## Table S1

| Nutrition Biomarkers | Outcome | N | 25th Percentile | 75th Percentile | Outcome, 75th Percentile v. 25th Percentile | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | Unadjusted | | | | | Adjusted | | | | | |
|  |  |  |  |  | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value |
| Vitamin D | Telomere Length Year 1 | 472 | 32.57 | 54.86 | 0.01 | -0.01 | -0.02 (-0.14, 0.11) | 0.81 | 0.89 | 0 | -0.04 | -0.05 (-0.17, 0.07) | 0.44 | 0.92 |
|  | Telomere Length Year 2 | 519 | 32.56 | 55.49 | -0.35 | -0.33 | 0.02 (-0.11, 0.15) | 0.76 | 0.89 | -0.21 | -0.24 | -0.03 (-0.15, 0.09) | 0.64 | 0.92 |
|  | Change in Telomere Length Year 1 and Year 2 | 403 | 32.59 | 55.47 | -0.35 | -0.37 | -0.02 (-0.15, 0.11) | 0.74 | 0.89 | 0.2 | 0.14 | -0.06 (-0.2, 0.07) | 0.36 | 0.9 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ferritin | Telomere Length Year 1 | 472 | 2.57 | 3.91 | -0.01 | 0.01 | 0.02 (-0.13, 0.16) | 0.85 | 0.89 | -0.02 | -0.03 | -0.01 (-0.17, 0.15) | 0.89 | 0.94 |
|  | Telomere Length Year 2 | 519 | 2.54 | 3.82 | -0.48 | -0.32 | 0.16 (-0.09, 0.42) | 0.2 | 0.74 | -0.45 | -0.23 | 0.22 (-0.03, 0.47) | 0.08 | 0.41 |
|  | Change in Telomere Length Year 1 and Year 2 | 403 | 2.53 | 3.86 | -0.52 | -0.43 | 0.09 (-0.22, 0.39) | 0.59 | 0.89 | 0.19 | 0.16 | -0.03 (-0.19, 0.13) | 0.73 | 0.92 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| sTfR | Telomere Length Year 1 | 472 | 1.29 | 1.68 | 0 | 0 | 0 (0, 0) | 1 | 1 | -0.17 | -0.06 | 0.11 (-0.19, 0.42) | 0.48 | 0.92 |
|  | Telomere Length Year 2 | 519 | 1.3 | 1.7 | -0.32 | -0.38 | -0.06 (-0.16, 0.04) | 0.27 | 0.74 | -0.22 | -0.26 | -0.04 (-0.15, 0.06) | 0.39 | 0.9 |
|  | Change in Telomere Length Year 1 and Year 2 | 403 | 1.3 | 1.69 | -0.41 | -0.31 | 0.1 (-0.23, 0.44) | 0.56 | 0.89 | 0.17 | 0.18 | 0.01 (-0.1, 0.13) | 0.84 | 0.93 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RBP | Telomere Length Year 1 | 472 | 0.13 | 0.52 | -0.03 | 0.06 | 0.09 (-0.05, 0.22) | 0.2 | 0.74 | -0.08 | 0.06 | 0.14 (-0.06, 0.33) | 0.18 | 0.62 |
|  | Telomere Length Year 2 | 519 | 0.13 | 0.51 | -0.38 | -0.25 | 0.13 (-0.14, 0.39) | 0.35 | 0.74 | -0.26 | -0.21 | 0.05 (-0.22, 0.32) | 0.73 | 0.92 |
|  | Change in Telomere Length Year 1 and Year 2 | 403 | 0.14 | 0.52 | -0.33 | -0.37 | -0.04 (-0.17, 0.08) | 0.54 | 0.89 | 0.28 | 0.18 | -0.1 (-0.22, 0.02) | 0.1 | 0.41 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Vitamin A Deficiency | Telomere Length Year 1 | 472 | 0 | 1 | 0.02 | -0.32 | -0.34 (-0.75, 0.07) | 0.11 | 0.74 | -0.02 | -0.38 | -0.36 (-0.78, 0.06) | 0.1 | 0.41 |
|  | Telomere Length Year 2 | 519 | 0 | 1 | -0.34 | -0.73 | -0.39 (-0.77, -0.01) | 0.04 | 0.74 | -0.22 | -0.66 | -0.44 (-0.81, -0.07) | 0.02 | 0.41 |
|  | Change in Telomere Length Year 1 and Year 2 | 403 | 0 | 1 | -0.35 | -0.48 | -0.13 (-0.57, 0.31) | 0.58 | 0.89 | 0.19 | 0.2 | 0.01 (-0.46, 0.48) | 0.97 | 0.97 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Iron Deficiency | Telomere Length Year 1 | 472 | 0 | 1 | 0.02 | -0.08 | -0.11 (-0.32, 0.11) | 0.34 | 0.74 | 0 | -0.13 | -0.12 (-0.34, 0.09) | 0.27 | 0.8 |
|  | Telomere Length Year 2 | 519 | 0 | 1 | -0.33 | -0.47 | -0.14 (-0.34, 0.06) | 0.16 | 0.74 | -0.21 | -0.38 | -0.17 (-0.36, 0.03) | 0.09 | 0.41 |
|  | Change in Telomere Length Year 1 and Year 2 | 403 | 0 | 1 | -0.36 | -0.33 | 0.03 (-0.2, 0.26) | 0.82 | 0.89 | 0.17 | 0.23 | 0.06 (-0.17, 0.29) | 0.62 | 0.92 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Vitamin D Deficiency | Telomere Length Year 1 | 472 | 0 | 1 | 0.02 | -0.09 | -0.11 (-0.35, 0.12) | 0.34 | 0.74 | -0.03 | 0.01 | 0.04 (-0.2, 0.28) | 0.75 | 0.92 |
|  | Telomere Length Year 2 | 519 | 0 | 1 | -0.33 | -0.43 | -0.1 (-0.32, 0.11) | 0.35 | 0.74 | -0.22 | -0.25 | -0.03 (-0.25, 0.19) | 0.8 | 0.93 |
|  | Change in Telomere Length Year 1 and Year 2 | 403 | 0 | 1 | -0.36 | -0.32 | 0.04 (-0.2, 0.29) | 0.74 | 0.89 | 0.16 | 0.22 | 0.06 (-0.2, 0.32) | 0.66 | 0.92 |
| N, 25th Percentile, and 75th Percentile are from the unadjusted analyses | | | | | | | | | | | | | | | |

