

Supplemental Material

Table S1. Characteristics of those included/who would be excluded through missing covariate data.

		Would be excluded due to missing data		Complete cases	
Gestational age, weeks	(median IQR)	40.0	(39.0, 41.0)	40.0	(39.0, 41.0)
Maternal age at delivery, years	(mean, SD)	27.4	5.1	28.5	4.8
BMI at first assessment	normal	2006/2502	80.2%	6617/8353	79.2%
	overweight	365/2502	14.6%	1266/8353	15.2%
	obese	131/2502	5.2%	470/8353	5.6%
Smoking before or during pregnancy	No	2725/3820	71.3%	6454/8353	77.3%
	Yes	1095/3820	28.7%	1899/8353	22.7%
Parity	0	1550/3659	42.4%	3837/8353	45.9%
	1	1270/3659	34.7%	2958/8353	35.4%
	2	579/3659	15.8%	1127/8353	13.5%
	3+	260/3659	7.1%	431/8353	5.2%
Educational achievement	CSE/ Vocational/ O- level	2282/3340	68.3%	5201/8353	62.3%
	A level	685/3340	20.5%	1983/8353	23.7%
	Degree	373/3340	11.2%	1169/8353	14.0%
HDP		745/4377	17.0%	1354/8353	16.2%

Table S2. Variables used in the imputation model.

Main model variables (substantive model of interest)	Imputation model
Outcome	
BMI	Linear regression
Lean mass, fat mass	Linear regression
SBP, DBP, pulse rate	Linear regression
Lipids	Linear regression
Glucose, insulin	Linear regression
Covariates	
Offspring sex	Logistic regression
Maternal age	Linear regression
HDP	Logistic regression
Maternal BMI	Linear regression
Maternal alcohol use during pregnancy	Logistic regression
Maternal smoking during pregnancy	Logistic regression
Maternal education	Ordinal regression
Parity	Ordinal regression
Auxiliary variables [variables not in the substantive model but are either predictive of missingness or the underlying missing values or both]	
Income	Linear regression
Pre pregnancy alcohol intake (b720)	Ordinal regression
Number of cigarettes per day at 32 weeks (c482)	Ordinal regression
Pre pregnancy weight (dw002)	Linear regression

Each outcome also acts as an auxiliary variable to the other, for example, when the outcome is BMI in the substantive model all outcomes except BMI act as auxiliary variables.

Table S3. Characteristics of the data before and after imputation.

		% missing	N	Before imputation	After imputation
				%	%
BMI at first assessment	normal	15.4	10855	79.4%	80.6
	overweight			15.0%	15.7
	obese			5.5%	3.7
Smoking status	0	5.1	12173	75.4%	80.0
	1			24.6%	20.0
Parity	0	6.4	12012	44.8%	49.1
	1			35.2%	33.0
	2			14.2%	14.2
	3+			5.8%	3.7
Educational achievement	CSE/ Vocational/ O-level	8.9	11693	64.0%	55.0
	A level			22.8%	28.0
	Degree			13.2%	17.0

Table S4 Details of current knot positions up to age 18 years

	Age 7	Age 9	Age 10	Age 11	Age 12	Age 13	Age 15	Age 18
SBP/DBP/pulse rate					x		x (16)	
Fat/lean mass						x	x	
Glucose							x	
Insulin		x					x	
Non-HDL /triglycerides		x						
HDL	x							

Table S5 Details of knots when extending models to include 25 year data

		Original knot placements			Additional knot at 18 years		
	N	DF	AIC	BIC	DF	AIC	BIC
Lean mass	32217	9	636512	636588	10	636217	636300
Fat mass	32217	16	20527	20661	22	19451	19635
DBP	52930	15	355326	355460	21	354216	354402
Pulse rate	52930	15	393568	393701	21	391617	391803
SBP	52930	15	382225	382358	21	381236	381423
Triglycerides	24047	10	26505	26586	15	25057	25179
HDL-c	23973	10	7973	8054	15	3795	3916
Non-HDL-c	23973	10	48980	49061	15	45487	45609
Insulin	15659	15	32481	32595	21	31973	32134
Glucose	14367	10	21181	21257	15	20392	20505

N=observations (not participants); DF=degrees of freedom; AIC= Akaike information criterion; BIC= Bayesian information criterion.

Table S6 Details of linearity check when gestational age was modelled continuously

Outcome	P-value when comparing across 3 categories (very preterm vs preterm vs full term)	P-value when comparing across quartiles
BMI	0.0043	0.671
Fat mass	0.0686	0.925
Lean mass	0.5223	0.2986
SBP	0.8181	0.5605
DBP	0.5384	0.3959
Pulse rate	0.3646	0.1539
Triglycerides	<0.0001	0.0593
HDL-c	0.0287	0.276
Non-HDL-c	0.0004	0.3147
Glucose	0.7318	0.1147
Insulin	0.3242	0.7874

