

ELSA Study Description

1. Sampling frame:

Wave 1 Original sample interviewed in Health Survey for England (HSE) 1998/1999/2001 Age 50+ on Mar 1 2002,
 Wave 2 (main interview and nurse visit),
 Wave 3 (main interview, life History and HSE 2001/02/03/04 refreshment sample); .
 Wave 4 (main Interview, nurse visit and HSE 2006 refreshment sample),
 Wave 5 (main interview and risk module,
 Wave 6 (main interview, nurse visit and HSE 2009/10/11 refreshment sample)
 Wave 7(main interview, and HSE 2011/12 refreshment sample)

2. Sample size:

Wave 1: 12,099 main interviews,
 Wave 2: 9,432 main interviews,
 Wave 3: 9,771 main interviews,
 Wave 4: 11,050 main interviews,
 Wave 5: 10,274 main interviews and
 Wave 6: 10,601 main interviews.

3. **Who is interviewed:** One age-eligible family unit is chosen per address. Interviews are sought with both members of couples in age-eligible units.

4. **Frequency of interview:** Biennial with supplementary self-completion surveys, nurse visit every other wave, starting from wave 2

5. **Interview mode:** Face-to-face for core and nurse visit, face-to-face or telephone interview for exit interview per informant's preference

6. **Proxy interviews:** Proxy interviews account for about 2% of all interviews.

7. **End of life interview:** Exit interviews are sought with proxies for all deceased respondents. End of Life interviews have been carried out at wave 2, 3, 4 and 6. Data from the Wave 6 end of life interviews has been archived and there are plans to archive the EoL data from Waves 2-4, soon.

8. **Public use data availability:** With the exception of sensitive data (including linked administrative records, geographical variables that are disclosive in nature and data on genetic material), the data and associated documentation for wave 0 (Health Survey for England years) to wave 6 are deposited in the Economic and Social Data Service archive: <http://www.data-archive.ac.uk>

9. **Other files:** RAND prepares user-friendly versions of ELSA data, including the longitudinal "RANDHarmonizedELSA" file

10. Future planning

a. **Next data collection round(s) scheduled:** Wave 7 fieldwork will be completed in May 2015

b. **Funding status:** ELSA waves 7 and 8 are funded by the National Institute on Aging (NIA/NIH) in the US and a consortium of UK government departments: Department of Health; Department for Work and Pensions; Department for Transport;

11. Biomarker collection

a. **Physical measures collected:** height, weight, waist and hip circumferences, pulse, and blood pressure.

b. **Performance measures conducted:** spirometry to measure lung health, grip strength, timed walks, chair rise, and balance tests.

c. **Blood-based measures collected and assays done:** blood samples were taken by phlebotomy from willing ELSA respondents. Whole blood, citrated, EDTA and fluoridated for measurement of glucose) samples were collected and sent in the post to the laboratory where they were processed, analysed or aliquotted for storage. A substantial list of analytes has been measured from the blood sample:

	Waves 0 -6						
	0 (HSE)	1	2	3	4	5	6
Triglycerides	●		●		●		●
Total and DHL-cholesterol	●		●		●		●
C-reactive protein, fibrinogen	●		●		●		●
Haemoglobin and ferritin	●		●		●		●
White blood cell count					●		●
Fasting lipids, glucose, glycated haemoglobin			●		●		●
Cortisol (from saliva).			●		●		
IgE / DHM IgE	●						
IGF-1							●
DHEAS					●		●
Vitamin D					●		●
DNA extraction and storage			●		●		●
Cortisol (from hair)							●

12. DNA samples: DNA samples from Wave 2 were extracted and stored for GWAS and other genotyping. The GWAS that was funded by the ESRC and involved genotyping with the Illumina Omni 2.5-8 chip of around 7,500 participants has been completed, and the data are now available through the European Genome-phenome Archive (EGA) -<https://www.ebi.ac.uk/ega/studies/EGAS00001001036>.

Requests for ELSA GWAS data take 3 forms:

- 1) the GWAS data without additional phenotypic information, in order to provide genotyped control data;
- 2) Applications linking the ELSA GWAS or existing candidate gene polymorphisms with ELSA phenotypic data
- 3) Applications to commission genotyping, because not all SNPs have been genotyped.