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**Table 1** – Characteristics of the gestation groups.

	<b>37-38 weeks gestation</b>	<b>39-43 weeks gestation</b>	<b>P value</b>
<b>Total live born (Caucasian, singleton births only)</b>	1835	8861	
<b>Survivors at 1 year (Caucasian, singleton survivors only)</b>	1799	8742	
<b>Had spirometry at 8-9 years</b>	911 (50.6)	4554 (52.1)	
<b>Had spirometry at 14-17 years</b>	602 (33.5)	3064 (35.0)	
<b>Total number in group who had any spirometry</b>	993	5042	
Male (%)	527 (53.1)	2452 (48.6)	0.011
Maternal smoking (%)	168/984 (17.1)	887/4984 (17.8)	0.587
Manual workers (%)	357/975 (36.6)	1832/4832 (37.9)	0.445
Exclusively breast fed for at least 3 months (%)	539/941 (57.3)	2717/4712 (57.7)	0.908
Had Caesarean section	181/967 (18.7)	358/4855 (7.4)	0.000
Mean birth-weight (g, SD)	3204.1 (456.0)	3556.0 (440.2)	0.000
Mean birth-weight (z-score by LMS, SD)	0.45 (1.04)	0.08 (0.92)	0.000
Mean gestation (weeks, SD)	37.7 (0.45)	40.2 (0.94)	0.000
<b>At spirometry at 8-9 years of age:</b>			
Mean age (months, SD)	103.5 (3.2)	103.4 (3.1)	0.283
Mean height (cm, SD)	132.5 (6.0)	132.4 (5.7)	0.854
Mean height (z-score, SD)	0.03 (1.05)	0.02 (0.99)	0.697
Mean weight (Kg, SD)	30.4 (6.1)	30.2 (5.7)	0.334
Mean weight (z-score, SD)	0.04 (1.04)	0.01 (0.97)	0.304
<b>At spirometry at 14-17 years of age:</b>			
Mean age (months, SD)	185.7 (3.5)	185.7 (3.4)	0.843
Mean height (cm, SD)	169.6 (8.5)	169.2 (8.3)	0.283
Mean height (z-score, SD)	0.01 (0.99)	0.02 (1.00)	0.900
Mean weight (Kg, SD)	62.5 (12.5)	61.4 (11.8)	0.036
Mean weight (z-scores, SD)	0.08 (1.03)	0.01 (0.98)	0.156

**Table 2** – Mean and 95% CI of z-score of lung function measures adjusted for age, gender and height, and ratios of raw lung function values at age 8-9 and then 14-17, with confidence intervals for the difference of means (early term – term), unadjusted and adjusted for maternal smoking in pregnancy and social status and then adjusted for maternal smoking in pregnancy, social status and delivery by Caesarean section (CS).

8-9 years	37-38 weeks N=911		39-43 weeks n=4554		Difference and 95% CI (unadjusted)	Difference and 95% CI (adjusted for maternal smoking and social status)	p-value for adjusted analysis	Difference and 95% CI (adjusted for maternal smoking and social status and delivery by CS)	p-value for adjusted analysis
	Mean	95% CI	Mean	95% CI					
<b>FEV<sub>1</sub></b>	-0.072	(-0.14,-0.01)	0.054	(0.02,0.08)	-0.125 (-0.197,-0.054)	-0.135 (-0.207, -0.062)	0.000	-0.136 (-0.211, -0.062)	0.000
<b>FVC</b>	-0.053	(-0.12,0.01)	0.041	(0.01,0.07)	-0.95 (-0.165, -0.024)	-0.103 (-0.175, -0.032)	0.005	-0.101 (-0.175, -0.028)	0.007
<b>FEF<sub>25-75</sub></b>	-0.051	(-0.12,0.14)	0.039	(0.01,0.07)	-0.090 (-0.161, -0.18)	-0.097 (-0.169, -0.024)	0.009	-0.098 (-0.172, -0.024)	0.009
<b>FEV<sub>1</sub>/FVC</b>	0.881	(0.88, 0.89)	0.885	(0.88,0.89)	-0.004 (-0.009, 0.001)	-0.004 (-0.009, 0.001)	0.124	-0.004 (-0.009, 0.001)	0.159
<b>FEF<sub>25-75</sub>/FVC</b>	1.201	(1.19,1.22)	1.216	(1.21,1.22)	-0.015 (-0.033, 0.004)	-0.015 (-0.032, 0.002)	0.078	-0.014 (-0.034, 0.004)	0.112

