**Other Supplementary Material**

Supplementary Table 1. Summary of Lothian Birth Cohort 1936 Data Collection

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Wave summary** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** |
| Participants  | 1091 | 866 | 697 | 550 |
| Mean Age | 69.6 | 72.5 | 76.3 | 79.3 |
| Start of cognitive assessments | Jan 2004 | Oct 2007 | Jul 2011 | Nov 2014 |
| End of cognitive assessments | May 2007 | May 2010 | Nov 2013 | Jan 2017 |
| **Cognitive Ability** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** |
| Moray House Test Score age 11 |   |   |   |   |
| MHT (Moray House Test) | ✓ |   | ✓ | ✓ |
| MMSE (Mini mental state examination) | ✓ | ✓ | ✓ | ✓ |
| Extensive cognitive test battery | ✓ | ✓ | ✓ | ✓ |
| **Biological Imaging** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** |
| Whole-brain MRI (T1, T2, T2\*, FLAIR) |   | ✓ | ✓ | ✓ |
| Whole-brain diffusion MRI |   | ✓ | ✓ | ✓ |
| Neuroradiological report & ratings |   | ✓ | ✓ | ✓ |
| Carotid Ultrasound |   | ✓ |   | ✓ |
| Retinal Photography |   | ✓ |   |   |
| Face Photography |   | ✓ | ✓ |  |
| **Physical and Medical** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** |
| Medical history | ✓ | ✓ | ✓ | ✓ |
| Anthropometrics | ✓ | ✓ | ✓ | ✓ |
| Physical Functioning | ✓ | ✓ | ✓ | ✓ |
| **Biomarkers** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** |
| Blood assays | ✓ | ✓ | ✓ | ✓ |
| Urine assays |  | ✓ | ✓ | ✓ |
| **Questionnaires** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** |
| IPIP Five Factor Personality | ✓ | ✓ | ✓ | ✓ |
| NEO-FFI (personality) | ✓ |   |   |   |
| Social, lifestyle & demographic | ✓ | ✓ | ✓ | ✓ |
| Food frequency questionnaire (FFQ) | ✓ |  |  | ✓ |
| **Genetic analysis** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** |
| GWAS | ✓ |   |   |   |
| Telomere length | ✓ | ✓ | ✓ | ✓ |
| Methylation analysis | ✓ | ✓ | ✓ |   |
| Numerous Genotyped SNPs | ✓ | ✓ | ✓ |   |
| **Linkages** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** |
| Cause of Death (NHS) | ✓ | ✓ | ✓ | ✓ |
| Dementia diagnosis | ✓ | ✓ | ✓ | ✓ |
| **Other: Measures** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** |
| Cortisol and FL testing (90 participant subset) |  | ✓ |   |   |
| Binding experiment (40 participant subset) |  | ✓ |   |   |
| Physical activity by accelerometer |  |  |   | ✓ |

*Note.* FL: ‘frontal lobe’ functions tested.

Supplementary Table 2. Summary of Lothian Birth Cohort 1921 Data Collection

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Wave summary** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** | **Wave 5** |
| Participants  | 550 | 321 | 235 | 129 | 59  |
| Mean Age | 79.1 | 83.4 | 86.6 | 90.1 | 92.1 |
| Start of cognitive assessments | Sep 1999 | Dec 2003 | Mar 2007 | Feb 2011 | Mar 2013 |
| End of cognitive assessments | Sep 2001 | Sep 2005 | Oct 2008 | Mar 2012 | Dec 2013 |
| **Cognitive Ability** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** | **Wave 5** |
| Moray House Test Score age 11 |   |   |   |   |   |
| MHT (Moray House Test) |  |   |  |  |   |
| MMSE (Mini mental state examination) |  |  |  |  |  |
| Extensive cognitive test battery |  |  |  |  |  |
| **Biological Imaging** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** | **Wave 5** |
| Whole-brain MRI (T1, T2, T2\*, FLAIR) |   | † |  |  |  |
| Whole-brain diffusion MRI |   |  |  |  |  |
| Neuroradiological report & ratings |   |  |  |  |  |
| Retinal Photography |  |  |  |  |  |
| Face Photography |   |  |  |  |  |
| **Physical and Medical** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** | **Wave 5** |
| Medical history |  | ⱡ |  |  |  |
| Anthropometrics |  |  |  |  |  |
| Physical Functioning |  |  |  |  |  |
| **Biomarkers** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** | **Wave 5** |
| Blood assays |  |  |  |  |  |
| Urine assays |  |  |  |  |  |
| **Questionnaires** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** | **Wave 5** |
| IPIP Five Factor Personality |  |  |  |  |  |
| Social, lifestyle & demographic |  |  |  |  |  |
| **Genetic analysis** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** | **Wave 5** |
| GWAS |  |   |   |   |   |
| Telomere length |  |  |  |  |  |
| Methylation analysis |  |  |  |   |   |
| Numerous Genotyped SNPs |  |  |  |   |   |
| **Linkages** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** | **Wave 5** |
| Cause of Death (NHS) |  |  |  |  |  |
| Dementia diagnosis |  |  |  |  |  |
| **Other: Measures** | **Wave 1** | **Wave 2** | **Wave 3** | **Wave 4** | **Wave 5** |
| Fluctuating asymmetry |  |  |  |  |  |

*Note.* †Scans only performed on 45 participants. ⱡBlood pressure and grip strength only.