

Supplementary Materials

Table S1. STROBE checklist.

STROBE Statement—checklist of items that should be included in reports of observational studies

| | Item No | Recommendation |
|------------------------------|---------|--|
| Title and abstract | 1 | (a) Indicate the study's design with a commonly used term in the title or the abstract (page 1) (b) Provide in the abstract an informative and balanced summary of what was done and what was found (page 1) |
| Introduction | | |
| Background/rationale | 2 | Explain the scientific background and rationale for the investigation being reported (pages 1–2) |
| Objectives | 3 | State specific objectives, including any prespecified hypotheses (page 2) |
| Methods | | |
| Study design | 4 | Present key elements of study design early in the paper (page 2) |
| Setting | 5 | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection (page 2) |
| Participants | 6 | (a) <i>Cohort study</i> —Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up (page 2) <i>Case-control study</i> —Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls <i>Cross-sectional study</i> —Give the eligibility criteria, and the sources and methods of selection of participants (b) <i>Cohort study</i> —For matched studies, give matching criteria and number of exposed and unexposed N/A <i>Case-control study</i> —For matched studies, give matching criteria and the number of controls per case |
| Variables | 7 | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable (pages 2–3 and Supplementary Materials pages 4–6) |
| Data sources/ measurement | 8* | For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group (pages 2–3 and Supplementary Materials pages 4–6) |
| Bias | 9 | Describe any efforts to address potential sources of bias (pages 3–4) |
| Study size | 10 | Explain how the study size was arrived at (pages 2–4 and Supplementary Materials page 12) |
| Quantitative variables | 11 | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why (pages 2–4) |
| Statistical methods | 12 | (a) Describe all statistical methods, including those used to control for confounding (pages 3–4 and Supplementary Materials pages 7–8) |

(b) Describe any methods used to examine subgroups and interactions (**pages 3–4**)

(c) Explain how missing data were addressed (**page 4**)

(d) *Cohort study*—If applicable, explain how loss to follow-up was addressed (**pages 3–4**)

Case-control study—If applicable, explain how matching of cases and controls was addressed

Cross-sectional study—If applicable, describe analytical methods taking account of sampling strategy

(e) Describe any sensitivity analyses (**page 4**)

Continued on next page

| | | |
|--------------------------|-----|--|
| Results | | |
| Participants | 13* | <p>(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed (Supplementary Materials page 12)</p> <p>(b) Give reasons for non-participation at each stage (Supplementary Materials page 12)</p> <p>(c) Consider use of a flow diagram (Supplementary Materials page 12)</p> |
| Descriptive data | 14* | <p>(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders (pages 4–6)</p> <p>(b) Indicate number of participants with missing data for each variable of interest (Supplementary Materials pages 9–11 and 14–16)</p> <p>(c) <i>Cohort study</i>—Summarise follow-up time (eg, average and total amount) (page 2 and Supplementary Materials page 13)</p> |
| Outcome data | 15* | <p><i>Cohort study</i>—Report numbers of outcome events or summary measures over time (pages 4–6 and Supplementary Materials page 13)</p> <p><i>Case-control study</i>—Report numbers in each exposure category, or summary measures of exposure</p> <p><i>Cross-sectional study</i>—Report numbers of outcome events or summary measures</p> |
| Main results | 16 | <p>(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included (pages 6–11 and Supplementary Materials pages 17–29)</p> <p>(b) Report category boundaries when continuous variables were categorized (pages 2–4)</p> <p>(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period N/A</p> |
| Other analyses | 17 | Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses (pages 6–11 and Supplementary Materials pages 17–29) |
| Discussion | | |
| Key results | 18 | Summarise key results with reference to study objectives (page 12) |
| Limitations | 19 | Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias (page 13) |
| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence (pages 12–13) |
| Generalisability | 21 | Discuss the generalisability (external validity) of the study results (pages 12–13) |
| Other information | | |
| Funding | 22 | Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based (page 14) |

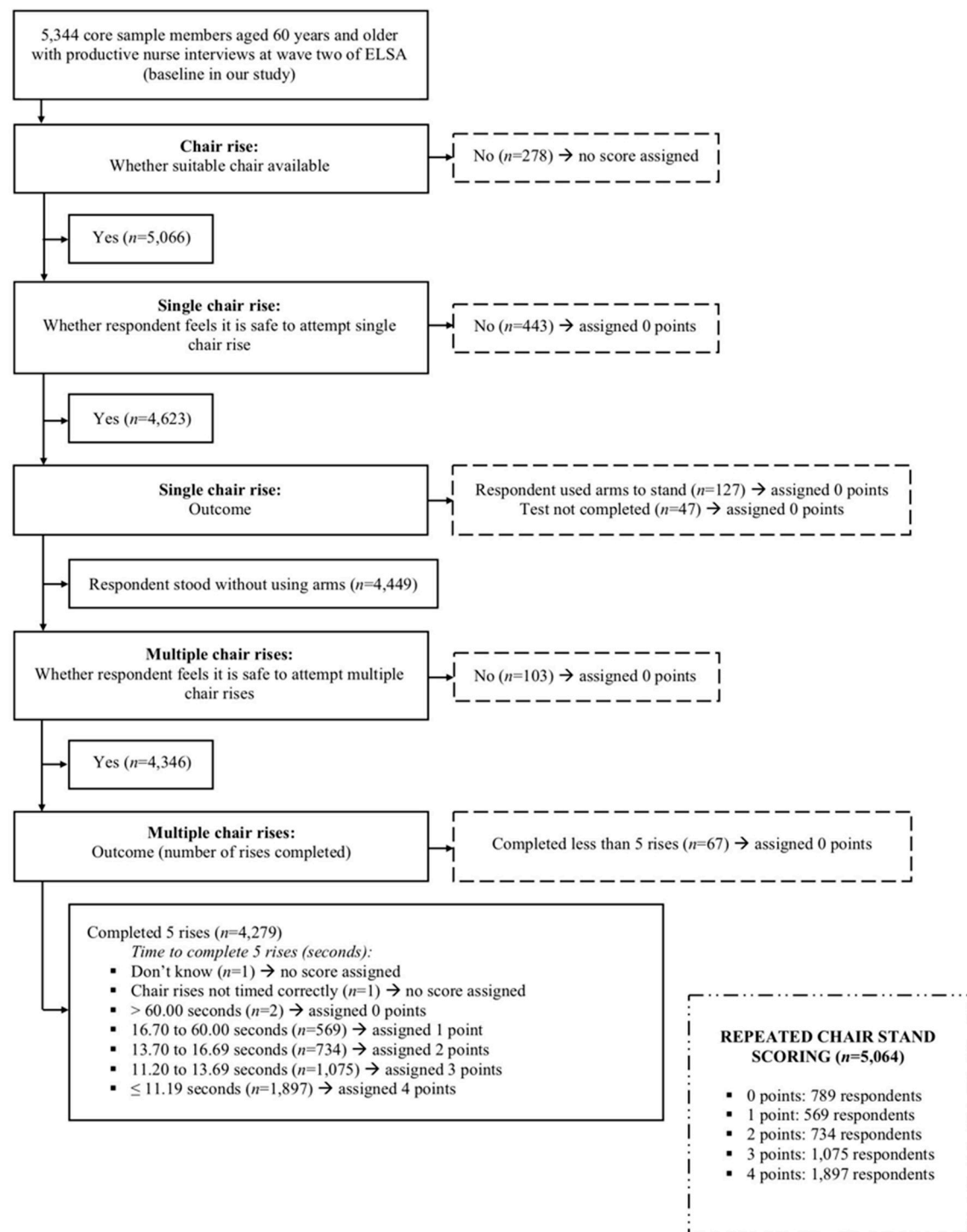


Figure S2. Flowchart summarising the repeated chair stand test scoring system.

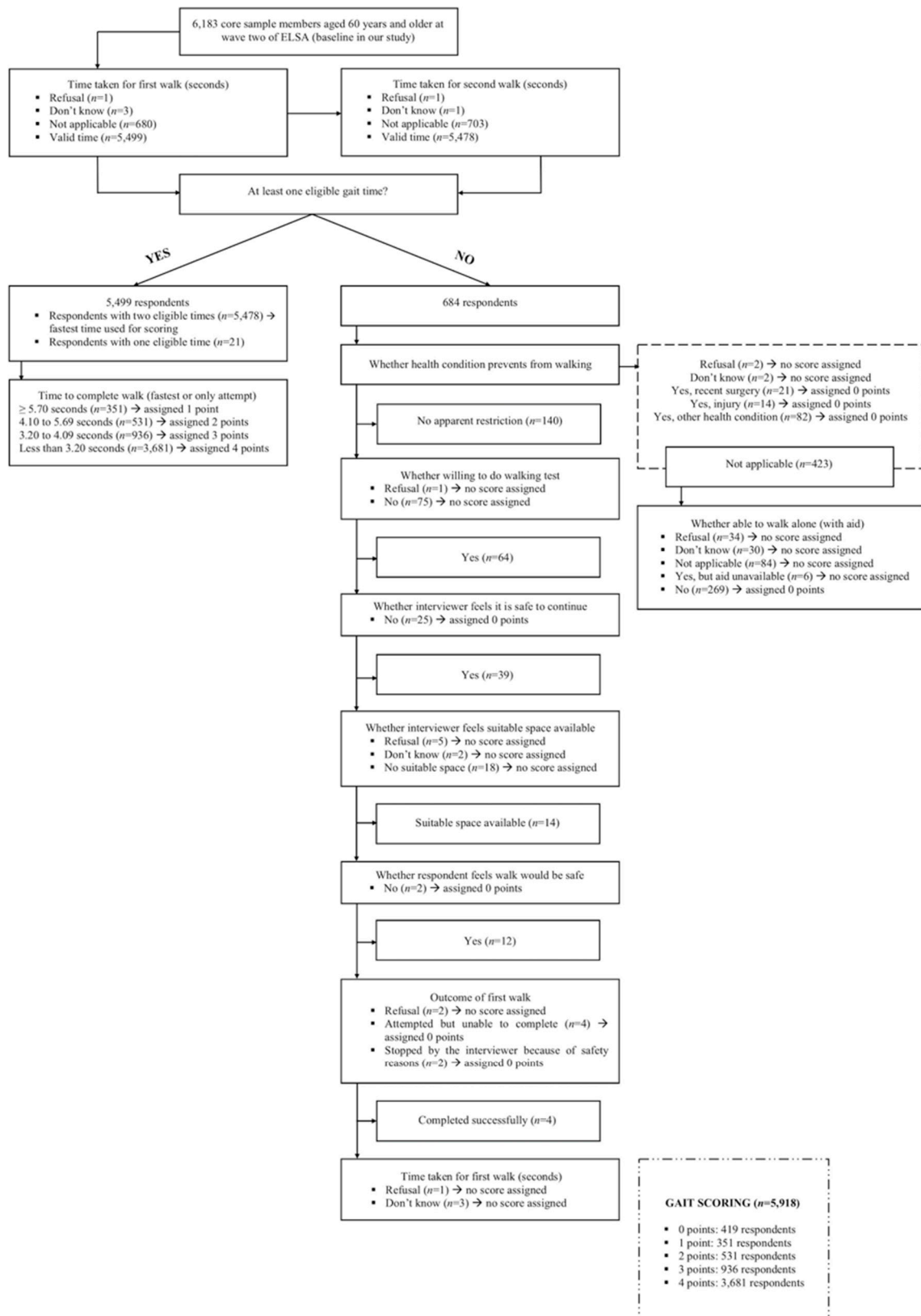


Figure S3. Flowchart summarising the gait test scoring system.