## Table S2

| Serum Stress Biomarker | Outcome | N | 25th Percentile | 75th Percentile | Outcome, 75th Percentile v. 25th Percentile | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | Unadjusted | | | | | Adjusted | | | | |
|  |  |  |  |  | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value |
| Cortisol | Telomere Length Year 1 | 468 | 2.5 | 3.3 | 0.00 | -0.21 | -0.21 (-0.53, 0.1) | 0.18 | 0.27 | -0.08 | -0.29 | -0.21 (-0.52, 0.1) | 0.19 | 0.28 |
|  | Telomere Length Year 2 | 514 | 2.5 | 3.3 | -0.28 | -0.39 | -0.11 (-0.26, 0.03) | 0.12 | 0.27 | -0.20 | -0.32 | -0.13 (-0.27, 0.01) | 0.07 | 0.22 |
|  | Change in Telomere Length Year 1 and Year 2 | 399 | 2.5 | 3.3 | -0.33 | -0.39 | -0.06 (-0.24, 0.12) | 0.52 | 0.52 | 0.16 | 0.09 | -0.07 (-0.29, 0.15) | 0.56 | 0.56 |
| N, 25th Percentile, and 75th Percentile are from the unadjusted analyses | | | | | | | | | | | | | | |

## Table S3

| Inflammation Biomarkers | Outcome | N | 25th Percentile | 75th Percentile | Outcome, 75th Percentile v. 25th Percentile | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | Unadjusted | | | | | Adjusted | | | | | |
|  |  |  |  |  | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value |
| CRP | Telomere Length Year 1 | 472 | -0.09 | 1.41 | 0 | 0 | 0 (0, 0) | 1 | 1 | -0.01 | -0.04 | -0.03 (-0.15, 0.1) | 0.71 | 0.97 |
|  | Telomere Length Year 2 | 519 | -0.09 | 1.41 | -0.38 | -0.34 | 0.04 (-0.08, 0.15) | 0.51 | 0.87 | -0.27 | -0.24 | 0.03 (-0.09, 0.14) | 0.66 | 0.97 |
|  | Change in Telomere Length Year 1 and Year 2 | 403 | -0.09 | 1.41 | -0.41 | -0.3 | 0.11 (-0.06, 0.28) | 0.2 | 0.82 | 0.16 | 0.18 | 0.02 (-0.11, 0.16) | 0.74 | 0.97 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AGP | Telomere Length Year 1 | 472 | -1.11 | -0.54 | 0 | 0 | 0 (0, 0) | 1 | 1 | 0.01 | -0.07 | -0.08 (-0.19, 0.02) | 0.13 | 0.79 |
|  | Telomere Length Year 2 | 519 | -1.12 | -0.58 | -0.32 | -0.37 | -0.05 (-0.15, 0.05) | 0.32 | 0.87 | -0.22 | -0.22 | -0.01 (-0.11, 0.09) | 0.88 | 0.97 |