Table S7 Intercept and slope estimates for lean mass and fat mass

	Age (years)	Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI) comparing pre-term to term born participants	P value for difference
Lean mass	Age 9yr (kg)	22.76 (22.36, 23.15)	23.33 (23.12, 23.55)	-0.58 (-0.93, -0.22)	0.0013
	Change 9-13yr (kg/yr)	2.21 (2.02, 2.40)	2.28 (2.17, 2.39)	-0.07 (-0.24, 0.09)	0.3916
	Change 13-15yr (kg/yr)	7.71 (7.39, 8.03)	7.51 (7.34, 7.68)	0.20 (-0.09, 0.49)	0.1839
	Change 15-18yr (kg/yr)	2.52 (2.30, 2.74)	2.62 (2.50, 2.74)	-0.10 (-0.30, 0.10)	0.3096
	Change 18-25yr (kg/yr)	0.07 (-0.03, 0.17)	0.14 (0.09, 0.19)	-0.07 (-0.15, 0.02)	0.1219
	Age 25yr (kg)	55.05 (54.35, 55.76)	56.30 (55.91, 56.69)	-1.25 (-1.88, -0.63)	0.0001
Fat mass	Age 9yr (kg)	1.95 (1.88, 2.03)	2.03 (1.98, 2.08)	-0.08 (-0.13, -0.02)	0.0058
	Change 9-13yr (kg /yr)	0.06 (0.04, 0.08)	0.06 (0.04, 0.07)	0.00 (-0.01, 0.01)	0.6106
	Change 13-15yr (kg/yr)	-0.04 (-0.07, -0.02)	-0.05 (-0.06, -0.04)	0.01 (-0.02, 0.03)	0.5397
	Change 15-18yr (kg /yr)	0.09 (0.07, 0.11)	0.09 (0.08, 0.10)	-0.00 (-0.02, 0.02)	0.8589
	Change 18-25yr (kg/yr)	0.09 (0.08, 0.10)	0.08 (0.07, 0.08)	0.01 (-0.00, 0.01)	0.1255
	Age 25yr (kg)	2.99 (2.93, 3.05)	3.00 (2.97, 3.03)	-0.01 (-0.06, 0.04)	0.6569

Table S8 Intercept and slope estimates for SBP, DBP and pulse rate

	Age (years)	Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI) comparing pre-term to term born participants	P value for difference
SBP	Age 7yr (mmHg)	99.44 (98.45, 100.43)	98.73 (98.19, 99.26)	0.71 (-0.18, 1.60)	0.1167
	Change 7-12yr (mmHg/yr)	1.34 (1.10, 1.58)	1.20 (1.07, 1.33)	0.14 (-0.08, 0.36)	0.2116
	Change 12-16yr (mmHg/yr)	4.98 (4.58, 5.38)	5.14 (4.93, 5.36)	-0.16 (-0.52, 0.20)	0.3841

	Change 16-18yr (mmHg/yr)	-1.29 (-2.21, -0.38)	-1.88 (-2.37, -1.40)	0.59 (-0.24, 1.42)	0.1620
	Change 18-25yr (mmHg/yr)	0.03 (-0.22, 0.28)	0.18 (0.04, 0.32)	-0.15 (-0.38, 0.07)	0.1887
	Age 25yr (mmHg)	123.67 (122.13, 125.21)	122.79 (121.94, 123.63)	0.89 (-0.48, 2.25)	0.2017
DBP	Age 7yr (mmHg)	57.72 (56.99, 58.44)	57.10 (56.71, 57.49)	0.61 (-0.04, 1.26)	0.0658
	Change 7-12yr (mmHg/yr)	-0.07 (-0.26, 0.12)	0.04 (-0.06, 0.14)	-0.11 (-0.28, 0.06)	0.2150
	Change 12-16yr (mmHg/yr)	2.12 (1.77, 2.46)	2.31 (2.12, 2.49)	-0.19 (-0.50, 0.12)	0.2335
	Change 16-18yr (mmHg/yr)	-1.19 (-1.95, -0.43)	-1.60 (-2.00, -1.19)	0.41 (-0.28, 1.10)	0.2435
	Change 18-25yr (mmHg/yr)	0.66 (0.46, 0.87)	0.73 (0.62, 0.84)	-0.07 (-0.25, 0.11)	0.4602
	Age 25yr (mmHg)	68.09 (66.82, 69.37)	68.44 (67.74, 69.13)	-0.34 (-1.47, 0.78)	0.5488
Pulse rate	Age 7yr (bpm)	83.20 (82.03, 84.38)	82.99 (82.34, 83.63)	0.22 (-0.84, 1.28)	0.6853
	Change 7-12yr (bpm/yr)	-2.46 (-2.74, -2.18)	-2.35 (-2.50, -2.20)	-0.11 (-0.37, 0.14)	0.3863
	Change 12-16yr (bpm/yr)	-0.27 (-0.72, 0.17)	-0.10 (-0.34, 0.13)	-0.17 (-0.57, 0.23)	0.4078
	Change 16-18yr (bpm/yr)	-3.43 (-4.43, -2.42)	-4.49 (-5.03, -3.96)	1.07 (0.16, 1.98)	0.0216
	Change 18-25yr (bpm/yr)	0.28 (0.00, 0.56)	0.42 (0.27, 0.57)	-0.14 (-0.39, 0.11)	0.2629
	Age 25yr (bpm)	64.90 (63.34, 66.47)	64.78 (63.91, 65.64)	0.13 (-1.25, 1.51)	0.8571