Table S2. Specification for multilevel models with total SPPB score as the exposure.

| Model | Specification |
|-----------------------|--|
| Model 1 | Univariable: total SPPB score (exposure) and outcome only |
| Model 2 | Model 1 plus continuous linear time variable |
| Model 3 | Model 2 plus continuous quadratic time variable ¹ |
| Model 4 | Model 3 plus socio-demographic covariates (age, biological sex, ethnicity, marital status, employment status, education, and wealth) |
| Model 5 | Model 4 plus health-related covariates (physical activity, BMI, cognitive function, and depressive symptoms) |
| Model 6 | Model 5 plus outcome from wave two |
| Model 7 | Model 6 plus interaction between total SPPB score and age |
| Model 8 | Model 6 plus interaction between total SPPB score and biological sex |
| Model 9 | Model 6 plus interaction between total SPPB score and time |
| Model 10 | Model 9 plus interaction between total SPPB score and quadratic time |
| Model 11 ² | Model 6 plus significant interactions in Model 7–10 |

BMI, body-mass index; *SPPB*, Short Physical Performance Battery.

¹ The quadratic time variable was subsequently excluded from models if there was no evidence of non-linearity.

² Only performed if there was more than one significant interaction in Model 7–10.

Table S3. Specification for multilevel models with SPPB domain scores (balance, repeated chair stands, and gait) as the exposures.

| Model | Specification |
|---------|--|
| Model 1 | Univariable: exposure(s) ¹ and outcome only |
| Model 2 | Model 1 plus continuous linear time variable |
| Model 3 | Model 2 plus continuous quadratic time variable ² |
| Model 4 | Model 3 plus socio-demographic covariates (age, biological sex, ethnicity, marital status, employment status, education, and wealth) |
| Model 5 | Model 4 plus health-related covariates (physical activity, BMI, cognitive function, and depressive symptoms) |
| Model 6 | Model 5 plus outcome from wave two |

BMI, body-mass index; *SPPB*, Short Physical Performance Battery.

¹ Balance score, repeated chair stand score, and gait score. Models were performed i) separately for each exposure; and ii) with all exposures entered simultaneously.

² The quadratic time variable was subsequently excluded from models if there was no evidence of non-linearity.

Table S4. Patterns of missing data prior to multiple imputation.

| Variable | Missing | Total | Percent Missing |
|-----------------------------------|----------------|--------------|------------------------|
| Total SPPB score | 0 | 34,524 | 0.00 |
| Balance score | 0 | 34,524 | 0.00 |
| Repeated Chair Stand score | 0 | 34,524 | 0.00 |
| Gait score | 0 | 34,524 | 0.00 |
| Age | 0 | 34,524 | 0.00 |
| Biological sex | 0 | 34,524 | 0.00 |
| Living status | 0 | 34,524 | 0.00 |
| Total SPPB score × Age | 0 | 34,524 | 0.00 |
| Total SPPB score × Biological sex | 0 | 34,524 | 0.00 |
| Ethnicity | 7 | 34,524 | 0.02 |
| Marital status | 7 | 34,524 | 0.02 |
| Employment status | 77 | 34,524 | 0.22 |
| Education | 3,381 | 34,524 | 9.79 |
| Wealth | 357 | 34,524 | 1.03 |
| Physical activity | 7 | 34,524 | 0.02 |
| Body-mass index | 2,128 | 34,524 | 6.16 |
| Time orientation | 70 | 34,524 | 0.20 |
| Immediate and delayed recall | 98 | 34,524 | 0.28 |
| Prospective memory | 28 | 34,524 | 0.08 |
| Verbal fluency | 56 | 34,524 | 0.16 |
| Processing speed | 1,071 | 34,524 | 3.10 |
| Processing efficiency | 1,071 | 34,524 | 3.10 |
| Depressive symptoms | 371 | 34,524 | 1.07 |
| Mobility impairments (follow-up) | 14,121 | 34,524 | 40.90 |
| ADL disabilities (follow-up) | 14,116 | 34,524 | 40.89 |
| IADL disabilities (follow-up) | 14,116 | 34,524 | 40.89 |
| Falls (follow-up) | 14,866 | 34,524 | 43.06 |
| Mobility impairments (baseline) | 7 | 34,524 | 0.02 |
| ADL disabilities (baseline) | 7 | 34,524 | 0.02 |
| IADL disabilities (baseline) | 7 | 34,524 | 0.02 |
| Falls (baseline) | 21 | 34,524 | 0.06 |
| Self-reported general health | 7 | 34,524 | 0.02 |
| Limiting long-standing illness | 35 | 34,524 | 0.10 |
| Occupational class | 630 | 34,524 | 1.82 |
| Alcohol consumption | 3,794 | 34,524 | 10.99 |
| Smoking status | 28 | 34,524 | 0.08 |
| Height | 1,687 | 34,524 | 4.89 |
| Weight | 1,323 | 34,524 | 3.83 |

SPPB, Short Physical Performance Battery; *ADL*, Activities of Daily Living; *IADL*, Instrumental Activities of Daily Living.

Table S5. Number of observations imputed per dataset.

| Variable | Complete | Incomplete | Imputed | Total |
|-----------------------------------|----------|------------|---------|-------|
| Total SPPB score | 4,932 | 0 | 0 | 4,932 |
| Balance score | 4,932 | 0 | 0 | 4,932 |
| Repeated Chair Stand score | 4,932 | 0 | 0 | 4,932 |
| Gait score | 4,932 | 0 | 0 | 4,932 |
| Age | 4,932 | 0 | 0 | 4,932 |
| Biological sex | 4,932 | 0 | 0 | 4,932 |
| Living status | 4,932 | 0 | 0 | 4,932 |
| Total SPPB score × Age | 4,932 | 0 | 0 | 4,932 |
| Total SPPB score × Biological sex | 4,932 | 0 | 0 | 4,932 |
| Ethnicity | 4,931 | 1 | 1 | 4,932 |
| Marital status | 4,931 | 1 | 1 | 4,932 |
| Employment status | 4,921 | 11 | 11 | 4,932 |
| Education | 4,449 | 483 | 483 | 4,932 |
| Wealth | 4,881 | 51 | 51 | 4,932 |
| Physical activity | 4,931 | 1 | 1 | 4,932 |
| Body-mass index | 4,628 | 304 | 304 | 4,932 |
| Time orientation | 4,922 | 10 | 10 | 4,932 |
| Immediate and delayed recall | 4,918 | 14 | 14 | 4,932 |
| Prospective memory | 4,928 | 4 | 4 | 4,932 |
| Verbal fluency | 4,924 | 8 | 8 | 4,932 |
| Processing speed | 4,779 | 153 | 153 | 4,932 |
| Processing efficiency | 4,779 | 153 | 153 | 4,932 |
| Depressive symptoms | 4,879 | 53 | 53 | 4,932 |
| Mobility impairments (wave three) | 4,179 | 753 | 753 | 4,932 |
| Mobility impairments (wave four) | 3,610 | 1,322 | 1,322 | 4,932 |
| Mobility impairments (wave five) | 3,295 | 1,637 | 1,637 | 4,932 |
| Mobility impairments (wave six) | 2,950 | 1,982 | 1,982 | 4,932 |
| Mobility impairments (wave seven) | 2,515 | 2,417 | 2,417 | 4,932 |
| Mobility impairments (wave eight) | 2,111 | 2,821 | 2,821 | 4,932 |
| Mobility impairments (wave nine) | 1,743 | 3,189 | 3,189 | 4,932 |
| ADL disabilities (wave three) | 4,181 | 751 | 751 | 4,932 |
| ADL disabilities (wave four) | 3,610 | 1,322 | 1,322 | 4,932 |
| ADL disabilities (wave five) | 3,296 | 1,636 | 1,636 | 4,932 |
| ADL disabilities (wave six) | 2,950 | 1,982 | 1,982 | 4,932 |
| ADL disabilities (wave seven) | 2,515 | 2,417 | 2,417 | 4,932 |
| ADL disabilities (wave eight) | 2,113 | 2,819 | 2,819 | 4,932 |
| ADL disabilities (wave nine) | 1,743 | 3,189 | 3,189 | 4,932 |
| IADL disabilities (wave three) | 4,181 | 751 | 751 | 4,932 |
| IADL disabilities (wave four) | 3,610 | 1,322 | 1,322 | 4,932 |
| IADL disabilities (wave five) | 3,296 | 1,636 | 1,636 | 4,932 |
| IADL disabilities (wave six) | 2,950 | 1,982 | 1,982 | 4,932 |
| IADL disabilities (wave seven) | 2,515 | 2,417 | 2,417 | 4,932 |
| IADL disabilities (wave eight) | 2,113 | 2,819 | 2,819 | 4,932 |
| IADL disabilities (wave nine) | 1,743 | 3,189 | 3,189 | 4,932 |
| Falls (wave three) | 4,123 | 809 | 809 | 4,932 |
| Falls (wave four) | 3,510 | 1,422 | 1,422 | 4,932 |
| Falls (wave five) | 3,164 | 1,768 | 1,768 | 4,932 |
| Falls (wave six) | 2,817 | 2,115 | 2,115 | 4,932 |
| Falls (wave seven) | 2,390 | 2,542 | 2,542 | 4,932 |

| | | | | |
|---------------------------------|-------|-------|-------|-------|
| Falls (wave eight) | 2,006 | 2,926 | 2,926 | 4,932 |
| Falls (wave nine) | 1,648 | 3,284 | 3,284 | 4,932 |
| Mobility impairments (baseline) | 4,931 | 1 | 1 | 4,932 |
| ADL disabilities (baseline) | 4,931 | 1 | 1 | 4,932 |
| IADL disabilities (baseline) | 4,931 | 1 | 1 | 4,932 |
| Falls (baseline) | 4,929 | 3 | 3 | 4,932 |
| Self-reported general health | 4,931 | 1 | 1 | 4,932 |
| Limiting long-standing illness | 4,927 | 5 | 5 | 4,932 |
| Occupational class | 4,842 | 90 | 90 | 4,932 |
| Alcohol consumption | 4,390 | 542 | 542 | 4,932 |
| Smoking status | 4,928 | 4 | 4 | 4,932 |
| Height | 4,691 | 241 | 241 | 4,932 |
| Weight | 4,743 | 189 | 189 | 4,932 |

SPPB, Short Physical Performance Battery; *ADL*, Activities of Daily Living; *IADL*, Instrumental Activities of Daily Living.

Note: The gait score was omitted because of collinearity.

