

## *SUPPLEMENTARY WEB MATERIAL*

### **Cohort Profile: The ‘Children of the 90s’; the index offspring of The Avon Longitudinal Study of Parents and Children (ALSPAC).**

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#### **How often have they been followed up?**

The 68 data collection assessments from age 4 weeks to age 18 are described in Table s1 alongside response information providing the response proportion of those eligible to receive that data collection assessment (those enrolled excluding those lost to follow-up due to death, study withdrawal or where ALSPAC had lost contact), and the live born eligible sample. We also provide for each data collection phase a figure of the number of participants who have completed at least one assessment during that data collection phase.

#### **The ALSPAC BioBank**

The ALSPAC biobank is summarised in Table s2.

**Table s1: Data collected about the child by participant completed questionnaire or by attending a study clinical assessment visit, grouped by ALSPAC data collection phase.**

Data Type	File Name <sup>§</sup>	Time Point (months)	Sent	Completed	Response Proportion Eligible for Follow-up <sup>†</sup>	Response Proportion Live born <u>eligible sample</u> (19,598) <sup>†</sup>	Total children completing >=1 item during time interval	Response Proportion Live born <u>eligible sample</u> (19,598) <sup>†</sup>
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**Table s1a: Data collected about the child during the ALSPAC 'Infancy' data collection phase.**

Infancy, eligible for follow-up: (>=4 weeks and <=2 years of age)							n = 13,848	
MCQ	KA	4w	14,231	12,344	89.14%	62.98%	12,996	66.3%
C*	CiF 1	4m	1,509	1,023	7.39%	5.21%		
MCQ	KB	6m	13,882	11,478	82.89%	58.56%		
C* <sup>‡</sup>	CiF 2	8m	1,589	1,314	9.49%	6.7%		
C*	CiF 3	12m	1,398	1,241	8.96%	6.33%		
MCQ	KC	15m	13,400	11,067	79.92%	56.47%		
C*	CiF 4	18m	1,341	1,183	8.54%	6.03%		
MCQ	KD	128m	13,190	11,120	80.30%	56.74%		

\*CiF: 'Children in Focus' clinical assessment visit, 10% sub sample which aimed to provide a validation to self-reported data and to collect phenotypic and environmental data in a clinical setting. The sample was selected at random from births between 06/06/1992 and 11/12/1992, but excluding babies delivered <33 weeks gestation. All multiple births in the period were included.

<sup>‡</sup>The invited sample was increased at 8 months (an additional 550 cases were invited).

Key: MCQ – Mother Completed Questionnaire about the child, C – child clinical assessment

**Table s1b: Data collected about the child during the ALSPAC 'Early Childhood' data collection phase.**

Early Childhood, eligible for follow-up: (>2 years and <7 years of age)							n = 13,700	
MCQ	KE	24m	12,944	10,422	76.07%	53.17%	11,719	59.79%
C*	CiF 5	25m	1,322	1,127	8.23%	5.75%		
MCQ	KF	30m	12,800	10,340	75.47%	52.76%		
C*	CiF 6	31m	1,305	1,135	8.28%	5.79%		
C*	CiF 7	37m	1,226	1,081	7.89%	5.51%		
C* <sup>‡‡</sup>	CiF 7	37m	1,842	935	6.82%	4.77%		
	ctrl							
MCQ	KG	38m	12,617	10,137	73.99%	51.72%		
MCQ	KJ	42m	12,541	10,053	73.38%	51.29%		
C*	CiF 8	43m	1,249	1,065	7.77%	5.43%		
MCQ <sup>#</sup>	J	47m	12,349	9,501	69.35%	48.47%		
C*	CiF 9	49m	1,268	1,032	7.53%	5.26%		
MCQ	KK	54m	12,375	9,715	70.91%	49.57%		
MCQ	KL	57m	12,206	9,521	69.50%	48.58%		
C*	CiF 10	61m	1,505	994	7.26%	5.07%		
MCQ	KM	65m	11,578	9,003	65.72%	45.94%		

CCQ	CCA 1	65m	11,881	7,554	55.14%	38.54%
MCQ	KN	69m	11,280	8,691	63.44%	44.35%
CCQ	CCA 2	69m	11,601	7,521	54.90%	38.38%
CCQ	CCA 3	73m	11,227	7,348	53.64%	37.49%
MCQ	KP	77m	10,918	8,568	62.54%	43.72%
CCQ	CCA 4	77m	11,280	7,751	56.58%	39.55%
MCQ	KQ	81m	10,662	8,505	62.08%	43.40%
CCQ	CCA 5	81m	11,316	6,277	45.82%	32.02%
CCQ	CCA 6	85m	11,397	7,426	54.20%	37.89%

\* CiF: See above for sample definition.

\*\* Focus In Children Control Sample: selected for a randomised control trial of orthoptic screening program designs, using the criteria described for CiF other than excluding existing CiF cases. Other than the orthoptic screening session the control sample undertook the same assessments as the Focus In Children sample.