|  | Change in Telomere Length Year 1 and Year 2 | 403 | -1.12 | -0.58 | -0.31 | -0.39 | -0.07 (-0.18, 0.03) | 0.18 | 0.82 | 0.21 | 0.16 | -0.06 (-0.17, 0.05) | 0.33 | 0.97 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| IFNG | Telomere Length Year 1 | 393 | 5.28 | 10.03 | -0.05 | -0.03 | 0.02 (-0.14, 0.17) | 0.83 | 1 | -0.08 | -0.1 | -0.02 (-0.16, 0.11) | 0.77 | 0.97 |
|  | Telomere Length Year 2 | 489 | 5.16 | 9.99 | -0.4 | -0.42 | -0.02 (-0.18, 0.14) | 0.8 | 1 | -0.27 | -0.26 | 0.01 (-0.15, 0.17) | 0.93 | 0.97 |
|  | Change in Telomere Length Year 1 and Year 2 | 381 | 5.21 | 9.9 | -0.3 | -0.34 | -0.05 (-0.19, 0.1) | 0.53 | 0.87 | 0.22 | 0.23 | 0.01 (-0.13, 0.15) | 0.88 | 0.97 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sum Score | Telomere Length Year 1 | 393 | -0.62 | 0.65 | -0.03 | 0.02 | 0.05 (-0.12, 0.23) | 0.58 | 0.87 | -0.09 | -0.09 | 0 (-0.13, 0.13) | 0.97 | 0.97 |
|  | Telomere Length Year 2 | 489 | -0.64 | 0.64 | -0.32 | -0.38 | -0.06 (-0.24, 0.12) | 0.53 | 0.87 | -0.26 | -0.22 | 0.04 (-0.07, 0.16) | 0.45 | 0.97 |
|  | Change in Telomere Length Year 1 and Year 2 | 381 | -0.64 | 0.63 | -0.1 | -0.37 | -0.27 (-0.54, 0.01) | 0.06 | 0.68 | 0.41 | 0.14 | -0.28 (-0.57, 0.01) | 0.06 | 0.75 |
| N, 25th Percentile, and 75th Percentile are from the unadjusted analyses | | | | | | | | | | | | | | | |

## Table S4

| Estriol | Outcome | N | 25th Percentile | 75th Percentile | Outcome, 75th Percentile v. 25th Percentile | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | Unadjusted | | | | | Adjusted | | | | |
|  |  |  |  |  | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value | Predicted Outcome at 25th Percentile | Predicted Outcome at 75th Percentile | Coefficient (95% CI) | P-value | FDR Corrected P-value |
| Estriol | Telomere Length Year 1 | 468 | 0.71 | 1.7 | 0.00 | 0.02 | 0.02 (-0.08, 0.13) | 0.68 | 0.68 | -0.04 | -0.05 | -0.01 (-0.14, 0.13) | 0.94 | 0.94 |
|  | Telomere Length Year 2 | 514 | 0.77 | 1.7 | -0.21 | -0.35 | -0.14 (-0.44, 0.16) | 0.36 | 0.53 | -0.09 | -0.28 | -0.19 (-0.5, 0.12) | 0.24 | 0.35 |
|  | Change in Telomere Length Year 1 and Year 2 | 399 | 0.78 | 1.7 | -0.35 | -0.40 | -0.05 (-0.16, 0.05) | 0.32 | 0.53 | 0.19 | 0.10 | -0.08 (-0.22, 0.05) | 0.23 | 0.35 |
| N, 25th Percentile, and 75th Percentile are from the unadjusted analyses | | | | | | | | | | | | | | |