Table S9 Intercept and slope estimates for lipids

	Age (years)	Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI) comparing pre-term to term born participants	P value for difference
Triglycerides (logged)	Birth (mmol/l)	-0.83 (-0.89, -0.76)	-0.61 (-0.64, -0.58)	-0.22 (-0.27, -0.16)	0.0000
	Change 0-9yr (mmol/l/yr)	0.10 (0.09, 0.10)	0.07 (0.07, 0.08)	0.02 (0.02, 0.03)	0.0000
	Change 9-18yr (mmol/l/yr)	-0.04 (-0.05, -0.03)	-0.04 (-0.04, -0.03)	-0.00 (-0.01, 0.01)	0.5807
	Change 18-25yr (mmol/l/yr)	0.03 (0.02, 0.04)	0.04 (0.03, 0.05)	-0.01 (-0.02, 0.00)	0.2702
	Age 25yr (mmol/l)	-0.11 (-0.18, -0.03)	-0.04 (-0.08, -0.00)	-0.06 (-0.13, 0.00)	0.0579
HDL-c	Birth (mmol/l)	0.58 (0.54, 0.61)	0.50 (0.48, 0.52)	0.08 (0.04, 0.11)	0.0000
	Change 0-7yr (mmol/l/yr)	0.14 (0.13, 0.15)	0.15 (0.15, 0.15)	-0.01 (-0.02, -0.00)	0.0016
	Change 7-18yr (mmol/l/yr)	-0.04 (-0.04, -0.03)	-0.04 (-0.04, -0.03)	-0.00 (-0.00, 0.00)	0.7878
	Change 18-25yr (mmol/l/yr)	0.04 (0.03, 0.05)	0.04 (0.03, 0.04)	0.00 (-0.01, 0.01)	0.9000
	Age 25yr (mmol/l)	1.41 (1.34, 1.47)	1.40 (1.37, 1.44)	0.00 (-0.05, 0.06)	0.8890
Non-HDL-c	Birth (mmol/l)	1.41 (1.29, 1.53)	1.36 (1.30, 1.42)	0.05 (-0.06, 0.16)	0.3366
	Change 0-9yr (mmol/l/yr)	0.17 (0.15, 0.18)	0.18 (0.17, 0.18)	-0.01 (-0.03, 0.00)	0.1865
	Change 9-18yr (mmol/l/yr)	-0.07 (-0.09, -0.06)	-0.08 (-0.08, -0.07)	0.00 (-0.01, 0.01)	0.7920
	Change 18-25yr (mmol/l/yr)	0.12 (0.10, 0.14)	0.11 (0.10, 0.12)	0.01 (-0.01, 0.02)	0.5630
	Age 25yr (mmol/l)	3.06 (2.92, 3.19)	3.05 (2.97, 3.12)	0.01 (-0.11, 0.13)	0.8839

Predicted estimates based females, white ethnicity, mean maternal age and pre pregnancy BMI, no HDP, no previous children, no maternal smoking or alcohol, and educated to CSE/ Vocational/ O-level, no existing diabetes, GDM or glycosuria and no treatments to help conceive.

Table S10 Intercept and slope estimates for glucose and insulin

		Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI) comparing pre-term to term born participants	P value for difference
Glucose	Age (years)				
	7 years	4.23 (4.16, 4.30)	4.25 (4.21, 4.29)	-0.02 (-0.08, 0.04)	0.5342
	Change 7-15 yr (mmol/l/yr)	0.13 (0.12, 0.15)	0.14 (0.13, 0.14)	-0.00 (-0.01, 0.01)	0.7992
	Change 15-18 yr (mmol/l/yr)	-0.04 (-0.08, -0.00)	-0.07 (-0.10, -0.05)	0.03 (-0.00, 0.07)	0.0786
	Change 18-25yr (mmol/l/yr)	0.05 (0.04, 0.07)	0.05 (0.04, 0.06)	-0.00 (-0.02, 0.01)	0.9179
Insulin (logged)	Age 25yr (mmol/l)	5.55 (5.45, 5.66)	5.49 (5.43, 5.55)	0.06 (-0.03, 0.16)	0.1996
	Birth	0.89 (0.67, 1.11)	0.95 (0.84, 1.05)	-0.06 (-0.27, 0.16)	0.5959
	Change 0-9 yr (mmol/l/yr)	0.05 (0.01, 0.09)	0.06 (0.04, 0.08)	-0.01 (-0.05, 0.03)	0.5956
	Change 9-15 yr (mmol/l/yr)	0.13 (0.08, 0.18)	0.11 (0.09, 0.14)	0.02 (-0.03, 0.06)	0.4351
	Change 15-18yr (mmol/l/yr)	-0.11 (-0.15, -0.06)	-0.11 (-0.14, -0.09)	0.01 (-0.04, 0.05)	0.7575
	Change 18-25yr (mmol/l/yr)	0.04 (0.01, 0.06)	0.03 (0.02, 0.05)	0.00 (-0.02, 0.02)	0.9502
	Age 25yr (mmol/l)	2.05 (1.93, 2.16)	2.06 (2.00, 2.12)	-0.02 (-0.12, 0.08)	0.7578

