

Supplemental Table S1 Parental characteristics of the study population (n=107)

<u>Maternal</u>		
	Mean	SD
Age (years)	33	(5.41)
	Median	(Q1, Q3)
BMI (kg/m ²)	24.6	(22.0, 30.1)
Gravida	1	(0, 2)
Parity	0	(0, 2)
IMD quintile	n	(%)
Q1 (least deprived)	19	(17.8)
Q2	10	(9.4)
Q3	18	(16.8)
Q4	33	(30.8)
Q5 (most deprived)	27	(25.2)
Smoking during pregnancy	7	(6.5)
Significant maternal history ^a	43	(40.2)
<u>Paternal</u>		
	Median	(IQR)
Age (years)	35	(32, 39)
BMI (kg/m ²)	26.4	(23.4, 29.1)
IMD ^b quintile	n	(%)
Q1 (least deprived)	18	(16.8)
Q2	10	(9.4)
Q3	18	(16.8)
Q4	33	(30.8)
Q5 (most deprived)	27	(25.2)

^a Defined as problem associated with fetal growth.

^b IMD=index of multiple deprivation,

Supplemental table S2. Birthweight, feeding method, hospital stay and growth by gestational age group

	Moderate preterm (32⁺⁰ to 33⁺⁶) n=24		Late preterm (34⁺⁰ to 36⁺⁶) n=83		p[*]
	Median	(IQR)	Median	(IQR)	
Birthweight (kg)	1.99	(1.74, 2.2)	2.33	(2.14, 2.48)	<0.001
Days of exclusive breastfeeding^a (n=32)	35.5	(28.5, 96.5)	42.0	(22.0, 108.0)	0.647
Hospital LOS^b	17.5	(12.0, 23.0)	5.0	(3.0, 8.0)	<0.001
Weight-for-age z-score at TEA	-0.35	(-1.20, 0.41)	-0.68	(-1.52, 0.02)	0.213
Change in weight-for-age z-score (TEA-3 mCA)	0.12	(-0.60, 1.10)	-0.01	(-0.54, 0.57)	0.601
Weight gain velocity, g/kg/day (enrolment-3 months CA)	15.6	(13.1, 18.9)	12.8	(11.4, 14.8)	0.002
Feeding at enrolment	N	%	n	%	
Breastfed	11	45.8%	30	36.1%	0.662
Mixed	7	29.2%	26	31.3%	
Formula fed	6	25.0%	27	32.6%	
Breastfeeding at 3mCA	N	%	n	%	
Exclusive	5	20.8%	20	24.1%	0.939
Exclusive or mixed	8	33.3%	29	34.9%	0.928

* p-value from Wilcoxon Mann-Whitney test

^a At 3 months

^b LOS: length of stay

Supplemental Figure S1: Calculation formulas for upper arm area (cm²), arm muscle area (cm²), arm fat area (cm²), arm fat percentage (%), lean mass index (kg/m²), fat mass index (kg/m²), weight gain velocity (g/kg/d), head circumference gain velocity (cm/wk), length gain velocity (cm/wk).

$$\text{Upper arm area} = \frac{[\text{mid upper arm circumference}]^2}{4 \times \pi}$$

$$\text{Arm muscle area} = \frac{([\text{mid upper arm circumference}] - \pi \times [\text{triceps skinfold}])^2}{4 \times \pi}$$

$$\text{Arm fat area} = [\text{arm area}] - [\text{arm muscle area}]$$

$$\text{Arm fat percentage} = \frac{[\text{arm fat area}]}{[\text{upper arm area}]} \times 100$$

$$\text{Lean mass index} = \frac{[\text{lean mass}]}{[\text{length}]^2}$$

$$\text{Fat mass index} = \frac{[\text{fat mass}]}{[\text{length}]^2}$$

$$\text{Weight gain velocity} = \frac{[\text{weight at 3moCA}] - [\text{weight at TEA}]}{[\text{weight at TEA}] \times [\text{number of days between TEA and 3moCA}]}$$

$$\text{Head circumference gain velocity} = \frac{[\text{head circumference at 3moCA}] - [\text{head circumference at TEA}]}{[\text{number of weeks between 3moCA and TEA}]}$$

$$\text{Length gain velocity} = \frac{[\text{length at 3moCA}] - [\text{length at TEA}]}{[\text{number of weeks between TEA and 3moCA}]}$$

Statistical analyses

Residential location as an established proxy for parental socioeconomic status was assigned using the rank of the IMD, grouped into quintiles, based on the distribution across England, with quintile 1 representing the most affluent areas and quintile 5 the highest level of deprivation. Socioeconomic status was categorised into more (IMD quintiles 4 and 5) or less (quintiles 1 to 3) deprived.