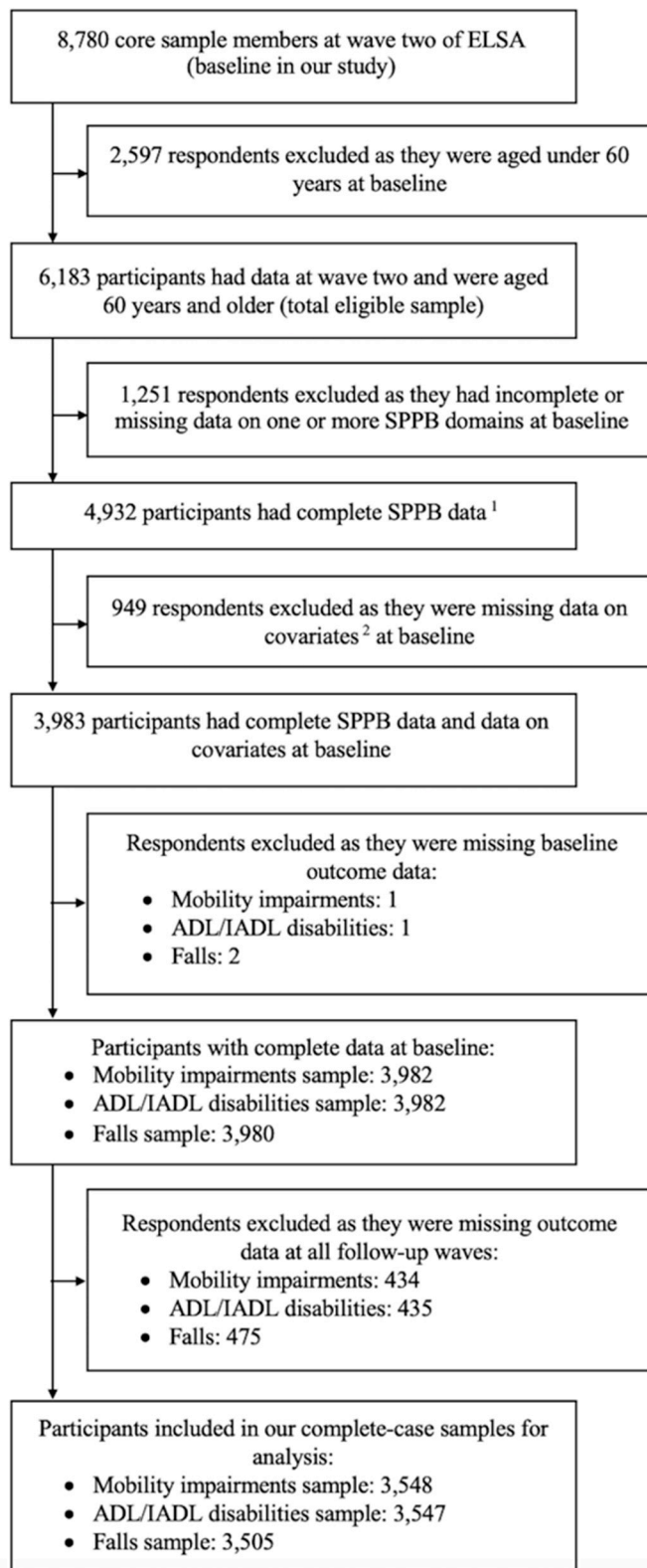


Figure S4. Flow of study members into the complete-case analytical samples.

ELSA, English Longitudinal Study of Ageing; *SPPB*, Short Physical Performance Battery; *ADL*, Activities of Daily Living; *IADL*, Instrumental Activities of Daily Living.

¹ This was the sample size used for multiple imputation to replace missing data on covariates (treated as time-invariant) and outcomes at all follow-up waves; exposure data were not imputed.

² Covariates were age, biological sex, ethnicity, marital status, employment status, education, wealth, physical activity, body-mass index, cognitive function, and depressive symptoms.

Table S6. Descriptive statistics for mobility impairments, ADL disabilities, IADL disabilities, and falls at each wave of follow-up.

| | Overall sample |
|--|----------------|
| Mobility impairments ($n=3,548$; 16,934 observations), mean (SD) | |
| Wave three ($n=3,401$) | 2.1 (2.5) |
| Wave four ($n=2,978$) | 2.2 (2.5) |
| Wave five ($n=2,726$) | 2.4 (2.7) |
| Wave six ($n=2,459$) | 2.6 (2.8) |
| Wave seven ($n=2,117$) | 2.6 (2.8) |
| Wave eight ($n=1,778$) | 2.6 (2.8) |
| Wave nine ($n=1,475$) | 2.8 (2.9) |
| ADL disabilities ($n=3,547$; 16,934 observations), mean (SD) | |
| Wave three ($n=3,401$) | 0.4 (0.9) |
| Wave four ($n=2,977$) | 0.4 (1.0) |
| Wave five ($n=2,727$) | 0.5 (1.1) |
| Wave six ($n=2,459$) | 0.5 (1.1) |
| Wave seven ($n=2,117$) | 0.5 (1.2) |
| Wave eight ($n=1,778$) | 0.5 (1.2) |
| Wave nine ($n=1,475$) | 0.6 (1.3) |
| IADL disabilities ($n=3,547$; 16,934 observations), mean (SD) | |
| Wave three ($n=3,401$) | 0.4 (1.0) |
| Wave four ($n=2,977$) | 0.5 (1.1) |
| Wave five ($n=2,727$) | 0.6 (1.3) |
| Wave six ($n=2,459$) | 0.7 (1.4) |
| Wave seven ($n=2,117$) | 0.7 (1.4) |
| Wave eight ($n=1,778$) | 0.8 (1.6) |
| Wave nine ($n=1,475$) | 0.9 (1.7) |
| Falls ($n=3,505$; 16,332 observations), n (% Yes) | |
| Wave three ($n=3,364$) | 976 (29.0) |
| Wave four ($n=2,898$) | 780 (26.9) |
| Wave five ($n=2,625$) | 782 (29.8) |
| Wave six ($n=2,351$) | 722 (30.7) |
| Wave seven ($n=2,016$) | 634 (31.4) |
| Wave eight ($n=1,688$) | 561 (33.2) |
| Wave nine ($n=1,390$) | 476 (34.3) |

SD, standard deviation; *n*, number of participants; *ADL*, Activities of Daily Living; *IADL*, Instrumental Activities of Daily Living.

Note: All values are weighted estimates. There are different numbers of participants with complete data on all variables at each wave as the number of individuals with available outcome data varied by timepoint.

Table S7. Baseline characteristics of the complete-case samples used for analyses versus the samples excluded due to missing data (unweighted).

| | Mobility impairments | | | ADL/IADL disabilities | | | Falls | | |
|-------------------------------------|--------------------------------|--------------------------------|----------------|--------------------------------|--------------------------------|----------------|--------------------------------|--------------------------------|----------------|
| | Included (<i>n</i> =3,548) | Excluded (<i>n</i> =2,635) | <i>p</i> value | Included (<i>n</i> =3,547) | Excluded (<i>n</i> =2,636) | <i>p</i> value | Included (<i>n</i> =3,505) | Excluded (<i>n</i> =2,678) | <i>p</i> value |
| Age, mean (SD) ¹ | 70.3 (7.4) | 72.8 (8.4) | <0.001 | 70.3 (7.4) | 72.8 (8.4) | <0.001 | 70.3 (7.4) | 72.9 (8.4) | <0.001 |
| Observations, <i>n</i> | 3,548 | 2,635 | | 3,547 | 2,636 | | 3,505 | 2,678 | |
| Biological sex, <i>n</i> (%) | | | <0.001 | | | <0.001 | | | <0.001 |
| Male | 1,646 (46.4) | 1,105 (41.9) | | 1,646 (46.4) | 1,105 (41.9) | | 1,628 (46.4) | 1,123 (41.9) | |
| Female | 1,902 (53.6) | 1,530 (58.1) | | 1,901 (53.6) | 1,531 (58.1) | | 1,877 (53.6) | 1,555 (58.1) | |
| Observations, <i>n</i> | 3,548 | 2,635 | | 3,547 | 2,636 | | 3,505 | 2,678 | |
| Ethnicity, <i>n</i> (%) | | | <0.001 | | | <0.001 | | | <0.001 |
| White | 3,502 (98.7) | 2,548 (96.8) | | 3,501 (98.7) | 2,549 (96.8) | | 3,460 (98.7) | 2,590 (96.8) | |
| non-White | 46 (1.3) | 85 (3.2) | | 46 (1.3) | 85 (3.2) | | 45 (1.3) | 86 (3.2) | |
| Observations, <i>n</i> | 3,548 | 2,633 | | 3,547 | 2,634 | | 3,505 | 2,676 | |
| Marital status, <i>n</i> (%) | | | <0.001 | | | <0.001 | | | <0.001 |
| Single, that is never married | 159 (4.5) | 138 (5.2) | | 159 (4.5) | 138 (5.2) | | 157 (4.5) | 140 (5.2) | |
| Legally separated | 31 (0.9) | 21 (0.8) | | 31 (0.9) | 21 (0.8) | | 31 (0.9) | 21 (0.8) | |
| Divorced | 256 (7.2) | 204 (7.7) | | 256 (7.2) | 204 (7.7) | | 256 (7.3) | 204 (7.6) | |
| Widowed | 803 (22.6) | 735 (27.9) | | 803 (22.6) | 735 (27.9) | | 792 (22.6) | 746 (27.9) | |
| Married, first and only marriage | 1,969 (55.5) | 1,301 (49.4) | | 1,968 (55.5) | 1,302 (49.4) | | 1,944 (55.5) | 1,326 (49.5) | |
| Remarried, second or later marriage | 330 (9.3) | 235 (8.9) | | 330 (9.3) | 235 (8.9) | | 325 (9.3) | 240 (9.0) | |
| Observations, <i>n</i> | 3,548 | 2,634 | | 3,547 | 2,635 | | 3,505 | 2,677 | |
| Employment, <i>n</i> (%) | | | <0.001 | | | <0.001 | | | <0.001 |
| Retired | 2,599 (73.3) | 1,895 (72.3) | | 2,598 (73.2) | 1,896 (72.3) | | 2,568 (73.3) | 1,926 (72.3) | |
| Unemployed | 10 (0.3) | 9 (0.3) | | 10 (0.3) | 9 (0.3) | | 10 (0.3) | 9 (0.3) | |
| Permanently sick or disabled | 91 (2.6) | 157 (6.0) | | 91 (2.6) | 157 (6.0) | | 90 (2.6) | 158 (5.9) | |
| Looking after home or family | 344 (9.7) | 295 (11.3) | | 344 (9.7) | 295 (11.3) | | 337 (9.6) | 302 (11.3) | |
| Semi-retired | 23 (0.6) | 15 (0.6) | | 23 (0.6) | 15 (0.6) | | 23 (0.7) | 15 (0.6) | |
| Employed | 358 (10.1) | 197 (7.5) | | 358 (10.1) | 197 (7.5) | | 357 (10.2) | 198 (7.4) | |
| Self-employed | 123 (3.5) | 53 (2.0) | | 123 (3.5) | 53 (2.0) | | 120 (3.4) | 56 (2.1) | |
| Observations, <i>n</i> | 3,548 | 2,621 | | 3,547 | 2,622 | | 3,505 | 2,664 | |
| Education, <i>n</i> (%) | | | <0.001 | | | <0.001 | | | <0.001 |

