

Avon

Longitudinal

Study of

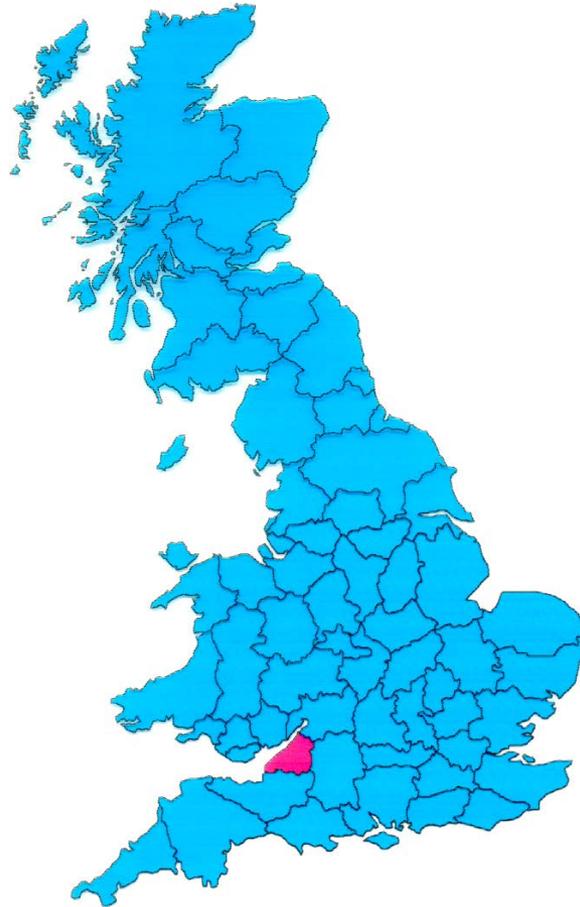
Parents

And

Children



Avon



ALSPAC

Avon area

- Defined geographical area
- Low level of outward migration
- Good mixture of:
 - Social background
 - Housing
 - Urban/rural
- Enthusiastic health professionals
- Supportive teachers and employers

OVERALL OBJECTIVE

To understand the ways in which the physical and social environment interact, over time, with genetic inheritance to affect health, behaviour and development in children and then into adulthood.

ENVIRONMENTAL INFLUENCES

Psychosocial conditions
Parenting

Diet and Lifestyle

Pollutants

Housing

Health behaviour

Medical & Dental care

Day Care

Schooling

**COMPLEX INTERACTIONS
± GENOTYPIC VARIATION**

Outcomes

ALSPAC

| | |
|----------------------|--|
| Inclusion criteria | EDD 1.4.91-31.12.92 Mother resident in Avon |
| Enrolled pregnancies | 14,541 (~85% of total eligible) |
| Being followed | 13,801 mothers 13,998 children |

ALSPAC DATA

- Self completion questionnaires
- Health records
- Biological samples
- Environmental monitoring
- Education records
- Hands on assessments



Questionnaire No:

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| | | | | | | | |
|--|--|--|--|--|--|--|--|

YOUR ENVIRONMENT

Finding out how the environment affects mothers and their babies will help us to make the environment a healthier place.

This questionnaire asks about your environment. It asks about where you live and work, and about what you do.

All the answers you give are confidential. We would be grateful if you would answer as many questions as you can.

If there is any question you don't want to answer just leave it blank.

