

S1 File. Supplementary tables

**Table A. Three models on gait speed in later life (fully adjusted).**

| Predictors              | Uncorrected                 | Bias-corrected              | Error-corrected             |
|-------------------------|-----------------------------|-----------------------------|-----------------------------|
| Constant                | 0.716 ± 0.264 <sup>†</sup>  | 0.803 ± 0.264 <sup>†</sup>  | 0.745 ± 0.264 <sup>†</sup>  |
| Sex, Female             | -0.048 ± 0.008 <sup>†</sup> | -0.049 ± 0.008 <sup>†</sup> | -0.050 ± 0.008 <sup>†</sup> |
| Age                     | 0.006 ± 0.007               | 0.006 ± 0.007               | 0.006 ± 0.007               |
| Age <sup>2</sup>        | 0.000 ± 0.000*              | 0.000 ± 0.000*              | 0.000 ± 0.000*              |
| Household size          | 0.007 ± 0.006               | 0.007 ± 0.006               | 0.007 ± 0.006               |
| Routine manual          | -0.041 ± 0.009 <sup>†</sup> | -0.039 ± 0.009 <sup>†</sup> | -0.038 ± 0.009 <sup>†</sup> |
| Wealth mid-tertile      | 0.043 ± 0.01 <sup>†</sup>   | 0.041 ± 0.010 <sup>†</sup>  | 0.041 ± 0.010 <sup>†</sup>  |
| Wealth top-tertile      | 0.088 ± 0.011 <sup>†</sup>  | 0.086 ± 0.011 <sup>†</sup>  | 0.086 ± 0.011 <sup>†</sup>  |
| Age left education      | 0.006 ± 0.002 <sup>†</sup>  | 0.005 ± 0.002 <sup>†</sup>  | 0.005 ± 0.002 <sup>†</sup>  |
| Married-cohab.          | 0.038 ± 0.020               | 0.038 ± 0.020               | 0.038 ± 0.020               |
| Separated-div.          | 0.038 ± 0.023               | 0.037 ± 0.023               | 0.038 ± 0.023               |
| Widow                   | 0.034 ± 0.021               | 0.034 ± 0.021               | 0.034 ± 0.021               |
| Social support          | -0.018 ± 0.037              | -0.018 ± 0.037              | -0.019 ± 0.037              |
| Social connection       | 0.005 ± 0.001 <sup>†</sup>  | 0.005 ± 0.001 <sup>†</sup>  | 0.005 ± 0.001 <sup>†</sup>  |
| CVD                     | -0.024 ± 0.010*             | -0.024 ± 0.010*             | -0.024 ± 0.010*             |
| COPD                    | -0.039 ± 0.011 <sup>†</sup> | -0.039 ± 0.011 <sup>†</sup> | -0.039 ± 0.011 <sup>†</sup> |
| Cancer                  | -0.006 ± 0.015              | -0.007 ± 0.015              | -0.007 ± 0.015              |
| Smoking                 | -0.027 ± 0.013*             | -0.026 ± 0.013*             | -0.026 ± 0.013*             |
| Drinking                | 0.020 ± 0.009*              | 0.020 ± 0.009*              | 0.019 ± 0.009*              |
| Exercise, vigorous      | 0.046 ± 0.011 <sup>†</sup>  | 0.046 ± 0.011 <sup>†</sup>  | 0.046 ± 0.011 <sup>†</sup>  |
| Exercise, moderate      | 0.107 ± 0.008 <sup>†</sup>  | 0.107 ± 0.008 <sup>†</sup>  | 0.107 ± 0.008 <sup>†</sup>  |
| Childhood lack facility | -0.005 ± 0.003              | -0.031 ± 0.003 <sup>†</sup> | -0.035 ± 0.011 <sup>†</sup> |
| <i>RMSE</i>             | 0.0038                      | 0.0025                      | 0.0037                      |

Source: The English Longitudinal Study of Ageing.

\*  $p < 0.05$ .

<sup>†</sup>  $p < 0.01$ .