Table S11 Predicted mean BMI (95% CI) at ages 1, 3, 7, 9, 11, 13, 15, 18 and 25 years by preterm and full-term birth and the difference in their means (95% CI) from sensitivity analyses

		Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI) comparing pre- term to term born participants	P value for difference
Main analysis (adjusted)	1	2.73 (2.52, 2.95)	2.73 (2.55, 2.92)	-0.00 (-0.12, 0.12)	0.9748
Complete case	1	2.74 (2.50, 2.99)	2.73 (2.53, 2.94)	0.01 (-0.12, 0.14)	0.8840
Unadjusted	1	2.78 (2.77, 2.80)	2.82 (2.81, 2.82)	-0.03 (-0.05, -0.02)	0.0002
Including post terms	1	2.69 (2.48, 2.90)	2.69 (2.51, 2.87)	-0.00 (-0.12, 0.12)	0.9957
Main analysis (adjusted)	3	2.70 (2.63, 2.77)	2.71 (2.66, 2.77)	-0.01 (-0.06, 0.03)	0.5771
Complete case	3	2.70 (2.62, 2.78)	2.71 (2.65, 2.78)	-0.01 (-0.06, 0.04)	0.7044
Unadjusted	3	2.76 (2.75, 2.77)	2.78 (2.78, 2.78)	-0.02 (-0.04, -0.01)	0.0001
Including post terms	3	2.69 (2.62, 2.76)	2.70 (2.65, 2.76)	-0.01 (-0.06, 0.03)	0.5753
Main analysis (adjusted)	7	2.75 (2.73, 2.77)	2.77 (2.76, 2.78)	-0.02 (-0.03, -0.00)	0.0416
Complete case	7	2.75 (2.73, 2.77)	2.77 (2.76, 2.78)	-0.02 (-0.04, 0.00)	0.0951
Unadjusted	7	2.79 (2.78, 2.81)	2.81 (2.81, 2.82)	-0.02 (-0.03, -0.01)	0.0018
Including post terms	7	2.75 (2.73, 2.77)	2.77 (2.76, 2.78)	-0.02 (-0.03, -0.00)	0.0353
Main analysis (adjusted)	9	2.81 (2.79, 2.82)	2.82 (2.81, 2.83)	-0.02 (-0.03, -0.00)	0.0099
Complete case	9	2.81 (2.79, 2.82)	2.82 (2.81, 2.83)	-0.02 (-0.03, -0.00)	0.0463
Unadjusted	9	2.84 (2.82, 2.85)	2.85 (2.85, 2.86)	-0.02 (-0.03, -0.01)	0.0031

Including post terms	9	2.81 (2.79, 2.82)	2.82 (2.82, 2.83)	-0.02 (-0.03, -0.00)	0.0079
Main analysis (adjusted)	11	2.87 (2.86, 2.88)	2.89 (2.88, 2.89)	-0.02 (-0.03, -0.00)	0.0062
Complete case	11	2.87 (2.86, 2.89)	2.89 (2.88, 2.90)	-0.01 (-0.03, 0.00)	0.0527
Unadjusted	11	2.89 (2.88, 2.90)	2.91 (2.90, 2.91)	-0.02 (-0.03, -0.01)	0.0051
Including post terms	11	2.87 (2.86, 2.88)	2.89 (2.88, 2.89)	-0.02 (-0.03, -0.01)	0.0051
Main analysis (adjusted)	13	2.94 (2.92, 2.95)	2.95 (2.95, 2.96)	-0.02 (-0.03, -0.00)	0.0090
Complete case	13	2.94 (2.93, 2.96)	2.96 (2.95, 2.96)	-0.01 (-0.03, 0.00)	0.0992
Unadjusted	13	2.95 (2.94, 2.96)	2.97 (2.97, 2.97)	-0.02 (-0.03, -0.00)	0.0100
Including post terms	13	2.94 (2.92, 2.95)	2.95 (2.95, 2.96)	-0.02 (-0.03, -0.00)	0.0081
Main analysis (adjusted)	15	3.00 (2.99, 3.01)	3.01 (3.01, 3.02)	-0.02 (-0.03, -0.00)	0.0201
Complete case	15	3.01 (2.99, 3.02)	3.02 (3.01, 3.03)	-0.01 (-0.03, 0.01)	0.2009
Unadjusted	15	3.02 (3.01, 3.03)	3.03 (3.03, 3.04)	-0.02 (-0.03, -0.00)	0.0236
Including post terms	15	3.00 (2.99, 3.01)	3.01 (3.01, 3.02)	-0.01 (-0.03, -0.00)	0.0197
Main analysis (adjusted)	18	3.06 (3.05, 3.08)	3.08 (3.07, 3.09)	-0.01 (-0.03, 0.00)	0.0731
Complete case	18	3.07 (3.05, 3.09)	3.08 (3.07, 3.09)	-0.01 (-0.02, 0.01)	0.4235
Unadjusted	18	3.12 (3.10, 3.13)	3.13 (3.12, 3.13)	-0.01 (-0.03, 0.00)	0.0995
Including post terms	18	3.07 (3.05, 3.08)	3.08 (3.07, 3.09)	-0.01 (-0.03, 0.00)	0.0769
Main analysis (adjusted)	25	2.87 (2.78, 2.95)	2.87 (2.79, 2.96)	-0.01 (-0.03, 0.01)	0.5466
Complete case	25	2.85 (2.75, 2.94)	2.85 (2.76, 2.95)	-0.01 (-0.03, 0.01)	0.4451
Unadjusted	25	3.21 (3.19, 3.22)	3.20 (3.20, 3.20)	0.01 (-0.01, 0.02)	0.5393
Including post terms	25	2.90 (2.82, 2.98)	2.90 (2.82, 2.98)	-0.01 (-0.03, 0.01)	0.5157