THANK YOU VERY MUCH FOR YOUR HELP

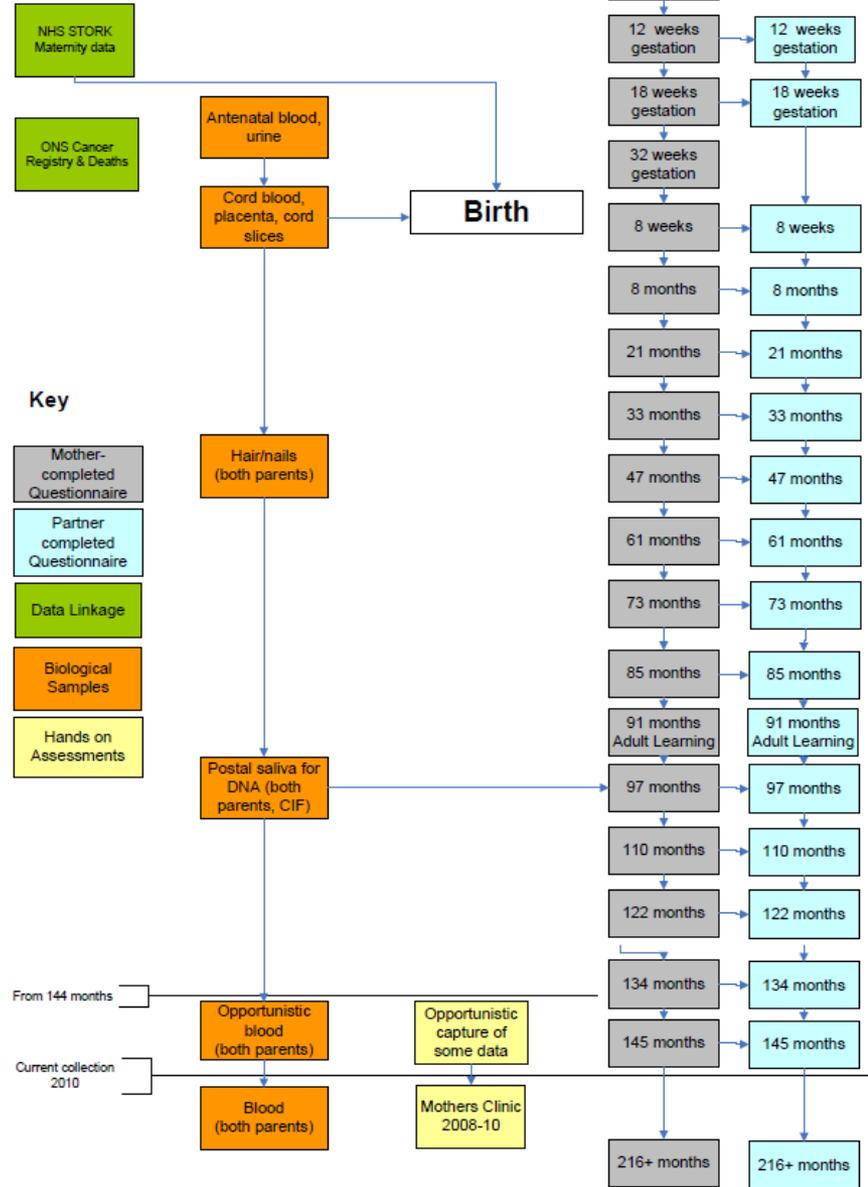
23/01/92

Recycled Paper

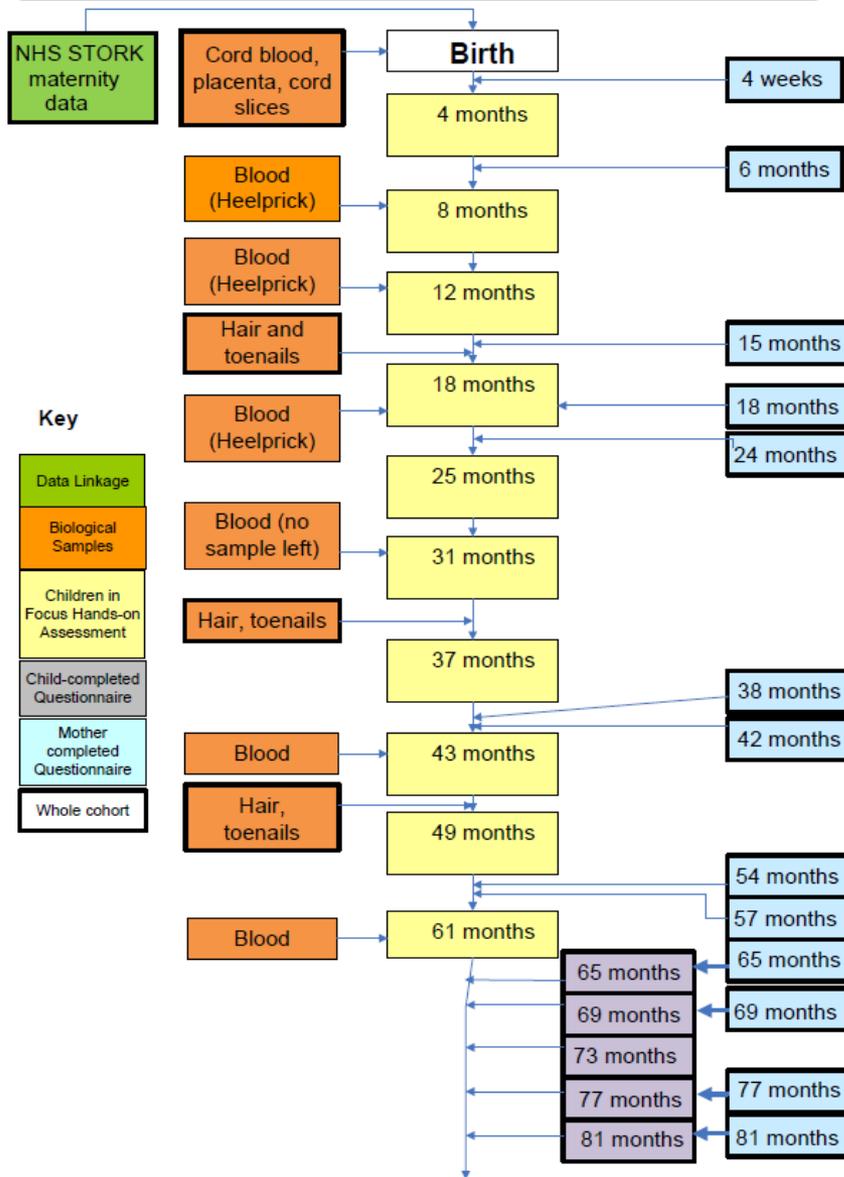
Core characteristics

Core maternal, paternal and child characteristics have been collected throughout the study.

Data Collection relating to Parent/Carers



Data Collection on the child from Birth to Seven Years



Currently....

23+ year questionnaire being administered

Focus@24+ clinic just underway

Biological Resources

| | Cell lines | DNA | GWAS | SNPs |
|------------------|-------------------|--------------|-------------|----------------|
| Offspring | 7105 | 10643 | 8365 | 500,527 |
| Mothers | 5681 | 11697 | 8340 | 526,888 |
| Partners | 1862 | 931 | - | - |

Biological Resources

- * 2000 most heavily phenotyped participants.
- * 1000 participants – Gene expression data and copy number variation data available.
- * 1000 mother/child dyads – DNA methylation data sampling.
- * Whole-methylome sequencing currently being piloted.

Cancer Cases

Linkage with the UK National Office of Statistics provides notifications of:

- * Cancer Registry
- * Deaths
- * Cause of Death

Biospecimens

Biospecimens collected from pregnancy onwards (for mothers) and birth onwards for offspring.

- Placenta
- Cord slices
- Bloods
- Hair and nails
- Saliva
- Urine

Details of all specimens can be found on ALSPAC website, including:

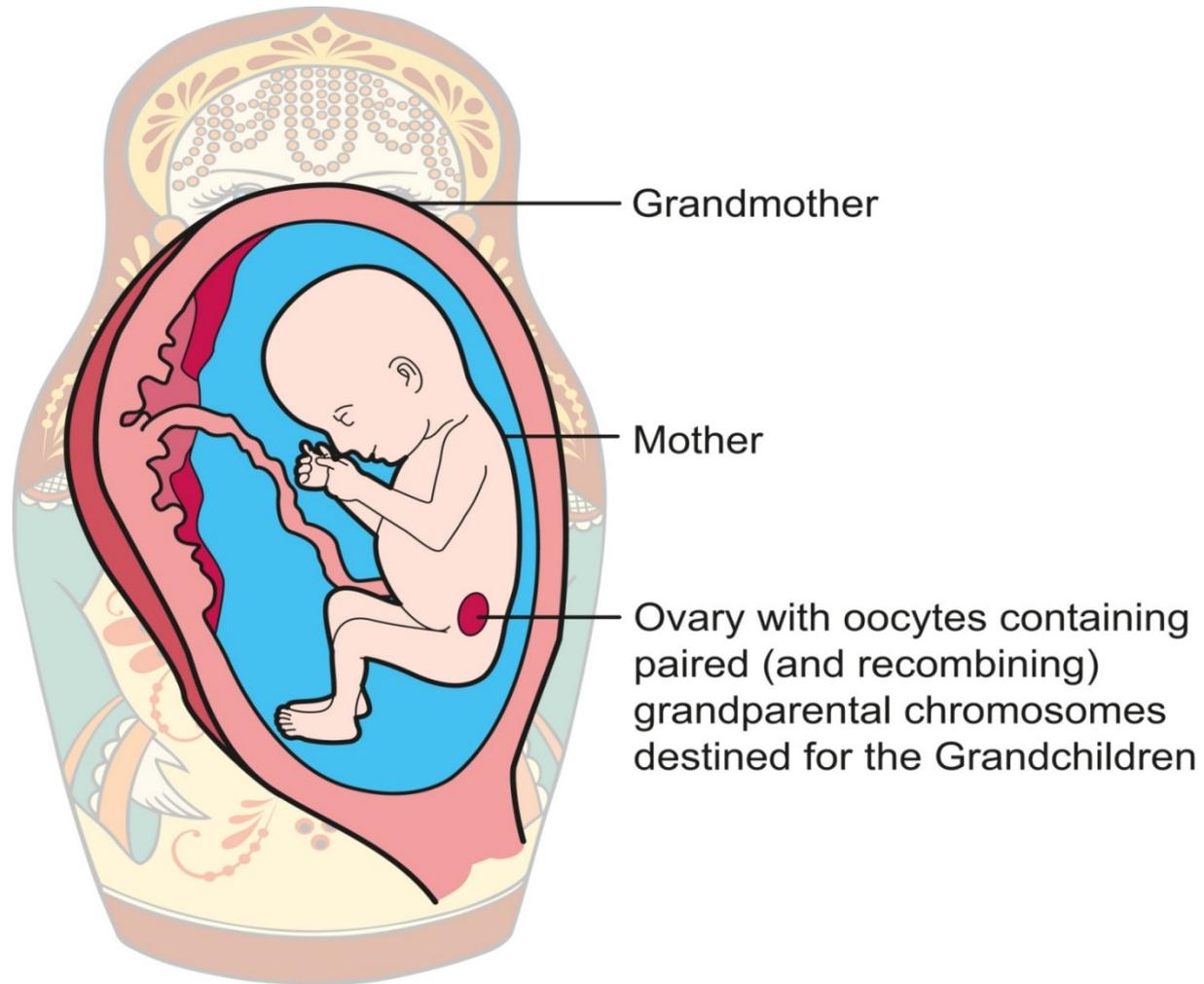
- * When collected (e.g. birth, 43 months)
- * Maximum number of aliquots (1+)
- * Aliquot size (e.g. 1 ml, 200 μ l)
- * Number with at least 1 aliquot
- * Storage conditions (e.g. room temp; -70°C)

Ultrasound & GIS

Detailed information concerning each ultrasound examination including type and gestation.

GIS data - available

New Dimensions



Kuzawa CW. *Am J Hum Biol* 2005;17:5 Integrated nutrition signal could lead to “intergenerational phenotypic inertia”

Website

www.bristol.ac.uk/ALSPAC/researchers

Data dictionary
Access details