  

14-17 years	37-38 weeks N=602		39-43 weeks n=3064		Difference and 95% CI (unadjusted)	Difference and 95% CI (adjusted for maternal smoking and social status)	p-value for adjusted analysis	Difference and 95% CI (adjusted for maternal smoking and social status and delivery by CS)	p-value for adjusted analysis
	Mean	95% CI	Mean	95% CI					
<b>FEV<sub>1</sub></b>	-0.027	(-0.11,0.05)	0.025	(-0.01,0.06)	-0.052 (-0.141, 0.37)	-0.053 (-0.143, 0.038)	0.252	-0.045 (-0.138, 0.048)	0.340
<b>FVC</b>	-0.001	(-0.82,0.71)	0.009	(-0.27,0.05)	-0.010 (-0.098, 0.078)	-0.016 (-0.105, 0.74)	0.731	-0.006 (-0.098, 0.086)	0.899
<b>FEF<sub>25-75</sub></b>	-0.031	(-0.11,0.49)	0.031	(-0.01,0.07)	-0.061 (-0.149, 0.26)	-0.063 (-0.152, 0.25)	0.162	-0.063 (-0.154, 0.028)	0.177
<b>FEV<sub>1</sub>/FVC</b>	0.898	(0.89, 0.90)	0.903	(0.90, 0.91)	-0.006 (-0.013, 0.001)	-0.005 (-0.012, 0.002)	0.114	-0.005 (-0.012, 0.002)	0.176
<b>FEF<sub>25-75</sub>/FVC</b>	1.075	(1.05, 1.10)	1.090	(1.08,1.10)	-0.016 (-0.039, 0.008)	-0.015 (-0.037, 0.009)	0.200	-0.014 (-0.037, 0.011)	0.278

There is some missing data, numbers shown are the maximum at each time point for the standardised lung function scores.

Percentage male in early term-born group at 8-9 years 53.5% and at 14-17 years 50.8%. Percentage male in full term-born group at 8-9 years 49.3% and at 14-17 years 46.3%.

**Table 3** – Mean and 95% CI of z-score of lung function measures adjusted for age, gender and height, and ratios of raw lung function values at age 8-9 and then 14-17, with confidence intervals for the difference of means (CS – no CS), unadjusted and adjusted for maternal smoking in pregnancy and social status.

	Had CS N=498		No CS n=4787		Difference and 95% CI (unadjusted)	Difference and 95% CI (adjusted)	p-value for adjusted analysis
	Mean	95% CI	Mean	95% CI			
<b>FEV<sub>1</sub></b>	-0.043	(-0.13,0.05)	0.040	(0.01,0.07)	-0.083 (-0.176, 0.010)	-0.075 (-0.171, 0.020)	0.122
<b>FVC</b>	-0.079	(-0.17, 0.01)	0.039	(0.01,0.07)	-0.118 (-0.209, -0.026)	-0.129 (-0.222, -0.035)	0.007
<b>FEF<sub>25-75</sub></b>	0.016	(-0.07, 0.10)	0.022	(-0.01,0.05)	-0.006 (-0.098, 0.087)	0.013 (-0.082, 0.107)	0.790
<b>FEV<sub>1</sub>/FVC</b>	0.887	(0.88,0.89)	0.884	(0.88,0.89)	0.003 (-0.003, 0.009)	0.005 (-0.002, 0.011)	0.136
<b>FEF<sub>25-75</sub>/FVC</b>	1.220	(1.20, 1.24)	1.213	(1.21, 1.22)	0.008 (-0.014, 0.030)	0.012 (-0.010, 0.034)	0.277