**Table B. Three models on episodic memory in later life (fully adjusted).**

| Predictors              | Uncorrected                 | Bias-corrected              | Error-corrected             |
|-------------------------|-----------------------------|-----------------------------|-----------------------------|
| Constant                | 11.722 ± 2.118 <sup>†</sup> | 12.140 ± 2.118 <sup>†</sup> | 11.894 ± 2.118 <sup>†</sup> |
| Sex, Female             | 0.772 ± 0.088 <sup>†</sup>  | 0.768 ± 0.088 <sup>†</sup>  | 0.765 ± 0.088 <sup>†</sup>  |
| Age                     | -0.047 ± 0.058              | -0.048 ± 0.058              | -0.050 ± 0.058              |
| Age <sup>2</sup>        | -0.001 ± 0.000              | -0.001 ± 0.000              | -0.001 ± 0.000              |
| Household size          | 0.037 ± 0.052               | 0.036 ± 0.052               | 0.036 ± 0.052               |
| Routine manual          | -0.632 ± 0.095 <sup>†</sup> | -0.622 ± 0.095 <sup>†</sup> | -0.618 ± 0.095 <sup>†</sup> |
| Wealth mid-tertile      | 0.308 ± 0.109 <sup>†</sup>  | 0.303 ± 0.109 <sup>†</sup>  | 0.299 ± 0.109 <sup>†</sup>  |
| Wealth top-tertile      | 0.596 ± 0.116 <sup>†</sup>  | 0.585 ± 0.116 <sup>†</sup>  | 0.579 ± 0.116 <sup>†</sup>  |
| Age left education      | 0.185 ± 0.019 <sup>†</sup>  | 0.180 ± 0.019 <sup>†</sup>  | 0.177 ± 0.019 <sup>†</sup>  |
| Married-cohab.          | 0.105 ± 0.203               | 0.106 ± 0.203               | 0.105 ± 0.203               |
| Separated-div.          | 0.137 ± 0.230               | 0.135 ± 0.229               | 0.130 ± 0.229               |
| Widow                   | 0.156 ± 0.219               | 0.156 ± 0.219               | 0.156 ± 0.219               |
| Social support          | 0.173 ± 0.399               | 0.176 ± 0.399               | 0.175 ± 0.399               |
| Social connection       | 0.064 ± 0.012 <sup>†</sup>  | 0.063 ± 0.012 <sup>†</sup>  | 0.063 ± 0.012 <sup>†</sup>  |
| CVD                     | -0.083 ± 0.108              | -0.084 ± 0.108              | -0.085 ± 0.108              |
| COPD                    | 0.170 ± 0.116               | 0.172 ± 0.116               | 0.174 ± 0.116               |
| Cancer                  | 0.333 ± 0.177               | 0.328 ± 0.177               | 0.323 ± 0.177               |
| Smoking                 | -0.351 ± 0.129 <sup>†</sup> | -0.346 ± 0.129 <sup>†</sup> | -0.342 ± 0.129 <sup>†</sup> |
| Drinking                | 0.477 ± 0.091 <sup>†</sup>  | 0.474 ± 0.091 <sup>†</sup>  | 0.474 ± 0.091 <sup>†</sup>  |
| Exercise, vigorous      | 0.085 ± 0.109               | 0.086 ± 0.109               | 0.087 ± 0.109               |
| Exercise, moderate      | 0.384 ± 0.091 <sup>†</sup>  | 0.384 ± 0.091 <sup>†</sup>  | 0.383 ± 0.091 <sup>†</sup>  |
| CESD                    | -0.116 ± 0.024 <sup>†</sup> | -0.116 ± 0.024 <sup>†</sup> | -0.116 ± 0.024 <sup>†</sup> |
| Childhood lack facility | -0.054 ± 0.029              | -0.191 ± 0.029 <sup>†</sup> | -0.273 ± 0.118*             |
| <i>RMSE</i>             | 0.0406                      | 0.0092                      | 0.0405                      |

Source: The English Longitudinal Study of Ageing.

\*  $p < 0.05$ .

†  $p < 0.01$ .