| | | | | | | | | | |
|--|--------------|--------------|--------|--------------|--------------|--------|--------------|--------------|--------|
| No qualification | 1,589 (44.8) | 1,211 (59.4) | | 1,588 (44.8) | 1,212 (59.4) | | 1,564 (44.6) | 1,236 (59.4) | |
| Secondary or lower | 1,036 (29.2) | 472 (23.2) | | 1,036 (29.2) | 472 (23.1) | | 1,026 (29.3) | 482 (23.2) | |
| Higher education below degree | 485 (13.7) | 166 (8.1) | | 485 (13.7) | 166 (8.1) | | 480 (13.7) | 171 (8.2) | |
| Degree or equivalent | 438 (12.3) | 189 (9.3) | | 438 (12.3) | 189 (9.3) | | 435 (12.4) | 192 (9.2) | |
| Observations, <i>n</i> | 3,548 | 2,038 | | 3,547 | 2,039 | | 3,505 | 2,081 | |
| Wealth, <i>n</i> (%) | | | <0.001 | | | <0.001 | | | <0.001 |
| 1 st quintile (lowest) | 551 (15.5) | 659 (25.6) | | 551 (15.5) | 659 (25.6) | | 544 (15.5) | 666 (25.4) | |
| 2 nd quintile | 663 (18.7) | 571 (22.2) | | 663 (18.7) | 571 (22.2) | | 660 (18.8) | 574 (21.9) | |
| 3 rd quintile | 712 (20.1) | 517 (20.1) | | 712 (20.1) | 517 (20.1) | | 702 (20.0) | 527 (20.1) | |
| 4 th quintile | 784 (22.1) | 427 (16.6) | | 784 (22.1) | 427 (16.6) | | 771 (22.0) | 440 (16.8) | |
| 5 th quintile (highest) | 838 (23.6) | 400 (15.5) | | 837 (23.6) | 401 (15.6) | | 828 (23.6) | 410 (15.7) | |
| Observations, <i>n</i> | 3,548 | 2,574 | | 3,547 | 2,575 | | 3,505 | 2,617 | |
| Physical activity, <i>n</i> (%) | | | <0.001 | | | <0.001 | | | <0.001 |
| Inactive | 221 (6.2) | 431 (16.9) | | 220 (6.2) | 432 (16.9) | | 211 (6.0) | 441 (17.0) | |
| Mild activity | 528 (14.9) | 545 (21.3) | | 528 (14.9) | 545 (21.3) | | 521 (14.9) | 552 (21.3) | |
| Moderate activity | 1,816 (51.2) | 1,127 (44.1) | | 1,816 (51.2) | 1,127 (44.1) | | 1,796 (51.2) | 1,147 (44.2) | |
| Vigorous activity | 983 (27.7) | 450 (17.6) | | 983 (27.7) | 450 (17.6) | | 977 (27.9) | 456 (17.6) | |
| Observations, <i>n</i> | 3,548 | 2,553 | | 3,547 | 2,554 | | 3,505 | 2,596 | |
| BMI (kg/m ²), mean (SD) | 27.9 (4.7) | 27.6 (4.8) | 0.037 | 27.9 (4.7) | 27.6 (4.8) | 0.034 | 27.9 (4.7) | 27.5 (4.8) | 0.008 |
| Observations, <i>n</i> | 3,548 | 1,436 | | 3,547 | 1,437 | | 3,505 | 1,479 | |
| Cognitive function, mean (SD) | 0.1 (1.0) | -0.2 (1.0) | <0.001 | 0.1 (1.0) | -0.2 (1.0) | <0.001 | 0.1 (0.9) | -0.2 (1.0) | <0.001 |
| Observations, <i>n</i> | 3,548 | 2,285 | | 3,547 | 2,286 | | 3,505 | 2,328 | |
| Depressive symptoms (range 0-8), mean (SD) | 1.4 (1.8) | 1.9 (2.1) | <0.001 | 1.4 (1.8) | 1.9 (2.1) | <0.001 | 1.4 (1.8) | 1.9 (2.1) | <0.001 |
| Observations, <i>n</i> | 3,548 | 2,451 | | 3,547 | 2,452 | | 3,505 | 2,494 | |
| Total SPPB score (range 0-12), mean (SD) | 9.8 (2.7) | 8.0 (3.8) | <0.001 | 9.8 (2.7) | 8.0 (3.8) | <0.001 | 9.8 (2.6) | 8.0 (3.8) | <0.001 |
| Observations, <i>n</i> | 3,548 | 1,384 | | 3,547 | 1,385 | | 3,505 | 1,427 | |
| Balance score, <i>n</i> (%) | | | <0.001 | | | <0.001 | | | <0.001 |
| 0 | 67 (1.9) | 243 (13.5) | | 67 (1.9) | 243 (13.5) | | 66 (1.9) | 244 (13.3) | |
| 1 | 160 (4.5) | 153 (8.5) | | 160 (4.5) | 153 (8.5) | | 154 (4.4) | 159 (8.6) | |
| 2 | 193 (5.4) | 138 (7.7) | | 193 (5.4) | 138 (7.7) | | 187 (5.3) | 144 (7.8) | |
| 3 | 316 (8.9) | 190 (10.6) | | 316 (8.9) | 190 (10.6) | | 312 (8.9) | 194 (10.5) | |

| | | | | | | | | |
|--|--------------|--------------|--------|--------------|--------------|--------|--------------|--------------|
| 4 | 2,812 (79.3) | 1,072 (59.7) | | 2,811 (79.3) | 1,073 (59.7) | | 2,786 (79.5) | 1,098 (59.7) |
| Observations, <i>n</i> | 3,548 | 1,796 | | 3,547 | 1,797 | | 3,505 | 1,839 |
| Repeated Chair Stand score, <i>n</i> (%) | | | <0.001 | | | <0.001 | | <0.001 |
| 0 | 385 (10.9) | 404 (26.6) | | 385 (10.9) | 404 (26.6) | | 376 (10.7) | 413 (26.5) |
| 1 | 372 (10.5) | 197 (13.0) | | 372 (10.5) | 197 (13.0) | | 364 (10.4) | 205 (13.1) |
| 2 | 535 (15.1) | 199 (13.1) | | 535 (15.1) | 199 (13.1) | | 526 (15.0) | 208 (13.3) |
| 3 | 798 (22.5) | 277 (18.3) | | 797 (22.5) | 278 (18.3) | | 794 (22.7) | 281 (18.0) |
| 4 | 1,458 (41.1) | 439 (29.0) | | 1,458 (41.1) | 439 (28.9) | | 1,445 (41.2) | 452 (29.0) |
| Observations, <i>n</i> | 3,548 | 1,516 | | 3,547 | 1,517 | | 3,505 | 1,559 |
| Gait score, <i>n</i> (%) | | | <0.001 | | | <0.001 | | <0.001 |
| 0 | 124 (3.5) | 295 (12.4) | | 124 (3.5) | 295 (12.4) | | 121 (3.5) | 298 (12.3) |
| 1 | 129 (3.6) | 222 (9.4) | | 129 (3.6) | 222 (9.4) | | 124 (3.5) | 227 (9.4) |
| 2 | 273 (7.7) | 258 (10.9) | | 273 (7.7) | 258 (10.9) | | 268 (7.6) | 263 (10.9) |
| 3 | 554 (15.6) | 382 (16.1) | | 553 (15.6) | 383 (16.2) | | 544 (15.5) | 392 (16.2) |
| 4 | 2,468 (69.6) | 1,213 (51.2) | | 2,468 (69.6) | 1,213 (51.2) | | 2,448 (69.8) | 1,233 (51.1) |
| Observations, <i>n</i> | 3,548 | 2,370 | | 3,547 | 2,371 | | 3,505 | 2,413 |
| Mobility impairments (range 0-10), mean (SD) | 2.0 (2.4) | 3.0 (2.9) | <0.001 | – | – | | – | – |
| Observations, <i>n</i> | 3,548 | 2,633 | | – | – | | – | – |
| ADL disabilities (range 0-6), mean (SD) | – | – | | 0.3 (0.8) | 0.7 (1.3) | <0.001 | – | – |
| Observations, <i>n</i> | – | – | | 3,547 | 2,634 | | – | – |
| IADL disabilities (range 0-7), mean (SD) | – | – | | 0.3 (0.8) | 0.9 (1.5) | <0.001 | – | – |
| Observations, <i>n</i> | – | – | | 3,547 | 2,634 | | – | – |
| Falls, <i>n</i> (%) | | | | | | | | <0.001 |
| No | – | – | | – | – | | 2,439 (69.6) | 1,651 (63.7) |
| Yes | – | – | | – | – | | 1,066 (30.4) | 942 (36.3) |
| Observations, <i>n</i> | – | – | | – | – | | 3,505 | 2,593 |

n, number of participants; *SD*, standard deviation; *BMI*, body-mass index; *SPPB*, Short Physical Performance Battery; *ADL*, Activities of Daily Living; *IADL*, Instrumental Activities of Daily Living.

¹ Age was collapsed to 90 for participants aged 90+ years.

Note: The samples with complete data and those with missing data for each outcome add up to the total eligible sample at wave two (*n*=6,183; see Figure S4).

Table S8. Odds ratios for mobility impairments, ADL disabilities, and IADL disabilities per one-point increase in total SPPB score, using repeated measures outcomes from seven waves of follow-up.

| | OR (95% CI) | <i>p</i> value |
|---|-------------------|----------------|
| Mobility impairments (<i>n</i> =3,548; 16,934 observations) | | |
| Model 1: Univariable association | 0.51 (0.48, 0.54) | <0.001 |
| Model 2: Model 1 plus continuous linear time variable | 0.49 (0.46, 0.52) | <0.001 |
| Model 3: Model 2 plus continuous quadratic time variable ¹ | 0.49 (0.46, 0.52) | <0.001 |
| Model 4: Model 2 plus socio-demographic covariates ² | 0.59 (0.55, 0.62) | <0.001 |
| Model 5: Model 4 plus health-related covariates ³ | 0.69 (0.65, 0.73) | <0.001 |
| Model 6: Model 5 plus mobility impairments at wave two | 0.79 (0.75, 0.83) | <0.001 |
| ADL disabilities (<i>n</i> =3,547; 16,934 observations) | | |
| Model 1: Univariable association | 0.60 (0.58, 0.62) | <0.001 |
| Model 2: Model 1 plus continuous linear time variable | 0.57 (0.55, 0.59) | <0.001 |
| Model 3: Model 2 plus continuous quadratic time variable ¹ | 0.57 (0.55, 0.59) | <0.001 |
| Model 4: Model 2 plus socio-demographic covariates ² | 0.63 (0.61, 0.66) | <0.001 |
| Model 5: Model 4 plus health-related covariates ³ | 0.73 (0.70, 0.76) | <0.001 |
| Model 6: Model 5 plus ADL disabilities at wave two | 0.81 (0.78, 0.85) | <0.001 |
| IADL disabilities (<i>n</i> =3,547; 16,934 observations) | | |
| Model 1: Univariable association | 0.59 (0.56, 0.61) | <0.001 |
| Model 2: Model 1 plus continuous linear time variable | 0.53 (0.51, 0.56) | <0.001 |
| Model 3: Model 2 plus continuous quadratic time variable ¹ | 0.53 (0.51, 0.56) | <0.001 |
| Model 4: Model 2 plus socio-demographic covariates ² | 0.64 (0.61, 0.66) | <0.001 |
| Model 5: Model 4 plus health-related covariates ³ | 0.73 (0.70, 0.76) | <0.001 |
| Model 6: Model 5 plus IADL disabilities at wave two | 0.81 (0.78, 0.84) | <0.001 |

ADL, Activities of Daily Living; *IADL*, Instrumental Activities of Daily Living; *SPPB*, Short Physical Performance Battery; *n*, number of participants; *CI*, confidence intervals; *OR*, odds ratio.