Main analysis (as shown in Figure 1 and Table 3): main analysis of preterm (24-36 weeks) vs full term (37-41 weeks) adjusted for (and entered into the models as main effects and interactions with offspring age) offspring sex and maternal characteristics: age, parity, smoking status, alcohol intake, pre pregnancy BMI, HDP or pre-existing hypertension, existing diabetes or GDM or glycosuria, ethnicity (white compared to non-white) and any treatments to help conception in this pregnancy (including IVF) (compared to none). Predictions described are for offspring females, white ethnicity, mean maternal age and pre pregnancy BMI, no HDP or pre-existing hypertension, no previous children, no maternal smoking or alcohol, educated to CSE/ Vocational/ O-level, no existing diabetes, GDM or glycosuria and no treatments to help conceive. Estimates <0 mean lower values for preterm vs term. Complete case: only those with complete data included and adjusted for the same confounders as described above. Unadjusted associations based on the multiple imputation dataset to enable comparison of the same population to the main analysis model. All post-term births (i.e. women with gestation >41 weeks included) and adjusted for the same confounders as described above.

Table S12 Predicted mean lean mass (95% CI) at ages 9, 11, 13, 15, 18 and 25 years by preterm and full-term birth and the difference in their means (95% CI) from sensitivity analyses

		Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI) comparing pre-term to term born participants	P value for difference
Main analysis (adjusted)	9	22.8 (22.4, 23.1)	23.3 (23.1, 23.5)	-0.6 (-0.9, -0.2)	0.001
Complete case	9	22.8 (22.3, 23.3)	23.3 (23.0, 23.5)	-0.5 (-0.9, -0.1)	0.019
Unadjusted	9	21.5 (21.1, 22.0)	21.9 (21.8, 22.0)	-0.3 (-0.8, 0.1)	0.117
Including post terms	9	22.8 (22.4, 23.2)	23.4 (23.1, 23.6)	-0.6 (-0.9, -0.2)	0.001

Main analysis (adjusted)	11	27.2 (26.8, 27.6)	27.9 (27.7, 28.1)	-0.7 (-1.1, -0.4)	0.000
Complete case	11	27.3 (26.8, 27.7)	27.9 (27.6, 28.1)	-0.6 (-1.0, -0.2)	0.005
Unadjusted	11	27.1 (26.7, 27.5)	27.8 (27.7, 27.9)	-0.7 (-1.1, -0.3)	0.000
Including post terms	11	27.2 (26.8, 27.6)	27.9 (27.7, 28.1)	-0.7 (-1.1, -0.4)	0.000
Main analysis (adjusted)	13	35.1 (30.0, 40.3)	32.5 (32.1, 32.8)	-0.9 (-1.4, -0.3)	0.003
Complete case	13	35.8 (29.9, 41.8)	32.5 (32.0, 32.9)	-0.7 (-1.4, -0.0)	0.050
Unadjusted	13	45.6 (38.0, 53.2)	33.8 (33.5, 34.0)	-1.1 (-2.0, -0.3)	0.009
Including post terms	13	35.3 (30.2, 40.3)	32.5 (32.1, 32.8)	-0.9 (-1.5, -0.3)	0.002
Main analysis (adjusted)	15	47.0 (46.4, 47.7)	47.5 (47.1, 47.8)	-0.5 (-1.1, 0.1)	0.116
Complete case	15	45.9 (45.1, 46.7)	46.0 (45.5, 46.5)	-0.1 (-0.8, 0.5)	0.678
Unadjusted	15	43.0 (42.2, 43.8)	42.5 (42.3, 42.7)	0.5 (-0.4, 1.3)	0.283
Including post terms	15	45.8 (45.1, 46.4)	46.2 (45.8, 46.6)	-0.5 (-1.1, 0.1)	0.099
Main analysis (adjusted)	18	54.6 (53.9, 55.2)	55.3 (55.0, 55.7)	-0.8 (-1.4, -0.2)	0.012
Complete case	18	54.2 (53.4, 55.0)	54.9 (54.5, 55.4)	-0.7 (-1.4, -0.0)	0.046
Unadjusted	18	46.3 (45.4, 47.2)	45.8 (45.5, 46.0)	0.5 (-0.4, 1.4)	0.241
Including post terms	18	54.2 (53.5, 54.8)	55.0 (54.7, 55.4)	-0.8 (-1.4, -0.2)	0.006
Main analysis (adjusted)	25	55.1 (54.3, 55.8)	56.3 (55.9, 56.7)	-1.3 (-1.9, -0.6)	0.000
Complete case	25	34.4 (32.2, 36.5)	35.2 (33.1, 37.3)	-0.8 (-1.6, -0.1)	0.025
Unadjusted	25	47.5 (46.6, 48.4)	47.9 (47.7, 48.1)	-0.4 (-1.4, 0.5)	0.358
Including post terms	25	34.3 (32.5, 36.1)	35.2 (33.5, 36.9)	-0.9 (-1.5, -0.3)	0.003