**Table C. Three models on mental health in later life (fully adjusted).**

| Predictors              | Uncorrected                 | Bias-corrected              | Error-corrected             |
|-------------------------|-----------------------------|-----------------------------|-----------------------------|
| Constant                | 2.185 ± 1.229               | 2.450 ± 1.229*              | 2.183 ± 1.230               |
| Sex, Female             | -0.318 ± 0.051 <sup>†</sup> | -0.320 ± 0.051 <sup>†</sup> | -0.317 ± 0.051 <sup>†</sup> |
| Age                     | 0.063 ± 0.034               | 0.062 ± 0.034               | 0.063 ± 0.034               |
| Age <sup>2</sup>        | 0.000 ± 0.000               | 0.000 ± 0.000               | 0.000 ± 0.000               |
| Household size          | 0.060 ± 0.030*              | 0.060 ± 0.030               | 0.060 ± 0.030*              |
| Routine manual          | -0.097 ± 0.055              | -0.091 ± 0.055              | -0.097 ± 0.055              |
| Wealth mid-tertile      | 0.287 ± 0.063 <sup>†</sup>  | 0.283 ± 0.063 <sup>†</sup>  | 0.287 ± 0.063 <sup>†</sup>  |
| Wealth top-tertile      | 0.517 ± 0.067 <sup>†</sup>  | 0.510 ± 0.067 <sup>†</sup>  | 0.517 ± 0.067 <sup>†</sup>  |
| Age left education      | 0.009 ± 0.011               | 0.006 ± 0.011               | 0.009 ± 0.011               |
| Married-cohab.          | 0.115 ± 0.118               | 0.116 ± 0.118               | 0.115 ± 0.118               |
| Separated-div.          | -0.211 ± 0.133              | -0.213 ± 0.133              | -0.212 ± 0.133              |
| Widow                   | -0.502 ± 0.127 <sup>†</sup> | -0.502 ± 0.127 <sup>†</sup> | -0.502 ± 0.127 <sup>†</sup> |
| Social support          | 1.107 ± 0.232 <sup>†</sup>  | 1.109 ± 0.232 <sup>†</sup>  | 1.108 ± 0.232 <sup>†</sup>  |
| Social connection       | 0.030 ± 0.007 <sup>†</sup>  | 0.030 ± 0.007 <sup>†</sup>  | 0.030 ± 0.007 <sup>†</sup>  |
| CVD                     | -0.104 ± 0.063              | -0.105 ± 0.063              | -0.104 ± 0.063              |
| COPD                    | -0.474 ± 0.067 <sup>†</sup> | -0.473 ± 0.067 <sup>†</sup> | -0.474 ± 0.067 <sup>†</sup> |
| Cancer                  | -0.115 ± 0.103              | -0.118 ± 0.103              | -0.115 ± 0.103              |
| Smoking                 | -0.255 ± 0.075 <sup>†</sup> | -0.252 ± 0.075 <sup>†</sup> | -0.255 ± 0.075 <sup>†</sup> |
| Drinking                | 0.132 ± 0.053*              | 0.130 ± 0.053*              | 0.132 ± 0.053*              |
| Exercise, vigorous      | 0.134 ± 0.064*              | 0.134 ± 0.064*              | 0.134 ± 0.064*              |
| Exercise, moderate      | 0.504 ± 0.053 <sup>†</sup>  | 0.504 ± 0.053 <sup>†</sup>  | 0.504 ± 0.053 <sup>†</sup>  |
| Childhood lack facility | -0.005 ± 0.017              | -0.091 ± 0.017 <sup>†</sup> | -0.003 ± 0.017              |
| <i>RMSE</i>             | 0.0236                      | 0.0206                      | 0.0236                      |

Source: The English Longitudinal Study of Ageing.

\*  $p < 0.05$ .

<sup>†</sup>  $p < 0.01$ .