# The 47m 'J' questionnaire mainly contains data the mother/carer has provided about themselves; however this questionnaire also asks the mother to complete information about the child's behaviour (for the first born only in the case of multiple births).

Key: MCQ – Mother Completed Questionnaire about the child, C – child clinical assessment, CCQ – Child Completed Questionnaire

**Table s1c: Data collected about the child during the ALSPAC 'Childhood' data collection phase.**

Childhood, eligible for follow-up:							n = 13,972	
(7 years of age)								
C**	F@7	84m	13,146	8,290	59.33%	42.30%	9,576	48.86%
CCQ	CCB	91m	11,168	7,123	50.98%	36.35%		

\*\* 'Focus' Clinical Assessment: Invitation to attend the 'Focus@7' study assessment clinic was extended to all those in the eligible sample who could be traced (recruitment phase II) in addition to those who had originally enrolled (recruitment phase I).

Key: C – child clinical assessment, CCQ – Child Completed Questionnaire

**Table 3d: Data collected about the child during the ALSPAC 'Late Childhood' data collection phase.**

Late Childhood, eligible for follow-up:							n = 14,056	
(>7 years and <13 years of age)								
MCQ	KR	91m	10,962	8,259	58.76%	42.14%	11,408	58.21%
C***	F@8	96m	12,749	7,488	53.27%	38.20%		
CCQ	CCC	97m	11,423	7,682	54.65%	39.20%		
MCQ	KS	103m	11,460	8,331	59.27%	42.51%		
MCQ	KT	103m	11,460	8,296	59.02%	42.19%		
CCQ	CCD	103m	11,578	8,189	58.26%	41.78%		
C***	F@9	108m	12,161	7,722	54.94%	39.40%		
CCQ	CCE	110m	11,497	8,574	61.00%	43.75%		
MCQ	KU	115m	11,169	8,221	58.49%	41.95%		
CCQ	CCF	115m	11,411	8,062	57.36%	41.14%		
C***	F@10	120m	11,868	7,557	53.76%	38.56%		
CCQ	CCG	122m	11,386	8,318	59.18%	42.44%		
MCQ	KV	128m	10,926	7,851	55.86%	40.06%		
CCQ	CCH	128m	11,325	7,789	55.41%	39.74%		
C***	F@11	132m	11,510	7,153	50.89%	36.50%		
CCQ	CCJ	134m	11,289	7,908	56.26%	40.35%		
MCQ	KW	140m	10,792	7,478	53.20%	38.16%		

CCQ	CCK	140m	11,190	7,566	53.83%	38.61%	
C***	TF1	144m	11,775	6,832	53.48%	34.86%	
CCQ	CCL	145m	11,132	7,500	53.36%	38.27%	

\*\*\* 'Focus' Clinical Assessment: In addition to the existing enrolled sample (from recruitment phases I and II) invitation to attend 'Focus' study assessment clinics from age 8 onwards was open to opportunistic enrolment of any child deemed eligible under the original eligibility definition (recruitment phase III).  
Key: MCQ – Mother Completed Questionnaire about the child, C – child clinical assessment, CCQ – Child Completed Questionnaire

**Table s1e: Data collected about the child during the ALSPAC 'Adolescence' data collection phase.**

Adolescence, eligible for follow-up: (>=13 years and <=16 years of age)							n = 12,781	
C***	TF2	156m	11,351	6,141	48.05%	31.33%	9,600	48.98%
MCQ	TA	157m	10,614	7,159	56.01%	36.53%		
CCQ	CCM	157m	10,992	7,136	55.83%	36.41%		
CCQ	CCN	157m	10,992	7,125	55.75%	36.36%		
MCQ	TB	166m	10,390	7,108	55.61%	36.27%		
CCQ	CCP	166m	10,752	6,905	54.03%	35.23%		
CCQ	CCQ	167m	10,661	6,213	48.61%	31.70%		
CCQ	CCR	169m	10,570	6,032	47.20%	30.78%		
C***	TF15	180m	10,692	5,509	43.10%	28.11%		
MCQ	TXA	192m	9,999	5,964	46.66%	30.43%		
CCQ	CCXA	192m	10,228	5,435	42.52%	27.73%		
CCQ <sup>†††</sup>	CCXB	192m	7,865	3,130	24.49%	15.97%		

\*\*\* 'Focus' Clinical Assessment: See above for sample definition.  
<sup>†††</sup> CCXB sent to a sub-sample only.  
Key: MCQ – Mother Completed Questionnaire about the child, C – child clinical assessment, CCQ – Child Completed Questionnaire

**Table s1f: Data collected about the child during the ALSPAC 'Transition to Adulthood' data collection phase.**

Transition to Adulthood, eligible for follow-up: (>16 years and <=18 years of age)							n = 12,349	
MCQ	TC	198m	9,964	5,720	46.32%	29.19%	7,729	39.44%
CCQ	CCS	198m	9,994	5,126	41.51%	26.16%		
C***	TF17	204m	9,912	5,196	42.08%	26.51%		
CCQ <sup>††</sup>	CCXC	Sent in 2010	9,369	1,584	12.83%	8.08%		

\*\*\* 'Focus' Clinical Assessment: See above for sample definition.  
<sup>††</sup> CCXC piloted a new methodology administering questionnaires via the internet and didn't include the standard reminder follow-up process.  
Key: MCQ – Mother Completed Questionnaire about the child, C – child clinical assessment, CCQ – Child Completed Questionnaire

<sup>†</sup> In estimating these proportions only individuals included in the denominator are considered part of the numerator.

