 | 1.7 | 3.9 | 1.4 | 5.3 | 1.3 | 6.0 | 0.9 |
| Concentration (pmol/L) | 507.3 | 35.7 | 436.3 | 13.4 | 426.1 | 17.0 | 629.1 | 38.5 | 562.1 | 25.3 | 561.4 | 55.3 |
| Serum MMA| |  |  |  |  |  |  |  |  |  |  |  |  |
| %>271 nmol/L | 19.7a | 3.1 | 12.7a,b | 2.5 | 11.0b | 2.1 | 14.7 | 2.2 | 11.9 | 1.4 | 16.1 | 2.5 |
| Concentration (nmol/L) | 210.2 | 14.0 | 200.1 | 7.3 | 196.5 | 11.7 | 198.8 | 7.6 | 184.6 | 6.4 | 204.4 | 11.0 |

25(OH)D, 25-hydroxyvitamin D; CKD, Chronic kidney disease; MMA, methylmalonic acid.

a,bMean values within a same row for each sex with different superscript letters were significantly different (P<0•016).

\*Adjusted for season (winter or summer).

† Were not able to be adjusted for race and Hispanic origin because only a few people were deficient.

| Adjusted for renal function (normal, CKD stages 1-2, and CKD stages 3-5).

§Relative standard error over 40%; estimates may not be statistically reliable.