**Table D. Three models on gait speed in later life, with adult health (fully adjusted).**

| Predictors              | Uncorrected                 | Bias-corrected              | Error-corrected             |
|-------------------------|-----------------------------|-----------------------------|-----------------------------|
| Constant                | 0.667 ± 0.262*              | 0.746 ± 0.262 <sup>†</sup>  | 0.697 ± 0.262 <sup>†</sup>  |
| Sex, Female             | -0.049 ± 0.008 <sup>†</sup> | -0.050 ± 0.008 <sup>†</sup> | -0.050 ± 0.008 <sup>†</sup> |
| Age                     | 0.009 ± 0.007               | 0.009 ± 0.007               | 0.008 ± 0.007               |
| Age <sup>2</sup>        | 0.000 ± 0.000 <sup>†</sup>  | 0.000 ± 0.000 <sup>†</sup>  | 0.000 ± 0.000 <sup>†</sup>  |
| Household size          | 0.004 ± 0.006               | 0.004 ± 0.006               | 0.004 ± 0.006               |
| Routine manual          | -0.039 ± 0.009 <sup>†</sup> | -0.037 ± 0.009 <sup>†</sup> | -0.037 ± 0.009 <sup>†</sup> |
| Wealth mid-tertile      | 0.039 ± 0.010 <sup>†</sup>  | 0.037 ± 0.010 <sup>†</sup>  | 0.037 ± 0.010 <sup>†</sup>  |
| Wealth top-tertile      | 0.081 ± 0.011 <sup>†</sup>  | 0.080 ± 0.011 <sup>†</sup>  | 0.079 ± 0.011 <sup>†</sup>  |
| Age left edu            | 0.006 ± 0.002 <sup>†</sup>  | 0.005 ± 0.002 <sup>†</sup>  | 0.005 ± 0.002 <sup>†</sup>  |
| Married-cohab.          | 0.040 ± 0.020*              | 0.040 ± 0.020*              | 0.040 ± 0.020*              |
| Separated-div.          | 0.040 ± 0.023               | 0.040 ± 0.023               | 0.040 ± 0.023               |
| Widow                   | 0.033 ± 0.021               | 0.033 ± 0.021               | 0.033 ± 0.021               |
| Social support          | -0.023 ± 0.036              | -0.023 ± 0.036              | -0.023 ± 0.036              |
| Social connection       | 0.005 ± 0.001 <sup>†</sup>  | 0.005 ± 0.001 <sup>†</sup>  | 0.005 ± 0.001 <sup>†</sup>  |
| CVD                     | -0.021 ± 0.010*             | -0.021 ± 0.010*             | -0.021 ± 0.010*             |
| COPD                    | -0.028 ± 0.011 <sup>†</sup> | -0.027 ± 0.011*             | -0.027 ± 0.011*             |
| Cancer                  | 0.004 ± 0.015               | 0.003 ± 0.015               | 0.003 ± 0.015               |
| Smoking                 | -0.027 ± 0.013*             | -0.027 ± 0.013*             | -0.026 ± 0.013*             |
| Drinking                | 0.018 ± 0.009*              | 0.017 ± 0.009*              | 0.017 ± 0.009*              |
| Exercise, vigorous      | 0.041 ± 0.011 <sup>†</sup>  | 0.041 ± 0.011 <sup>†</sup>  | 0.041 ± 0.011 <sup>†</sup>  |
| Exercise, moderate      | 0.101 ± 0.008 <sup>†</sup>  | 0.101 ± 0.008 <sup>†</sup>  | 0.101 ± 0.008 <sup>†</sup>  |
| Childhood lack facility | -0.005 ± 0.003              | -0.029 ± 0.003 <sup>†</sup> | -0.035 ± 0.011 <sup>†</sup> |
| Adult illness episodes  | -0.032 ± 0.004 <sup>†</sup> | -0.032 ± 0.004 <sup>†</sup> | -0.032 ± 0.004 <sup>†</sup> |
| <i>RMSE</i>             | 0.0038                      | 0.0006                      | 0.0037                      |

Source: The English Longitudinal Study of Ageing 2006.

\*  $p < 0.05$ .

<sup>†</sup>  $p < 0.01$ .