  

	Had CS N=335		No CS n=3213		Difference and 95% CI (unadjusted)	Difference and 95% CI (adjusted)	p-value for adjusted analysis
	Mean	95% CI	Mean	95% CI			
<b>FEV<sub>1</sub></b>	0.021	(-0.09,0.13)	0.015	(-0.02,0.05)	0.006 (-0.109, 0.121)	0.006 (-0.111, 0.123)	0.923
<b>FVC</b>	0.014	(-0.10, 0.12)	0.006	(-0.03,0.04)	0.008 (-0.106, 0.122)	-0.004 (-0.120, 0.112)	0.946
<b>FEF<sub>25-75</sub></b>	0.074	(-0.03,0.18)	0.012	(-0.02,0.05)	0.062 (-0.050, 0.175)	0.074 (-0.041, 0.189)	0.206
<b>FEV<sub>1</sub>/FVC</b>	0.902	(0.89, 0.91)	0.903	(0.90,0.90)	-0.001 (-0.010, 0.008)	0.001 (-0.008, 0.011)	0.760
<b>FEF<sub>25-75</sub>/FVC</b>	1.101	(1.07,1.13)	1.089	(1.08,1.10)	0.015 (-0.015, 0.044)	0.019 (-0.013, 0.051)	0.233

There is some missing data, numbers shown are the maximum at each time point for the standardised lung function scores.

Percentage male in the had CS group at 8-9 years 49.4% and at 14-17 years 49.3%. Percentage male in the no CS group at 8-9 years 49.8% and at 14-17 years 46.6%.

**Table 4** – B value and SEM for early term birth and later lung function (model 1) and early term birth, delivery by caesarean section and the interaction between early term birth and caesarean section (model 2) at age 8-9 and then 14-17, with p-values

	<b>B (SEM) for early term in model 1</b>	<b>p-value</b>	<b>B (SEM) for early term in model 2</b>	<b>p-value</b>	<b>B (SEM) for caesarean section in model 2</b>	<b>p-value</b>	<b>B (SEM) for interaction between early term and caesarean section in model 2</b>	<b>p-value</b>
<b>FEV<sub>1</sub></b>	-0.081 (0.0494)	0.100	-0.097 (0.0542)	0.073	-0.116 (0.750)	0.122	0.151 (0.1376)	0.271
<b>FVC</b>	-0.012 (0.0486)	0.801	-0.016 (0.0534)	0.766	-0.115 (0.0739)	0.118	0.086 (0.1355)	0.525
<b>FEF<sub>25-75</sub></b>	-0.101 (0.0485)	0.037	-0.115 (0.0532)	0.031	-0.050 (0.0736)	0.499	0.100 (0.1351)	0.459

  

	<b>B (SEM) for early term in model 1</b>	<b>p-value</b>	<b>B (SEM) for early term in model 2</b>	<b>p-value</b>	<b>B (SEM) for caesarean section in model 2</b>	<b>p-value</b>	<b>B (SEM) for interaction between early term and caesarean section in model 2</b>	<b>p-value</b>
<b>FEV<sub>1</sub></b>	-0.043 (0.0499)	0.394	-0.091 (0.0547)	0.097	-0.025 (0.0757)	0.740	0.272 (0.1389)	0.050
<b>FVC</b>	-0.003 (0.0498)	0.957	-0.041 (0.0547)	0.452	-0.037 (0.0756)	0.621	0.227 (0.1388)	0.102
<b>FEF<sub>25-75</sub></b>	-0.072 (0.0489)	0.141	-0.105 (0.0536)	0.051	0.065 (0.0742)	0.381	0.138 (0.1362)	0.311

Number of children used in both models is 2920  
 Percentage male in early term-born group 51.3%.