¹ The quadratic time variable was subsequently excluded from models as there was no evidence of non-linearity.

² Age, biological sex, ethnicity, marital status, employment status, education, and wealth.

³ Physical activity, body-mass index, cognitive function, and depressive symptoms.

Note: All values are weighted estimates.

Table S9. Mean changes in mobility impairments, ADL disabilities, and IADL disabilities, and odds ratios for falls per one-point increase in total SPPB score, using repeated measures outcomes from seven waves of follow-up (imputed samples).

| | Estimate (95% CI) | <i>p</i> value |
|---|----------------------|----------------|
| Mobility impairments (<i>n</i> =4,932; 34,524 observations) | | |
| Model 1: Univariable association | -0.54 (-0.56, -0.51) | <0.001 |
| Model 2: Model 1 plus continuous linear time variable | -0.54 (-0.56, -0.52) | <0.001 |
| Model 3: Model 2 plus continuous quadratic time variable | -0.54 (-0.56, -0.52) | <0.001 |
| Model 4: Model 3 plus socio-demographic covariates ¹ | -0.50 (-0.52, -0.47) | <0.001 |
| Model 5: Model 4 plus health-related covariates ² | -0.37 (-0.40, -0.34) | <0.001 |
| Model 6: Model 5 plus mobility impairments at wave two | -0.15 (-0.18, -0.12) | <0.001 |
| ADL disabilities (<i>n</i> =4,932; 34,524 observations) | | |
| Model 1: Univariable association | -0.17 (-0.19, -0.14) | <0.001 |
| Model 2: Model 1 plus continuous linear time variable | -0.19 (-0.21, -0.17) | <0.001 |
| Model 3: Model 2 plus continuous quadratic time variable | -0.19 (-0.21, -0.17) | <0.001 |
| Model 4: Model 3 plus socio-demographic covariates ¹ | -0.20 (-0.22, -0.18) | <0.001 |
| Model 5: Model 4 plus health-related covariates ² | -0.15 (-0.17, -0.13) | <0.001 |
| Model 6: Model 5 plus ADL disabilities at wave two | -0.08 (-0.10, -0.06) | <0.001 |
| IADL disabilities (<i>n</i> =4,932; 34,524 observations) | | |
| Model 1: Univariable association | -0.18 (-0.21, -0.15) | <0.001 |
| Model 2: Model 1 plus continuous linear time variable | -0.22 (-0.24, -0.19) | <0.001 |
| Model 3: Model 2 plus continuous quadratic time variable | -0.22 (-0.24, -0.19) | <0.001 |
| Model 4: Model 3 plus socio-demographic covariates ¹ | -0.21 (-0.24, -0.19) | <0.001 |
| Model 5: Model 4 plus health-related covariates ² | -0.15 (-0.17, -0.12) | <0.001 |
| Model 6: Model 5 plus IADL disabilities at wave two | -0.07 (-0.09, -0.04) | <0.001 |
| | OR (95% CI) | <i>p</i> value |
| Falls (<i>n</i> =4,932; 34,524 observations) | | |
| Model 1: Univariable association | 0.85 (0.83, 0.87) | <0.001 |
| Model 2: Model 1 plus continuous linear time variable | 0.85 (0.83, 0.87) | <0.001 |
| Model 3: Model 2 plus continuous quadratic time variable ³ | 0.85 (0.83, 0.87) | <0.001 |
| Model 4: Model 2 plus socio-demographic covariates ¹ | 0.88 (0.86, 0.91) | <0.001 |
| Model 5: Model 4 plus health-related covariates ² | 0.91 (0.88, 0.93) | <0.001 |
| Model 6: Model 5 plus falls at wave two | 0.93 (0.90, 0.95) | <0.001 |

ADL, Activities of Daily Living; *IADL*, Instrumental Activities of Daily Living; *SPPB*, Short Physical Performance Battery; *n*, number of participants; *CI*, confidence intervals; *OR*, odds ratio.

¹ Age, biological sex, ethnicity, marital status, employment status, education, and wealth.

² Physical activity, body-mass index, cognitive function, and depressive symptoms.

³ The quadratic time variable was subsequently excluded from models as there was no evidence of non-linearity.

Note: All values are weighted estimates. The “cmdok” option was used to force the “melogit” command to run on imputed data for multilevel logistic models with falls as the outcome.

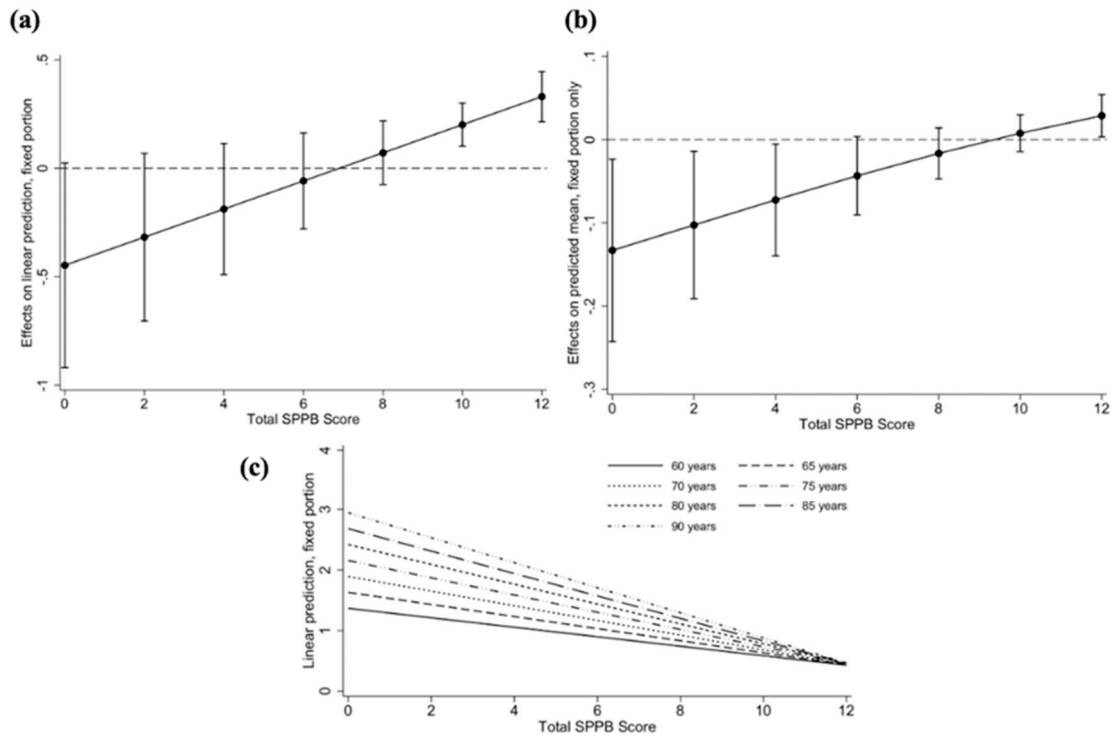


Figure S5. Marginal effects of biological sex on mobility impairments (a) and falls (b) at representative values of the baseline total SPPB score, and simple slopes for the relationship of baseline total SPPB score on IADL disabilities at different age values (c).

Note: Predicted margins were derived from Model 11 for mobility impairments (a), Model 8 for falls (b), and Model 11 for IADL disabilities (c). Values were computed using the postestimation “margins” command with the “vce(unconditional)” option. The random effects of the respective multilevel models were fixed to zero. The marginal effects depict the differences in mobility impairments (a) and falls (b) between males (reference) and females at various values of the baseline total SPPB score. Error bars indicate 95% confidence intervals. The simple slopes (c) show the amount of change in IADL disabilities for a one-point increase in baseline total SPPB score, while holding age constant at different values.

Table S10. Multilevel model results for baseline SPPB domain scores (balance, repeated chair stands, and gait) on mobility impairments, ADL disabilities, IADL disabilities, and falls over seven waves of follow-up: all exposures entered simultaneously.