**Table E. Three models on episodic memory in later life, with adult health (fully adjusted).**

| Predictors              | Uncorrected                 | Bias-corrected              | Error-corrected             |
|-------------------------|-----------------------------|-----------------------------|-----------------------------|
| Constant                | 11.750 ± 2.120 <sup>†</sup> | 12.174 ± 2.120 <sup>†</sup> | 11.927 ± 2.120 <sup>†</sup> |
| Sex, Female             | 0.772 ± 0.088 <sup>†</sup>  | 0.769 ± 0.088 <sup>†</sup>  | 0.766 ± 0.088 <sup>†</sup>  |
| Age                     | -0.048 ± 0.058              | -0.050 ± 0.058              | -0.052 ± 0.058              |
| Age <sup>2</sup>        | -0.001 ± 0.000              | -0.001 ± 0.000              | -0.001 ± 0.000              |
| Household size          | 0.037 ± 0.052               | 0.037 ± 0.052               | 0.037 ± 0.052               |
| Routine manual          | -0.633 ± 0.095 <sup>†</sup> | -0.623 ± 0.095 <sup>†</sup> | -0.618 ± 0.095 <sup>†</sup> |
| Wealth mid-tertile      | 0.310 ± 0.109 <sup>†</sup>  | 0.305 ± 0.109 <sup>†</sup>  | 0.301 ± 0.109 <sup>†</sup>  |
| Wealth top-tertile      | 0.598 ± 0.116 <sup>†</sup>  | 0.587 ± 0.116 <sup>†</sup>  | 0.582 ± 0.116 <sup>†</sup>  |
| Age left edu            | 0.184 ± 0.019 <sup>†</sup>  | 0.18 ± 0.0190 <sup>†</sup>  | 0.177 ± 0.019 <sup>†</sup>  |
| Married-cohab.          | 0.105 ± 0.203               | 0.106 ± 0.203               | 0.105 ± 0.203               |
| Separated-div.          | 0.137 ± 0.229               | 0.135 ± 0.229               | 0.130 ± 0.229               |
| Widow                   | 0.158 ± 0.219               | 0.158 ± 0.219               | 0.158 ± 0.219               |
| Social support          | 0.175 ± 0.399               | 0.177 ± 0.399               | 0.177 ± 0.399               |
| Social connection       | 0.064 ± 0.012 <sup>†</sup>  | 0.063 ± 0.012 <sup>†</sup>  | 0.063 ± 0.012 <sup>†</sup>  |
| CVD                     | -0.084 ± 0.108              | -0.086 ± 0.108              | -0.086 ± 0.108              |
| COPD                    | 0.166 ± 0.117               | 0.168 ± 0.117               | 0.169 ± 0.116               |
| Cancer                  | 0.329 ± 0.178               | 0.323 ± 0.178               | 0.319 ± 0.178               |
| Smoking                 | -0.351 ± 0.129 <sup>†</sup> | -0.346 ± 0.129 <sup>†</sup> | -0.341 ± 0.129 <sup>†</sup> |
| Drinking                | 0.478 ± 0.091 <sup>†</sup>  | 0.475 ± 0.091 <sup>†</sup>  | 0.475 ± 0.091 <sup>†</sup>  |
| Exercise, vigorous      | 0.087 ± 0.110               | 0.088 ± 0.110               | 0.089 ± 0.110               |
| Exercise, moderate      | 0.386 ± 0.091 <sup>†</sup>  | 0.386 ± 0.091 <sup>†</sup>  | 0.385 ± 0.091 <sup>†</sup>  |
| Childhood lack facility | -0.118 ± 0.024 <sup>†</sup> | -0.117 ± 0.024 <sup>†</sup> | -0.117 ± 0.024 <sup>†</sup> |
| Adult illness episodes  | -0.054 ± 0.029              | -0.192 ± 0.029 <sup>†</sup> | -0.273 ± 0.118*             |
| <i>RMSE</i>             | 0.0406                      | 0.0189                      | 0.0405                      |

Source: The English Longitudinal Study of Ageing.

\*  $p < 0.05$ .

†  $p < 0.01$ .

