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Supplementary information

Association between caesarean section delivery and obesity in childhood: a longitudinal cohort study in Ireland

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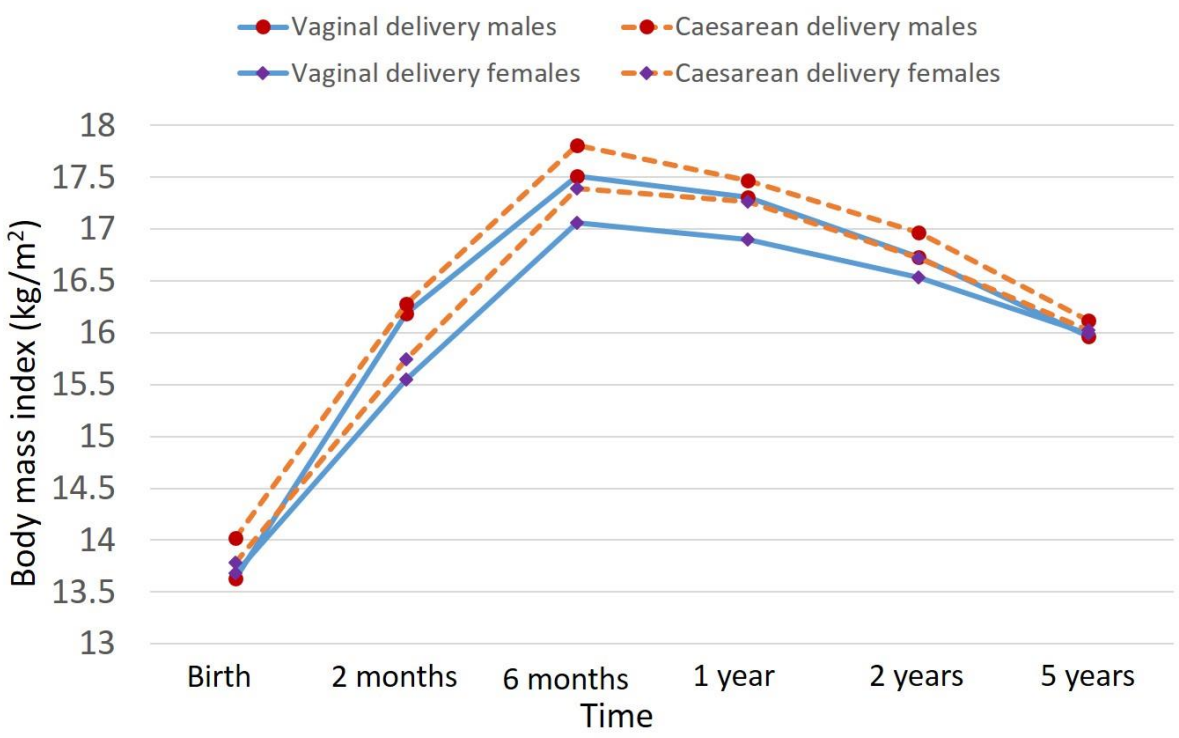

Supplementary Figure 1 Mean body mass index (BMI) from birth to 5 years of age by delivery mode and sex. Please note that the time axis has been expanded below age 1 year to allow clearer visualisation.

Supplementary Table 1 Missing data for body fat % at age two months.