<sup>§</sup>These refer to the ALSPAC resource catalogue file names and are not acronyms

Table s2: Children's Biological Samples†

Time Point	Sample Type (& Additives‡)	Maximum	Number of	Storage conditions
		number	cases with at	
		of	least 1 aliquot	
		aliquots	remaining*	
Birth	placenta (formalin)	1	8933	room temperature
	redcells (edta & hep)	1 & 1	265 & 1725	-70
	freeze dried plasma (1ml & 500ul hep)	1 & 1	144 & 1898	room temperature
	Plasma (1ml & 500ul hep)	2 & 3	5039 & 1594	-70
	whitecells (hep)	1	1314	-70
	blood spot (hep, 5 spots per aliquot)	1	9727	-20
	serum	2	6657	-20
	Umbilical cord slices	4	6277	-20
	<b>6 to 18 months</b>	child hair & nails	1 & 1	4881 & 4945
<b>31 months</b>	plasma (edta 500ul)	1	227	-70
<b>43 months</b>	whitecells (edta)	1	174	-70
	whole blood (edta 2ml)	1	436	-70
	Plasma (edta 500ul & 200ul & 750ul)	4 & 4 & 1	615 & 302 & 620	-70
<b>61 months</b>	Serum (500ul & 200ul)	4 & 2	586 & 228	-70
	plasma (edta 750ul & 500ul & 200ul)	5 & 3 & 1	606 & 613 & 495	-70
	redcells (edta)	1	613	-70
	whitecells (edta)	1	162	-70
<b>3 yrs</b>	Child hair & nails	1 & 1	3919 & 4455	room temperature
<b>4 yrs</b>	Child hair & nails	1 & 1	5120 & 5087	room temperature
<b>5 to 7 yrs</b>	Child teeth	4	4168	-20
<b>7 yrs</b>	redcells (edta)	2	5510	-70
	whitecells (edta)	1	5099	-70
	Plasma (edta 500ul & 200ul)	7 & 5	5615 & 4970	-70
	Serum (clotted 750ul & 500ul & 200ul)	4 & 4 & 4	3621 & 5201 & 4655	-70
	blood spot (edta QC, 5 spots per aliquot)	1	3329	room temperature
	Urine (4ml)	4	460	-70
<b>7 to 8 yrs</b>	baseline plasma (hep fasting 200ul)	5	826	-70
	post glucose plasma (hep 500ul & 200ul)	5 & 5	782 & 794	-70
	plasma (hep 500ul & 200ul)	4 & 9	5079 & 5177	-70
<b>9 yrs</b>	blood spot (cpda QC, 5 spots per aliquot)	2	5492	room temperature

<b>10 yrs</b>	Urine (4ml)	4	2872	-70
	mouthswab	1	6418	-20
<b>11yrs</b>	plasma (hep 500ul & 200ul)	4 & 9	4683 & 4761	-20
	blood spot (cpda QC, 5 spots per aliquot)	1	944	room temperature
	mouthswab/saliva	1	6881	-20
<b>12 yrs</b>	saliva	1	2053	-20
	saliva	1	4548	-20
<b>13 yrs</b>	plasma (hep 500ul & 200ul)	4 & 9	3234 & 3245	-70
	blood spot	1	326	-70
<b>15yrs</b>	Plasma (fluoride 300ul)	5	3451	-70
	Plasma (hep 500ul & 200ul)	4 & 9	3522 & 3491	-70
	white cells	1	3236	-70
	urine (1st catch 4ml & midstream 4ml)	4 & 4	3007 & 2908	-20/-70
	hair	1	2568	room temperature
	plasma (edta 500ul & 200ul)	3 & 5	3473 & 3499	-70
	blood spot (4 spots per aliquot)	1	354	room temperature
<b>17yrs</b>	plasma (hep 500ul & 200ul)	4 & 9	3249 & 3245	-70
	plasma (Fluoride 300ul)	5	3319	-70
	plasma (edta 500ul & 200ul)	3 & 5	3242 & 3160	-70
	white cells (edta)	1	2840	-70
	Hair	1	3682	room temperature
	Urine (4ml)	6	1895	-20/-70
	Peripheral Blood Lymphocytes	2	1435	liquid nitrogen

† Data compiled and accurate on 29th February 2012

\* The last aliquot of most samples is not available for research studies and some aliquots may since have been reserved for analysis.

‡ Key to sample additives: i. Hep=Heparin, ii. EDTA=Ethylenediaminetetraacetic Acid, iii.

CPDA=Citrate-Phosphate-Dextrose-Adenine