| | Mobility impairments ¹ | | ADL disabilities ² | | IADL disabilities ² | | Falls ³ | |
|------------------------------------|-----------------------------------|----------------|-------------------------------|----------------|--------------------------------|----------------|--------------------|----------------|
| | Estimate (95% CI) | <i>p</i> value | Estimate (95% CI) | <i>p</i> value | Estimate (95% CI) | <i>p</i> value | OR (95% CI) | <i>p</i> value |
| Unadjusted | | | | | | | | |
| Balance | | | | | | | | |
| 0 (reference) | 0.00 | | 0.00 | | 0.00 | | 1.00 | |
| 1 | 0.34 (-0.37, 1.05) | 0.347 | -0.46 (-0.90, -0.02) | 0.041 | -0.06 (-0.52, 0.40) | 0.809 | 1.38 (0.80, 2.36) | 0.246 |
| 2 | 0.45 (-0.23, 1.13) | 0.195 | -0.62 (-1.05, -0.19) | 0.005 | -0.35 (-0.79, 0.08) | 0.112 | 1.49 (0.88, 2.52) | 0.136 |
| 3 | 0.29 (-0.40, 0.97) | 0.413 | -0.56 (-0.99, -0.14) | 0.009 | -0.35 (-0.77, 0.08) | 0.109 | 1.16 (0.70, 1.93) | 0.556 |
| 4 | -0.28 (-0.94, 0.37) | 0.398 | -0.70 (-1.12, -0.29) | 0.001 | -0.56 (-0.97, -0.15) | 0.007 | 0.77 (0.47, 1.26) | 0.300 |
| Repeated Chair Stands | | | | | | | | |
| 0 (reference) | 0.00 | | 0.00 | | 0.00 | | 1.00 | |
| 1 | -1.03 (-1.39, -0.66) | <0.001 | -0.40 (-0.57, -0.23) | <0.001 | -0.23 (-0.43, -0.03) | 0.026 | 0.70 (0.52, 0.94) | 0.016 |
| 2 | -1.48 (-1.83, -1.14) | <0.001 | -0.52 (-0.68, -0.36) | <0.001 | -0.27 (-0.46, -0.08) | 0.005 | 0.73 (0.56, 0.97) | 0.029 |
| 3 | -1.81 (-2.14, -1.48) | <0.001 | -0.60 (-0.75, -0.45) | <0.001 | -0.33 (-0.51, -0.15) | <0.001 | 0.77 (0.59, 1.01) | 0.059 |
| 4 | -2.41 (-2.73, -2.09) | <0.001 | -0.70 (-0.85, -0.55) | <0.001 | -0.45 (-0.62, -0.27) | <0.001 | 0.64 (0.49, 0.83) | 0.001 |
| Gait | | | | | | | | |
| 0 (reference) | 0.00 | | 0.00 | | 0.00 | | 1.00 | |
| 1 | -0.05 (-0.66, 0.56) | 0.873 | -0.25 (-0.57, 0.08) | 0.143 | 0.36 (-0.07, 0.79) | 0.097 | 0.73 (0.46, 1.15) | 0.174 |
| 2 | -0.47 (-1.03, 0.09) | 0.103 | -0.39 (-0.66, -0.11) | 0.006 | -0.11 (-0.48, 0.26) | 0.559 | 0.69 (0.46, 1.04) | 0.076 |
| 3 | -1.56 (-2.11, -1.01) | <0.001 | -0.68 (-0.93, -0.42) | <0.001 | -0.50 (-0.86, -0.15) | 0.005 | 0.51 (0.35, 0.75) | 0.001 |
| 4 | -2.55 (-3.08, -2.02) | <0.001 | -0.88 (-1.12, -0.63) | <0.001 | -0.84 (-1.19, -0.50) | <0.001 | 0.39 (0.27, 0.55) | <0.001 |
| Fully adjusted ⁴ | | | | | | | | |
| Balance | | | | | | | | |
| 0 (reference) | 0.00 | | 0.00 | | 0.00 | | 1.00 | |
| 1 | 0.31 (-0.29, 0.91) | 0.312 | -0.20 (-0.55, 0.14) | 0.250 | 0.08 (-0.29, 0.45) | 0.676 | 1.15 (0.68, 1.95) | 0.597 |
| 2 | 0.46 (-0.10, 1.01) | 0.107 | -0.36 (-0.70, -0.03) | 0.035 | -0.17 (-0.50, 0.17) | 0.331 | 1.23 (0.75, 2.03) | 0.410 |
| 3 | 0.44 (-0.12, 1.00) | 0.125 | -0.27 (-0.60, 0.05) | 0.101 | -0.11 (-0.44, 0.23) | 0.536 | 1.08 (0.66, 1.76) | 0.760 |
| 4 | 0.14 (-0.40, 0.68) | 0.608 | -0.35 (-0.67, -0.03) | 0.032 | -0.17 (-0.50, 0.15) | 0.294 | 0.86 (0.54, 1.38) | 0.535 |
| Repeated Chair Stands | | | | | | | | |
| 0 (reference) | 0.00 | | 0.00 | | 0.00 | | 1.00 | |

| | | | | | | | | |
|---------------|----------------------|--------|----------------------|--------|----------------------|-------|-------------------|--------|
| 1 | -0.32 (-0.59, -0.05) | 0.022 | -0.19 (-0.33, -0.05) | 0.006 | -0.13 (-0.29, 0.03) | 0.102 | 0.69 (0.52, 0.90) | 0.006 |
| 2 | -0.45 (-0.71, -0.19) | 0.001 | -0.24 (-0.37, -0.10) | 0.001 | -0.12 (-0.27, 0.04) | 0.137 | 0.83 (0.64, 1.08) | 0.158 |
| 3 | -0.44 (-0.70, -0.19) | 0.001 | -0.26 (-0.39, -0.13) | <0.001 | -0.10 (-0.25, 0.05) | 0.203 | 0.85 (0.66, 1.10) | 0.210 |
| 4 | -0.66 (-0.91, -0.41) | <0.001 | -0.29 (-0.42, -0.17) | <0.001 | -0.14 (-0.28, -0.00) | 0.049 | 0.81 (0.63, 1.04) | 0.105 |
| <hr/> | | | | | | | | |
| Gait | | | | | | | | |
| 0 (reference) | 0.00 | | 0.00 | | 0.00 | | 1.00 | |
| 1 | -0.35 (-0.80, 0.11) | 0.135 | -0.27 (-0.53, -0.02) | 0.038 | 0.01 (-0.33, 0.34) | 0.964 | 0.65 (0.42, 1.01) | 0.057 |
| 2 | -0.17 (-0.57, 0.23) | 0.416 | -0.20 (-0.43, 0.03) | 0.089 | -0.01 (-0.29, 0.27) | 0.944 | 0.70 (0.48, 1.03) | 0.070 |
| 3 | -0.33 (-0.71, 0.05) | 0.086 | -0.26 (-0.47, -0.05) | 0.016 | -0.18 (-0.44, 0.09) | 0.196 | 0.63 (0.44, 0.90) | 0.011 |
| 4 | -0.70 (-1.07, -0.33) | <0.001 | -0.35 (-0.55, -0.14) | 0.001 | -0.33 (-0.59, -0.07) | 0.012 | 0.52 (0.37, 0.74) | <0.001 |

ADL, Activities of Daily Living; *IADL*, Instrumental Activities of Daily Living; *SPPB*, Short Physical Performance Battery; *CI*, confidence intervals; *OR*, odds ratio.

¹ Number of participants: 3,548. Total observations: 16,934.

² Number of participants: 3,547. Total observations: 16,934.

³ Number of participants: 3,505. Total observations: 16,332.

⁴ Adjusted for linear time, quadratic time (excluded from the models with mobility impairments or falls as the outcome as there was no evidence of non-linearity), age, biological sex, ethnicity, marital status, employment status, education, wealth, physical activity, body-mass index, cognitive function, depressive symptoms, and the outcome from wave two.

Note: All values are weighted estimates.

Table S11. Multilevel logistic regression model results for baseline SPPB domain scores (balance, repeated chair stands, and gait) on mobility impairments, ADL disabilities, and IADL disabilities over seven waves of follow-up: each exposure entered in separate models.

| | Mobility impairments ¹ | | ADL disabilities ² | | IADL disabilities ² | |
|------------------------------------|-----------------------------------|----------------|-------------------------------|----------------|--------------------------------|----------------|
| | OR (95% CI) | <i>p</i> value | OR (95% CI) | <i>p</i> value | OR (95% CI) | <i>p</i> value |
| Unadjusted | | | | | | |
| Balance | | | | | | |
| 0 (reference) | 1.00 | | 1.00 | | 1.00 | |
| 1 | 1.29 (0.43, 3.85) | 0.645 | 0.66 (0.28, 1.56) | 0.345 | 0.62 (0.27, 1.46) | 0.275 |
| 2 | 0.75 (0.28, 2.02) | 0.576 | 0.24 (0.10, 0.55) | 0.001 | 0.29 (0.13, 0.67) | 0.004 |
| 3 | 0.27 (0.11, 0.69) | 0.006 | 0.12 (0.05, 0.26) | <0.001 | 0.16 (0.07, 0.35) | <0.001 |
| 4 | 0.05 (0.02, 0.11) | <0.001 | 0.03 (0.01, 0.06) | <0.001 | 0.03 (0.01, 0.06) | <0.001 |
| Repeated Chair Stands | | | | | | |
| 0 (reference) | 1.00 | | 1.00 | | 1.00 | |
| 1 | 0.20 (0.12, 0.35) | <0.001 | 0.19 (0.13, 0.28) | <0.001 | 0.21 (0.15, 0.31) | <0.001 |
| 2 | 0.09 (0.05, 0.15) | <0.001 | 0.09 (0.06, 0.13) | <0.001 | 0.11 (0.08, 0.16) | <0.001 |
| 3 | 0.04 (0.03, 0.07) | <0.001 | 0.05 (0.04, 0.07) | <0.001 | 0.06 (0.04, 0.09) | <0.001 |
| 4 | 0.01 (0.01, 0.02) | <0.001 | 0.02 (0.02, 0.03) | <0.001 | 0.02 (0.02, 0.03) | <0.001 |
| Gait | | | | | | |
| 0 (reference) | 1.00 | | 1.00 | | 1.00 | |
| 1 | 3.24 (0.88, 11.88) | 0.076 | 0.79 (0.40, 1.56) | 0.496 | 1.76 (0.86, 3.62) | 0.123 |
| 2 | 0.92 (0.39, 2.16) | 0.844 | 0.41 (0.23, 0.74) | 0.003 | 0.63 (0.34, 1.15) | 0.133 |
| 3 | 0.20 (0.09, 0.42) | <0.001 | 0.11 (0.07, 0.19) | <0.001 | 0.19 (0.11, 0.34) | <0.001 |
| 4 | 0.04 (0.02, 0.07) | <0.001 | 0.03 (0.02, 0.04) | <0.001 | 0.03 (0.02, 0.05) | <0.001 |
| Fully adjusted ³ | | | | | | |
| Balance | | | | | | |
| 0 (reference) | 1.00 | | 1.00 | | 1.00 | |
| 1 | 1.29 (0.46, 3.58) | 0.629 | 0.90 (0.43, 1.85) | 0.767 | 0.83 (0.37, 1.88) | 0.659 |
| 2 | 1.12 (0.44, 2.85) | 0.809 | 0.48 (0.24, 0.97) | 0.040 | 0.54 (0.25, 1.19) | 0.128 |
| 3 | 0.71 (0.30, 1.71) | 0.448 | 0.43 (0.22, 0.85) | 0.015 | 0.49 (0.23, 1.06) | 0.068 |
| 4 | 0.47 (0.21, 1.07) | 0.072 | 0.33 (0.18, 0.62) | 0.001 | 0.30 (0.15, 0.63) | 0.001 |
| Repeated Chair Stands | | | | | | |
| 0 (reference) | 1.00 | | 1.00 | | 1.00 | |

| | | | | | | |
|---------------|-------------------|--------|-------------------|--------|-------------------|--------|
| 1 | 0.45 (0.27, 0.75) | 0.002 | 0.44 (0.31, 0.62) | <0.001 | 0.47 (0.32, 0.67) | <0.001 |
| 2 | 0.35 (0.22, 0.55) | <0.001 | 0.37 (0.26, 0.52) | <0.001 | 0.44 (0.31, 0.62) | <0.001 |
| 3 | 0.30 (0.19, 0.48) | <0.001 | 0.32 (0.23, 0.45) | <0.001 | 0.37 (0.27, 0.51) | <0.001 |
| 4 | 0.22 (0.14, 0.35) | <0.001 | 0.23 (0.16, 0.32) | <0.001 | 0.28 (0.20, 0.38) | <0.001 |
| <hr/> | | | | | | |
| Gait | | | | | | |
| 0 (reference) | 1.00 | | 1.00 | | 1.00 | |
| 1 | 0.85 (0.29, 2.48) | 0.767 | 0.34 (0.18, 0.63) | 0.001 | 0.68 (0.35, 1.34) | 0.271 |
| 2 | 0.53 (0.25, 1.12) | 0.095 | 0.40 (0.24, 0.67) | <0.001 | 0.59 (0.35, 1.02) | 0.060 |
| 3 | 0.39 (0.20, 0.76) | 0.006 | 0.30 (0.19, 0.49) | <0.001 | 0.44 (0.27, 0.72) | 0.001 |
| 4 | 0.23 (0.12, 0.45) | <0.001 | 0.19 (0.12, 0.31) | <0.001 | 0.23 (0.14, 0.38) | <0.001 |

ADL, Activities of Daily Living; *IADL*, Instrumental Activities of Daily Living; *SPPB*, Short Physical Performance Battery; *CI*, confidence intervals; *OR*, odds ratio.