Characteristic	**Body fat % data available at age two months (n %) n=1033**	**Body fat % data missing at two age months (n %) n=272**	**P value**[a]
Maternal age (years), median IQR	31 (28-33)	30 (28-33)	0.6021
Ethnicity[b]			0.558
Caucasian	1018 (98.5)	269 (98.9)	
Other	15 (1.5)	3 (1.1)	
Schooling (years primary and secondary), median IQR	13 (13-14)	13 (13-14)	0.5227
Marital status[b]			0.879
Single	100 (9.7)	23 (8.5)	
Married	725 (70.2)	195 (71.7)	
Stable relationship not married	207 (20.0)	54 (19.9)	
Sex of baby[b]			0.081
Male	540 (52.3)	126 (46.3)	
Female	493 (47.7)	146 (53.7)	
Pre-eclampsia[b]	40 (3.9)	9 (3.3)	0.664
Maternal BMI at 15 weeks (kg/m^2), median IQR	24.1 (22.1-26.9)	23.7 (22.0-26.7)	0.2455
Gestational age (weeks), median IQR	40 (39-41)	40 (39-41)	0.4624
Number of cigarettes per day at 15 weeks SCOPE visit, mean (±SD)[c]	0.5 (±2.2)	0.4 (±2.0)	0.2517
Birth weight (g), median IQR	3460 (3150-3770)	3475 (3160-3750)	0.9099

IQR – Interquartile range, BMI – Body mass index, SD – standard deviation, SCOPE – Screening for pregnancy endpoints.

[a] Mann-Whitney test

[b] Pearson's χ^2 test or Fisher's exact

[c] Two-sample t test

Supplementary Table 2 Mode of delivery and body mass index at age two years. Non-marosomic.

BMI category (normal BMI – base outcome)	**RRR (95% CI)**	**P value**	**AdjRRR (95% CI)****	**P value**
Thin				
Unassisted vaginal	Reference		Reference	
Operative vaginal	1.41 (0.84-2.36)	0.188	1.51 (0.89-2.58)	0.130
Prelabour LSCS	0.26 (0.24-1.62)	0.357	0.67 (0.27-1.68)	0.398
LSCS in labour	0.73 (0.32-1.64)	0.443	0.83 (0.37-1.90)	0.664
Overweight or obese				
Unassisted vaginal	Reference		Reference	
Operative vaginal	0.98 (0.58-1.64)	0.929	0.93 (0.54-1.59)	0.789
Prelabour LSCS	0.93 (0.44-1.95)	0.842	0.95 (0.44-2.05)	0.891
LSCS in labour	1.01 (0.51-1.98)	0.982	0.89 (0.44-1.82)	0.747

N for adjusted model = 921. Multinomial logistic regression. BMI – Body mass index, RRR (Relative Risk Ratio), CI (Confidence intervals), Adj (Adjusted).

**Adjusted for maternal age, education, ethnicity, marital status, infant sex, maternal smoking during pregnancy, maternal BMI at the first antenatal visit, gestational age (at delivery), birth weight and pre-eclampsia

Supplementary Table 3 Mode of delivery and body mass index at age five years. Non-macrosomic.

BMI category (normal BMI – base outcome)	**RRR (95% CI)**	**P value**	**AdjRRR (95% CI)****	**P value**
Thin				
Unassisted vaginal	Reference		Reference	
Operative vaginal	1.59 (0.76-3.32)	0.221	1.85 (0.85-4.04)	0.120
Prelabour LSCS	0.73 (0.20-2.63)	0.629	0.46 (0.14-1.55)	0.209
LSCS in labour	1.09 (0.38-3.14)	0.880	1.14 (0.39-3.34)	0.815
Overweight or obese				
Unassisted vaginal	Reference		Reference	
Operative vaginal	1.43 (0.87-2.36)	0.161	1.77 (1.03-3.04)	0.038
Prelabour LSCS	0.89 (0.41-1.95)	0.768	0.86 (0.36-2.08)	0.750
LSCS in labour	1.59 (0.85-2.98)	0.150	2.37 (1.19-4.68)	0.014

N for adjusted model = 741. Multinomial logistic regression. BMI – Body mass index, RRR (Relative Risk Ratio), CI (Confidence intervals), Adj (Adjusted).
**Adjusted for maternal age, education, ethnicity, marital status, infant sex, maternal smoking during pregnancy, maternal BMI at the first antenatal visit, gestational age (at delivery), birth weight and pre-eclampsia