**Table 5** – Rates of current asthma at 7.6 years of age based on doctor-diagnosed asthma ever with symptom +/- treatment in previous 12 months and current asthma at 13.8 years of age based on doctor diagnosed asthma ever asthma and child based respiratory questionnaire data at 103m (8.58 years) completed by mother.

	<b>37-38 weeks</b>	<b>39-43 weeks</b>	<b>Pearson chi-square t</b>
<b>Current asthma at 7.6 years of age, based on reported doctor-diagnosed asthma ever with symptoms +/- treatment in previous 12 months (%)</b>	155/1035 (15.0%)	704/5184 (13.6%)	0.235
<b>Current asthma at 13.8 years of age, based on doctor-diagnosed asthma ever (%)</b>	232/977 (23.7%)	1072/4802 (22.3%)	0.332
<b>Child had wheezing in past year and did not see doctor (%)</b>	74/1141 (6.5%)	334/5550 (6.0%)	0.548
<b>Child had asthma in past year and saw doctor (%)</b>	51/1137 (4.5%)	340/5539 (6.1%)	0.031 (significant)
<b>Child had asthma in past year and did not see doctor (%)</b>	65/1137 (5.7%)	297/5539 (5.4%)	0.630
<b>Child given asthma medication in past year yes 1-2 times (%)</b>	38/1121 (3.4%)	172/5460 (3.2%)	0.678
<b>Child given asthma medication in past year yes 3+ times (%)</b>	107/1121 (9.5%)	533/5460 (9.8%)	0.823

Percentage male in early term-born group for current asthma at 7.6 years 55.0% and for current asthma at 13.8 years 54.9% and for questionnaire data at 8.58 years 53.7%. Percentage male in full term-born group for current asthma at 7.6 years 50.1% and for current asthma at 13.8 years 49.3% and for questionnaire data at 8.58 years 49.7%.

**Table 6** – Child based respiratory questionnaire data at 16 + years (198m)

	<b>37-38 weeks</b>	<b>39-43 weeks</b>	<b>Pearson chi-square</b>
<b>Child has had wheezing or whistling in the chest at any time in the past completed by mother (%)</b>	182/804 (22.6%)	856/3865 (22.1%)	0.761
<b>Only answered if yes to above question was the following question asked: Child has had wheezing or whistling in their chest in the past 12 months completed by mother (%)</b>	87/287 (30.3%)	395/1420 (27.8%)	0.391
<b>Study child has had asthma completed by mother (%)</b>	196/796 (24.6%)	952/3831 (24.8%)	0.893
<b>Child has had wheezing with whistling on chest in past 12 months completed by child (%)</b>	88/714 (12.3%)	410/3425 (12.0%)	0.791
<b>Child has had wheezing in past 12 months and saw doctor completed by child (%)</b>	31/712 (4.4%)	168/3401 (4.9%)	0.508
<b>Child has had wheezing in past 12 months and did not see doctor completed by child (%)</b>	92/712 (12.9%)	415/3401 (12.2%)	0.596
<b>Told by doctor has asthma completed by child (%)</b>	190/717 (26.5%)	863/3409 (25.3%)	0.509
<b>Child had asthma in past year and saw a doctor completed by child (%)</b>	42/709 (5.9%)	187/3404 (5.5%)	0.649
<b>Child had asthma in past year and did not see doctor completed by child (%)</b>	44/709 (6.2%)	230/3404 (6.8%)	0.593
<b>In the past 12 months been prescribed any asthma medication completed by child (%)</b>	83/713 (11.6%)	389/3424 (11.4%)	0.831

Percentage male in early term-born group for children who had complete questionnaire data 48.6%. Percentage male in full term-born group for children who had complete questionnaire data 43.3%.