¹ Number of participants: 3,548. Total observations: 16,934.

² Number of participants: 3,547. Total observations: 16,934.

³ Adjusted for linear time (quadratic time was excluded from the models as there was no evidence of non-linearity), age, biological sex, ethnicity, marital status, employment status, education, wealth, physical activity, body-mass index, cognitive function, depressive symptoms, and the outcome from wave two.

Note: All values are weighted estimates.

Table S12. Multilevel logistic regression model results for baseline SPPB domain scores (balance, repeated chair stands, and gait) on mobility impairments, ADL disabilities, and IADL disabilities over seven waves of follow-up: all exposures entered simultaneously.

| | Mobility impairments ¹ | | ADL disabilities ² | | IADL disabilities ² | |
|------------------------------------|-----------------------------------|----------------|-------------------------------|----------------|--------------------------------|----------------|
| | OR (95% CI) | <i>p</i> value | OR (95% CI) | <i>p</i> value | OR (95% CI) | <i>p</i> value |
| Unadjusted | | | | | | |
| Balance | | | | | | |
| 0 (reference) | 1.00 | | 1.00 | | 1.00 | |
| 1 | 4.53 (1.44, 14.24) | 0.010 | 1.68 (0.76, 3.68) | 0.198 | 1.39 (0.63, 3.07) | 0.414 |
| 2 | 4.50 (1.57, 12.91) | 0.005 | 0.98 (0.46, 2.11) | 0.958 | 0.97 (0.44, 2.13) | 0.939 |
| 3 | 2.72 (0.98, 7.52) | 0.054 | 0.94 (0.44, 2.00) | 0.863 | 0.94 (0.44, 2.02) | 0.874 |
| 4 | 1.12 (0.43, 2.91) | 0.810 | 0.53 (0.26, 1.08) | 0.082 | 0.37 (0.18, 0.76) | 0.007 |
| Repeated Chair Stands | | | | | | |
| 0 (reference) | 1.00 | | 1.00 | | 1.00 | |
| 1 | 0.47 (0.26, 0.87) | 0.016 | 0.47 (0.32, 0.70) | <0.001 | 0.61 (0.41, 0.89) | 0.011 |
| 2 | 0.28 (0.16, 0.50) | <0.001 | 0.30 (0.20, 0.44) | <0.001 | 0.47 (0.32, 0.67) | <0.001 |
| 3 | 0.17 (0.10, 0.29) | <0.001 | 0.22 (0.15, 0.32) | <0.001 | 0.34 (0.24, 0.49) | <0.001 |
| 4 | 0.06 (0.04, 0.11) | <0.001 | 0.11 (0.07, 0.16) | <0.001 | 0.17 (0.12, 0.24) | <0.001 |
| Gait | | | | | | |
| 0 (reference) | 1.00 | | 1.00 | | 1.00 | |
| 1 | 1.81 (0.54, 6.07) | 0.334 | 0.60 (0.32, 1.14) | 0.118 | 1.34 (0.68, 2.64) | 0.402 |
| 2 | 0.88 (0.38, 2.04) | 0.773 | 0.52 (0.31, 0.89) | 0.016 | 0.75 (0.43, 1.32) | 0.317 |
| 3 | 0.35 (0.16, 0.75) | 0.007 | 0.26 (0.16, 0.43) | <0.001 | 0.40 (0.24, 0.68) | 0.001 |
| 4 | 0.13 (0.06, 0.27) | <0.001 | 0.11 (0.07, 0.18) | <0.001 | 0.12 (0.07, 0.20) | <0.001 |
| Fully adjusted ³ | | | | | | |
| Balance | | | | | | |
| 0 (reference) | 1.00 | | 1.00 | | 1.00 | |
| 1 | 2.27 (0.77, 6.71) | 0.139 | 1.46 (0.71, 3.02) | 0.302 | 1.17 (0.53, 2.58) | 0.692 |
| 2 | 2.42 (0.91, 6.46) | 0.078 | 0.91 (0.45, 1.87) | 0.804 | 0.86 (0.39, 1.87) | 0.705 |
| 3 | 1.78 (0.69, 4.58) | 0.231 | 1.01 (0.51, 2.02) | 0.974 | 0.91 (0.42, 1.97) | 0.812 |
| 4 | 1.32 (0.54, 3.26) | 0.540 | 0.86 (0.45, 1.66) | 0.655 | 0.64 (0.30, 1.33) | 0.229 |
| Repeated Chair Stands | | | | | | |
| 0 (reference) | 1.00 | | 1.00 | | 1.00 | |

| | | | | | | |
|---------------|-------------------|--------|-------------------|--------|-------------------|--------|
| 1 | 0.58 (0.34, 1.00) | 0.049 | 0.55 (0.38, 0.80) | 0.002 | 0.64 (0.44, 0.93) | 0.021 |
| 2 | 0.48 (0.29, 0.80) | 0.005 | 0.48 (0.34, 0.70) | <0.001 | 0.65 (0.45, 0.94) | 0.023 |
| 3 | 0.43 (0.26, 0.71) | 0.001 | 0.44 (0.31, 0.63) | <0.001 | 0.58 (0.40, 0.83) | 0.003 |
| 4 | 0.32 (0.20, 0.52) | <0.001 | 0.31 (0.22, 0.44) | <0.001 | 0.43 (0.30, 0.62) | <0.001 |
| <hr/> | | | | | | |
| Gait | | | | | | |
| 0 (reference) | 1.00 | | 1.00 | | 1.00 | |
| 1 | 0.76 (0.26, 2.19) | 0.612 | 0.34 (0.18, 0.63) | 0.001 | 0.70 (0.36, 1.36) | 0.287 |
| 2 | 0.53 (0.25, 1.12) | 0.098 | 0.45 (0.27, 0.77) | 0.003 | 0.67 (0.38, 1.16) | 0.153 |
| 3 | 0.46 (0.23, 0.90) | 0.024 | 0.41 (0.25, 0.68) | <0.001 | 0.57 (0.34, 0.95) | 0.033 |
| 4 | 0.31 (0.16, 0.60) | 0.001 | 0.30 (0.18, 0.48) | <0.001 | 0.34 (0.20, 0.56) | <0.001 |

ADL, Activities of Daily Living; *IADL*, Instrumental Activities of Daily Living; *SPPB*, Short Physical Performance Battery; *CI*, confidence intervals; *OR*, odds ratio.

¹ Number of participants: 3,548. Total observations: 16,934.

² Number of participants: 3,547. Total observations: 16,934.

³ Adjusted for linear time (quadratic time was excluded from the models as there was no evidence of non-linearity), age, biological sex, ethnicity, marital status, employment status, education, wealth, physical activity, body-mass index, cognitive function, depressive symptoms, and the outcome from wave two.

Note: All values are weighted estimates.

Table S13. Multilevel model results for baseline SPPB domain scores (balance, repeated chair stands, and gait) on mobility impairments, ADL disabilities, IADL disabilities, and falls over seven waves of follow-up: each exposure entered in separate models (imputed samples).

| | Mobility impairments ¹ | | ADL disabilities ¹ | | IADL disabilities ¹ | | Falls ¹ | |
|------------------------------------|-----------------------------------|---------|-------------------------------|---------|--------------------------------|---------|--------------------|---------|
| | Estimate (95% CI) | p value | Estimate (95% CI) | p value | Estimate (95% CI) | p value | OR (95% CI) | p value |
| Unadjusted | | | | | | | | |
| Balance | | | | | | | | |
| 0 (reference) | 0.00 | | 0.00 | | 0.00 | | 1.00 | |
| 1 | -1.72 (-2.30, -1.14) | <0.001 | -1.27 (-1.68, -0.85) | <0.001 | -1.26 (-1.79, -0.73) | <0.001 | 0.74 (0.52, 1.07) | 0.105 |
| 2 | -2.32 (-2.87, -1.76) | <0.001 | -1.68 (-2.07, -1.29) | <0.001 | -1.80 (-2.31, -1.29) | <0.001 | 0.62 (0.43, 0.89) | 0.011 |
| 3 | -3.25 (-3.76, -2.74) | <0.001 | -1.78 (-2.15, -1.42) | <0.001 | -1.91 (-2.37, -1.46) | <0.001 | 0.47 (0.34, 0.66) | <0.001 |
| 4 | -4.54 (-4.96, -4.11) | <0.001 | -1.97 (-2.32, -1.62) | <0.001 | -2.13 (-2.55, -1.70) | <0.001 | 0.24 (0.17, 0.33) | <0.001 |
| Repeated Chair Stands | | | | | | | | |
| 0 (reference) | 0.00 | | 0.00 | | 0.00 | | 1.00 | |
| 1 | -2.29 (-2.63, -1.95) | <0.001 | -1.04 (-1.25, -0.83) | <0.001 | -1.17 (-1.45, -0.89) | <0.001 | 0.61 (0.50, 0.75) | <0.001 |
| 2 | -3.16 (-3.47, -2.85) | <0.001 | -1.16 (-1.36, -0.95) | <0.001 | -1.27 (-1.53, -1.00) | <0.001 | 0.45 (0.37, 0.56) | <0.001 |
| 3 | -3.67 (-3.96, -3.39) | <0.001 | -1.24 (-1.44, -1.04) | <0.001 | -1.29 (-1.54, -1.04) | <0.001 | 0.39 (0.32, 0.48) | <0.001 |
| 4 | -4.38 (-4.64, -4.12) | <0.001 | -1.30 (-1.51, -1.09) | <0.001 | -1.35 (-1.60, -1.10) | <0.001 | 0.30 (0.24, 0.36) | <0.001 |
| Gait | | | | | | | | |
| 0 (reference) | 0.00 | | 0.00 | | 0.00 | | 1.00 | |
| 1 | -0.08 (-0.63, 0.47) | 0.780 | -0.50 (-0.91, -0.09) | 0.016 | -0.22 (-0.75, 0.30) | 0.403 | 0.91 (0.68, 1.21) | 0.511 |
| 2 | -1.42 (-1.92, -0.91) | <0.001 | -1.25 (-1.58, -0.92) | <0.001 | -1.39 (-1.83, -0.96) | <0.001 | 0.73 (0.55, 0.96) | 0.024 |
| 3 | -3.06 (-3.53, -2.59) | <0.001 | -1.53 (-1.84, -1.22) | <0.001 | -1.72 (-2.12, -1.31) | <0.001 | 0.45 (0.34, 0.59) | <0.001 |
| 4 | -4.52 (-4.96, -4.08) | <0.001 | -1.76 (-2.07, -1.45) | <0.001 | -1.99 (-2.38, -1.60) | <0.001 | 0.27 (0.21, 0.35) | <0.001 |
| Fully adjusted ² | | | | | | | | |
| Balance | | | | | | | | |
| 0 (reference) | 0.00 | | No convergence | | 0.00 | | 1.00 | |
| 1 | -0.33 (-0.69, 0.02) | 0.066 | | | -0.42 (-0.77, -0.07) | 0.019 | 0.80 (0.56, 1.14) | 0.217 |
| 2 | -0.49 (-0.80, -0.18) | 0.002 | | | -0.75 (-1.10, -0.40) | <0.001 | 0.77 (0.54, 1.10) | 0.143 |
| 3 | -0.57 (-0.88, -0.26) | <0.001 | | | -0.70 (-1.02, -0.37) | <0.001 | 0.70 (0.50, 0.98) | 0.037 |
| 4 | -0.94 (-1.22, -0.65) | <0.001 | | | -0.75 (-1.05, -0.45) | <0.001 | 0.53 (0.37, 0.75) | 0.001 |
| Repeated Chair Stands | | | | | | | | |
| 0 (reference) | 0.00 | | 0.00 | | 0.00 | | 1.00 | |