Table S13 Predicted mean (logged) fat mass (95% CI) at ages 9, 11, 13, 15, 18 and 25 years by preterm and full-term birth and the difference in their means (95% CI) from sensitivity analyses

		Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI) comparing pre-term to term born participants	P value for difference
Main analysis (adjusted)	9	2.0 (1.9, 2.0)	2.0 (2.0, 2.1)	-0.1 (-0.1, -0.0)	0.006
Complete case	9	1.9 (1.8, 2.0)	1.9 (1.9, 2.0)	-0.1 (-0.1, 0.0)	0.082
Unadjusted	9	1.8 (1.7, 1.8)	1.9 (1.8, 1.9)	-0.1 (-0.1, -0.0)	0.007
Including post terms	9	1.8 (1.8, 1.9)	1.9 (1.9, 2.0)	-0.1 (-0.1, -0.0)	0.011
Main analysis (adjusted)	11	2.1 (2.0, 2.1)	2.1 (2.1, 2.2)	-0.1 (-0.1, -0.0)	0.004
Complete case	11	2.0 (1.9, 2.1)	2.1 (2.0, 2.1)	-0.1 (-0.1, -0.0)	0.017
Unadjusted	11	2.1 (2.0, 2.1)	2.2 (2.2, 2.2)	-0.1 (-0.1, -0.0)	0.001
Including post terms	11	2.0 (1.9, 2.1)	2.1 (2.0, 2.1)	-0.1 (-0.1, -0.0)	0.002
Main analysis (adjusted)	13	2.2 (1.9, 2.6)	2.3 (2.2, 2.3)	-0.1 (-0.1, -0.0)	0.016
Complete case	13	2.3 (1.8, 2.9)	2.2 (2.2, 2.3)	-0.1 (-0.1, -0.0)	0.022
Unadjusted	13	2.2 (1.7, 2.7)	2.5 (2.5, 2.5)	-0.1 (-0.1, -0.0)	0.006
Including post terms	13	2.2 (1.7, 2.7)	2.2 (2.2, 2.3)	-0.1 (-0.1, -0.0)	0.008
Main analysis (adjusted)	15	2.1 (2.0, 2.2)	2.2 (2.1, 2.2)	-0.1 (-0.1, 0.0)	0.058
Complete case	15	2.1 (2.1, 2.2)	2.2 (2.1, 2.2)	-0.1 (-0.1, 0.0)	0.119
Unadjusted	15	2.4 (2.3, 2.5)	2.5 (2.5, 2.5)	-0.1 (-0.2, -0.1)	0.000
Including post terms	15	2.1 (2.0, 2.2)	2.2 (2.1, 2.2)	-0.1 (-0.1, -0.0)	0.029
Main analysis (adjusted)	18	2.4 (2.3, 2.5)	2.4 (2.4, 2.5)	-0.1 (-0.1, 0.0)	0.052
Complete case	18	2.4 (2.3, 2.5)	2.4 (2.3, 2.5)	-0.1 (-0.1, 0.0)	0.076
Unadjusted	18	2.7 (2.6, 2.7)	2.8 (2.7, 2.8)	-0.1 (-0.1, -0.0)	0.007

Including post terms	18	2.3 (2.3, 2.4)	2.4 (2.3, 2.5)	-0.1 (-0.1, 0.0)	0.069
Main analysis (adjusted)	25	3.0 (2.9, 3.0)	3.0 (3.0, 3.0)	-0.0 (-0.1, 0.0)	0.657
Complete case	25	3.4 (2.5, 4.3)	3.4 (2.5, 4.3)	0.0 (-0.1, 0.1)	0.943
Unadjusted	25	3.1 (3.0, 3.1)	3.1 (3.0, 3.1)	0.0 (-0.1, 0.1)	0.809
Including post terms	25	3.9 (3.1, 4.6)	3.9 (3.1, 4.6)	0.0 (-0.1, 0.1)	0.862