**Table F. Three models on mental health in later life, with adult health (fully adjusted)**

| Predictors              | Uncorrected                 | Bias-corrected              | Error-corrected             |
|-------------------------|-----------------------------|-----------------------------|-----------------------------|
| Constant                | 1.676 ± 1.209               | 1.871 ± 1.209               | 1.664 ± 1.210               |
| Sex, Female             | -0.317 ± 0.050 <sup>†</sup> | -0.318 ± 0.050 <sup>†</sup> | -0.316 ± 0.050 <sup>†</sup> |
| Age                     | 0.089 ± 0.033 <sup>†</sup>  | 0.088 ± 0.033 <sup>†</sup>  | 0.089 ± 0.033 <sup>†</sup>  |
| Age <sup>2</sup>        | -0.001 ± 0.000*             | -0.001 ± 0.000*             | -0.001 ± 0.000*             |
| Household size          | 0.042 ± 0.030               | 0.042 ± 0.030               | 0.042 ± 0.030               |
| Routine manual          | -0.084 ± 0.054              | -0.079 ± 0.054              | -0.084 ± 0.054              |
| Wealth mid-tertile      | 0.236 ± 0.062 <sup>†</sup>  | 0.233 ± 0.062 <sup>†</sup>  | 0.236 ± 0.062 <sup>†</sup>  |
| Wealth top-tertile      | 0.442 ± 0.066 <sup>†</sup>  | 0.437 ± 0.066 <sup>†</sup>  | 0.442 ± 0.066 <sup>†</sup>  |
| Age left edu            | 0.010 ± 0.011               | 0.008 ± 0.011               | 0.010 ± 0.011               |
| Married-cohab.          | 0.109 ± 0.116               | 0.109 ± 0.116               | 0.108 ± 0.116               |
| Separated-div.          | -0.205 ± 0.131              | -0.206 ± 0.131              | -0.205 ± 0.131              |
| Widow                   | -0.528 ± 0.125 <sup>†</sup> | -0.528 ± 0.125 <sup>†</sup> | -0.529 ± 0.125 <sup>†</sup> |
| Social support          | 1.037 ± 0.228 <sup>†</sup>  | 1.038 ± 0.228 <sup>†</sup>  | 1.037 ± 0.228 <sup>†</sup>  |
| Social connection       | 0.030 ± 0.007 <sup>†</sup>  | 0.030 ± 0.007 <sup>†</sup>  | 0.030 ± 0.007 <sup>†</sup>  |
| CVD                     | -0.071 ± 0.062              | -0.072 ± 0.062              | -0.071 ± 0.062              |
| COPD                    | -0.359 ± 0.066 <sup>†</sup> | -0.358 ± 0.066 <sup>†</sup> | -0.359 ± 0.066 <sup>†</sup> |
| Cancer                  | -0.005 ± 0.102              | -0.008 ± 0.102              | -0.005 ± 0.102              |
| Smoking                 | -0.262 ± 0.074 <sup>†</sup> | -0.260 ± 0.074 <sup>†</sup> | -0.262 ± 0.074 <sup>†</sup> |
| Drinking                | 0.099 ± 0.052               | 0.098 ± 0.052               | 0.100 ± 0.052               |
| Exercise, vigorous      | 0.079 ± 0.063               | 0.080 ± 0.063               | 0.079 ± 0.063               |
| Exercise, moderate      | 0.443 ± 0.052 <sup>†</sup>  | 0.443 ± 0.052 <sup>†</sup>  | 0.443 ± 0.052 <sup>†</sup>  |
| Childhood lack facility | -0.011 ± 0.016              | -0.074 ± 0.016 <sup>†</sup> | -0.008 ± 0.017              |
| Adult illness episodes  | -0.318 ± 0.024 <sup>†</sup> | -0.317 ± 0.024 <sup>†</sup> | -0.318 ± 0.024 <sup>†</sup> |
| <i>RMSE</i>             | 0.0232                      | 0.0107                      | 0.0232                      |

Source: The English Longitudinal Study of Ageing.

\*  $p < 0.05$ .

<sup>†</sup>  $p < 0.01$ .