| | | | | | | | | |
|---------------|----------------------|----------------|----------------------|--------|----------------------|--------|-------------------|--------|
| 1 | -0.47 (-0.70, -0.24) | <0.001 | -0.40 (-0.56, -0.24) | <0.001 | -0.36 (-0.56, -0.16) | 0.001 | 0.77 (0.63, 0.93) | 0.008 |
| 2 | -0.66 (-0.89, -0.44) | <0.001 | -0.43 (-0.57, -0.28) | <0.001 | -0.36 (-0.55, -0.17) | <0.001 | 0.77 (0.63, 0.94) | 0.011 |
| 3 | -0.75 (-0.97, -0.53) | <0.001 | -0.44 (-0.58, -0.30) | <0.001 | -0.31 (-0.49, -0.13) | 0.001 | 0.73 (0.60, 0.87) | 0.001 |
| 4 | -0.95 (-1.16, -0.73) | <0.001 | -0.45 (-0.59, -0.30) | <0.001 | -0.32 (-0.50, -0.14) | <0.001 | 0.68 (0.55, 0.83) | <0.001 |
| Gait | | No convergence | | | | | | |
| 0 (reference) | 0.00 | | | | 0.00 | | 1.00 | |
| 1 | -0.09 (-0.43, 0.25) | 0.600 | | | -0.07 (-0.42, 0.28) | 0.685 | 0.79 (0.60, 1.05) | 0.109 |
| 2 | -0.21 (-0.52, 0.10) | 0.175 | | | -0.49 (-0.80, -0.18) | 0.002 | 0.83 (0.63, 1.08) | 0.163 |
| 3 | -0.49 (-0.79, -0.19) | 0.002 | | | -0.55 (-0.83, -0.26) | <0.001 | 0.69 (0.53, 0.89) | 0.005 |
| 4 | -0.92 (-1.22, -0.62) | <0.001 | | | -0.66 (-0.94, -0.38) | <0.001 | 0.56 (0.43, 0.73) | <0.001 |

ADL, Activities of Daily Living; *IADL*, Instrumental Activities of Daily Living; *SPPB*, Short Physical Performance Battery; *CI*, confidence intervals; *OR*, odds ratio.

¹ Number of participants: 4,932. Total observations: 34,524. Imputations: 25.

² Adjusted for linear time, quadratic time (excluded from the models with falls as the outcome as there was no evidence of non-linearity), age, biological sex, ethnicity, marital status, employment status, education, wealth, physical activity, body-mass index, cognitive function, depressive symptoms, and the outcome from wave two.

Note: All values are weighted estimates. The “cmdok” option was used to force the “melogit” command to run on imputed data for multilevel logistic models with falls as the outcome.

Table S14. Multilevel model results for baseline SPPB domain scores (balance, repeated chair stands, and gait) on mobility impairments, ADL disabilities, IADL disabilities, and falls over seven waves of follow-up: all exposures entered simultaneously (imputed samples).

| | Mobility impairments ¹ | | ADL disabilities ¹ | | IADL disabilities ¹ | | Falls ¹ | |
|------------------------------------|-----------------------------------|----------------|-------------------------------|----------------|--------------------------------|----------------|--------------------|----------------|
| | Estimate (95% CI) | <i>p</i> value | Estimate (95% CI) | <i>p</i> value | Estimate (95% CI) | <i>p</i> value | OR (95% CI) | <i>p</i> value |
| Unadjusted | | | | | | | | |
| Balance | | | | | | | | |
| 0 (reference) | 0.00 | | 0.00 | | 0.00 | | 1.00 | |
| 1 | -0.49 (-1.01, 0.03) | 0.065 | -0.79 (-1.17, -0.40) | <0.001 | -0.76 (-1.26, -0.25) | 0.003 | 0.90 (0.63, 1.29) | 0.556 |
| 2 | -0.50 (-0.99, -0.00) | 0.049 | -0.99 (-1.36, -0.63) | <0.001 | -1.06 (-1.55, -0.58) | <0.001 | 0.82 (0.56, 1.19) | 0.285 |
| 3 | -0.60 (-1.11, -0.10) | 0.020 | -0.90 (-1.26, -0.53) | <0.001 | -0.92 (-1.39, -0.45) | <0.001 | 0.74 (0.51, 1.05) | 0.094 |
| 4 | -0.98 (-1.45, -0.51) | <0.001 | -0.90 (-1.25, -0.56) | <0.001 | -0.92 (-1.36, -0.47) | <0.001 | 0.47 (0.32, 0.68) | <0.001 |
| Repeated Chair Stands | | | | | | | | |
| 0 (reference) | 0.00 | | 0.00 | | 0.00 | | 1.00 | |
| 1 | -1.04 (-1.39, -0.70) | <0.001 | -0.47 (-0.67, -0.27) | <0.001 | -0.44 (-0.71, -0.16) | 0.002 | 1.01 (0.82, 1.25) | 0.891 |
| 2 | -1.50 (-1.84, -1.16) | <0.001 | -0.53 (-0.71, -0.34) | <0.001 | -0.41 (-0.69, -0.14) | 0.003 | 0.89 (0.72, 1.10) | 0.281 |
| 3 | -1.79 (-2.12, -1.47) | <0.001 | -0.57 (-0.75, -0.39) | <0.001 | -0.38 (-0.63, -0.13) | 0.003 | 0.85 (0.70, 1.05) | 0.131 |
| 4 | -2.34 (-2.66, -2.02) | <0.001 | -0.63 (-0.82, -0.44) | <0.001 | -0.41 (-0.66, -0.16) | 0.001 | 0.69 (0.56, 0.86) | 0.001 |
| Gait | | | | | | | | |
| 0 (reference) | 0.00 | | 0.00 | | 0.00 | | 1.00 | |
| 1 | -0.14 (-0.62, 0.35) | 0.583 | -0.39 (-0.76, -0.03) | 0.035 | -0.10 (-0.61, 0.40) | 0.686 | 0.89 (0.66, 1.19) | 0.415 |
| 2 | -0.81 (-1.27, -0.35) | 0.001 | -0.87 (-1.16, -0.57) | <0.001 | -1.03 (-1.46, -0.60) | <0.001 | 0.87 (0.66, 1.15) | 0.331 |
| 3 | -1.84 (-2.30, -1.39) | <0.001 | -0.98 (-1.25, -0.71) | <0.001 | -1.22 (-1.62, -0.81) | <0.001 | 0.66 (0.50, 0.87) | 0.004 |
| 4 | -2.77 (-3.22, -2.33) | <0.001 | -1.11 (-1.38, -0.84) | <0.001 | -1.43 (-1.83, -1.04) | <0.001 | 0.49 (0.37, 0.65) | <0.001 |
| Fully adjusted ² | | | | | | | | |
| No convergence | | | | | | | | |
| Balance | | | | | | | | |
| 0 (reference) | 0.00 | | | | 0.00 | | 1.00 | |
| 1 | -0.18 (-0.55, 0.19) | 0.344 | | | -0.33 (-0.69, 0.03) | 0.071 | 0.86 (0.61, 1.23) | 0.409 |
| 2 | -0.28 (-0.60, 0.05) | 0.097 | | | -0.61 (-0.97, -0.26) | 0.001 | 0.84 (0.58, 1.21) | 0.337 |
| 3 | -0.25 (-0.59, 0.10) | 0.159 | | | -0.51 (-0.86, -0.17) | 0.003 | 0.80 (0.56, 1.14) | 0.212 |
| 4 | -0.52 (-0.84, -0.20) | 0.001 | | | -0.54 (-0.86, -0.22) | 0.001 | 0.62 (0.43, 0.91) | 0.015 |
| Repeated Chair Stands | | | | | | | | |
| 0 (reference) | 0.00 | | | | 0.00 | | 1.00 | |
| 1 | -0.23 (-0.47, 0.01) | 0.065 | | | -0.13 (-0.33, 0.08) | 0.230 | 0.95 (0.78, 1.15) | 0.568 |

| | | | | | | |
|---------------|----------------------|--------|----------------------|--------|-------------------|-------|
| 2 | -0.38 (-0.62, -0.14) | 0.002 | -0.11 (-0.31, 0.09) | 0.263 | 0.98 (0.80, 1.20) | 0.851 |
| 3 | -0.44 (-0.67, -0.20) | <0.001 | -0.05 (-0.25, 0.14) | 0.578 | 0.95 (0.78, 1.15) | 0.566 |
| 4 | -0.64 (-0.88, -0.40) | <0.001 | -0.08 (-0.27, 0.11) | 0.405 | 0.88 (0.72, 1.08) | 0.228 |
| <hr/> | | | | | | |
| Gait | | | | | | |
| 0 (reference) | 0.00 | | 0.00 | | 1.00 | |
| 1 | -0.07 (-0.41, 0.26) | 0.664 | -0.01 (-0.36, 0.34) | 0.957 | 0.82 (0.61, 1.09) | 0.173 |
| 2 | -0.09 (-0.40, 0.22) | 0.589 | -0.35 (-0.66, -0.05) | 0.025 | 0.91 (0.70, 1.19) | 0.488 |
| 3 | -0.27 (-0.58, 0.03) | 0.073 | -0.38 (-0.66, -0.10) | 0.007 | 0.80 (0.61, 1.04) | 0.088 |
| 4 | -0.64 (-0.93, -0.34) | <0.001 | -0.49 (-0.77, -0.22) | <0.001 | 0.68 (0.51, 0.89) | 0.007 |

ADL, Activities of Daily Living; *IADL*, Instrumental Activities of Daily Living; *SPPB*, Short Physical Performance Battery; *CI*, confidence intervals; *OR*, odds ratio.

¹ Number of participants: 4,932. Total observations: 34,524. Imputations: 25.

² Adjusted for linear time, quadratic time (excluded from the model with falls as the outcome as there was no evidence of non-linearity), age, biological sex, ethnicity, marital status, employment status, education, wealth, physical activity, body-mass index, cognitive function, depressive symptoms, and the outcome from wave two.

Note: All values are weighted estimates. The “cmdok” option was used to force the “melogit” command to run on imputed data for multilevel logistic models with falls as the outcome.