Table S14 Predicted mean SBP (95% CI) at ages 7, 9, 11, 13, 15, 18 and 25 years by preterm and full-term birth and the difference in their means (95% CI) from sensitivity analyses

		Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI) comparing pre-term to term born participants	P value for difference
Main analysis (adjusted)	7	99.4 (98.5, 100.4)	98.7 (98.2, 99.3)	0.7 (-0.2, 1.6)	0.117
Complete case	7	99.2 (98.0, 100.3)	98.8 (98.1, 99.4)	0.4 (-0.7, 1.5)	0.464
Unadjusted	7	99.5 (98.6, 100.4)	98.5 (98.2, 98.7)	1.1 (0.2, 2.0)	0.020
Including post terms	7	99.5 (98.5, 100.5)	98.6 (98.1, 99.2)	0.8 (-0.1, 1.7)	0.065
Main analysis (adjusted)	9	102.1 (101.4, 102.9)	101.1 (100.7, 101.5)	1.0 (0.3, 1.7)	0.004
Complete case	9	101.8 (100.9, 102.7)	101.1 (100.7, 101.6)	0.6 (-0.2, 1.5)	0.123
Unadjusted	9	102.7 (102.0, 103.3)	101.4 (101.3, 101.6)	1.3 (0.6, 1.9)	0.000
Including post terms	9	102.2 (101.4, 102.9)	101.1 (100.7, 101.4)	1.1 (0.4, 1.8)	0.001
Main analysis (adjusted)	11	104.8 (104.0, 105.6)	103.5 (103.1, 103.9)	1.3 (0.6, 2.0)	0.000
Complete case	11	104.4 (103.5, 105.3)	103.5 (103.0, 104.0)	0.9 (0.0, 1.7)	0.042
Unadjusted	11	105.9 (105.2, 106.6)	104.4 (104.2, 104.6)	1.5 (0.8, 2.2)	0.000
Including post terms	11	104.8 (104.1, 105.6)	103.5 (103.1, 103.9)	1.4 (0.7, 2.1)	0.000
Main analysis (adjusted)	13	111.1 (110.3, 111.9)	109.9 (109.4, 110.3)	1.2 (0.5, 2.0)	0.001
Complete case	13	110.8 (109.9, 111.8)	109.9 (109.4, 110.4)	0.9 (0.1, 1.8)	0.036
Unadjusted	13	111.5 (110.8, 112.2)	110.0 (109.8, 110.1)	1.6 (0.9, 2.3)	0.000
Including post terms	13	111.2 (110.4, 111.9)	109.8 (109.4, 110.2)	1.3 (0.6, 2.0)	0.000
Main analysis (adjusted)	15	121.1 (120.0, 122.2)	120.1 (119.5, 120.7)	0.9 (-0.1, 1.9)	0.072
Complete case	15	121.1 (119.7, 122.4)	120.3 (119.6, 121.0)	0.8 (-0.4, 2.0)	0.208
Unadjusted	15	119.7 (118.7, 120.7)	118.1 (117.9, 118.4)	1.6 (0.6, 2.6)	0.003
Including post terms	15	121.2 (120.1, 122.3)	120.2 (119.6, 120.7)	1.0 (0.0, 2.0)	0.049
Main analysis (adjusted)	18	123.5 (122.2, 124.8)	121.5 (120.8, 122.2)	1.9 (0.8, 3.1)	0.001
Complete case	18	122.6 (121.0, 124.1)	121.4 (120.6, 122.2)	1.2 (-0.2, 2.6)	0.105
Unadjusted	18	118.8 (117.5, 120.1)	115.7 (115.4, 116.0)	3.1 (1.7, 4.5)	0.000
Including post terms	18	123.5 (122.2, 124.8)	121.4 (120.7, 122.0)	2.1 (0.9, 3.3)	0.001
Main analysis (adjusted)	25	123.7 (122.1, 125.2)	122.8 (121.9, 123.6)	0.9 (-0.5, 2.3)	0.202
Complete case	25	123.6 (121.8, 125.5)	123.1 (122.1, 124.1)	0.6 (-1.1, 2.2)	0.511
Unadjusted	25	118.0 (116.5, 119.5)	116.3 (115.9, 116.6)	1.7 (0.2, 3.3)	0.026
Including post terms	25	123.7 (122.2, 125.3)	122.9 (122.0, 123.7)	0.9 (-0.5, 2.2)	0.198

Table S15 Predicted mean DBP (95% CI) at ages 7, 9, 11, 13, 15, 18 and 25 years by preterm and full-term birth and the difference in their means (95% CI) from sensitivity analyses

		Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI) comparing pre-term to term born participants	P value for difference
Main analysis (adjusted)	7	57.7 (57.0, 58.4)	57.1 (56.7, 57.5)	0.6 (-0.0, 1.3)	0.066
Complete case	7	57.3 (56.5, 58.2)	57.0 (56.6, 57.5)	0.3 (-0.5, 1.1)	0.416
Unadjusted	7	58.0 (57.4, 58.6)	57.3 (57.1, 57.4)	0.8 (0.1, 1.4)	0.024
Including post terms	7	57.7 (57.0, 58.5)	57.1 (56.7, 57.4)	0.7 (0.0, 1.3)	0.045
Main analysis (adjusted)	9	57.6 (57.0, 58.1)	57.2 (56.9, 57.5)	0.4 (-0.1, 0.9)	0.101
Complete case	9	57.2 (56.6, 57.8)	57.2 (56.8, 57.5)	0.0 (-0.5, 0.6)	0.892
Unadjusted	9	58.0 (57.5, 58.4)	57.4 (57.3, 57.6)	0.5 (0.0, 1.0)	0.031
Including post terms	9	57.6 (57.1, 58.1)	57.1 (56.9, 57.4)	0.5 (-0.0, 0.9)	0.062
Main analysis (adjusted)	11	57.4 (56.9, 58.0)	57.3 (56.9, 57.6)	0.2 (-0.3, 0.7)	0.479
Complete case	11	57.1 (56.4, 57.7)	57.3 (57.0, 57.7)	-0.2 (-0.9, 0.4)	0.443
Unadjusted	11	57.9 (57.4, 58.4)	57.6 (57.5, 57.7)	0.3 (-0.2, 0.8)	0.240
Including post terms	11	57.4 (56.9, 58.0)	57.2 (56.9, 57.5)	0.2 (-0.3, 0.7)	0.353
Main analysis (adjusted)	13	59.5 (58.9, 60.0)	59.6 (59.3, 59.9)	-0.1 (-0.6, 0.4)	0.657
Complete case	13	59.1 (58.4, 59.7)	59.6 (59.2, 60.0)	-0.5 (-1.1, 0.1)	0.089
Unadjusted	13	59.7 (59.2, 60.2)	59.7 (59.5, 59.8)	0.0 (-0.5, 0.5)	0.870
Including post terms	13	59.5 (58.9, 60.0)	59.6 (59.3, 59.8)	-0.1 (-0.6, 0.4)	0.773
Main analysis (adjusted)	15	63.7 (62.8, 64.6)	64.2 (63.7, 64.7)	-0.5 (-1.3, 0.3)	0.224
Complete case	15	63.2 (62.2, 64.3)	64.1 (63.5, 64.6)	-0.8 (-1.8, 0.1)	0.088
Unadjusted	15	63.3 (62.5, 64.1)	63.6 (63.4, 63.8)	-0.3 (-1.1, 0.5)	0.518
Including post terms	15	63.7 (62.8, 64.6)	64.2 (63.7, 64.6)	-0.5 (-1.3, 0.3)	0.228
Main analysis (adjusted)	18	63.5 (62.5, 64.4)	63.3 (62.8, 63.8)	0.1 (-0.7, 1.0)	0.758
Complete case	18	63.0 (61.9, 64.2)	63.3 (62.7, 63.9)	-0.2 (-1.3, 0.8)	0.641
Unadjusted	18	64.4 (63.6, 65.2)	64.2 (64.0, 64.4)	0.2 (-0.7, 1.0)	0.708
Including post terms	18	63.5 (62.5, 64.4)	63.2 (62.8, 63.7)	0.2 (-0.6, 1.1)	0.614
Main analysis (adjusted)	25	68.1 (66.8, 69.4)	68.4 (67.7, 69.1)	-0.3 (-1.5, 0.8)	0.549
Complete case	25	67.8 (66.3, 69.3)	68.7 (67.9, 69.5)	-0.9 (-2.3, 0.4)	0.177
Unadjusted	25	67.0 (65.9, 68.1)	67.1 (66.9, 67.4)	-0.1 (-1.2, 1.0)	0.857
Including post terms	25	68.2 (66.9, 69.4)	68.5 (67.8, 69.2)	-0.3 (-1.4, 0.8)	0.573

Table S16 Predicted mean pulse rate (95% CI) at ages 7, 9, 11, 13, 15, 18 and 25 years by preterm and full-term birth and the difference in their means (95% CI) from sensitivity analyses

		Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI) comparing pre- term to term born participants	P value for difference
Main analysis (adjusted)	7	83.2 (82.0, 84.4)	83.0 (82.3, 83.6)	0.2 (-0.8, 1.3)	0.685
Complete case	7	82.5 (81.1, 83.8)	82.8 (82.1, 83.6)	-0.4 (-1.6, 0.9)	0.563
Unadjusted	7	84.3 (83.3, 85.4)	84.0 (83.7, 84.3)	0.3 (-0.7, 1.4)	0.559

Including post terms	7	83.1 (82.0, 84.3)	82.9 (82.2, 83.5)	0.3 (-0.8, 1.3)	0.615
Main analysis (adjusted)	9	78.3 (77.4, 79.2)	78.3 (77.8, 78.8)	-0.0 (-0.8, 0.8)	0.988
Complete case	9	77.6 (76.6, 78.7)	78.3 (77.7, 78.8)	-0.6 (-1.6, 0.3)	0.195
Unadjusted	9	79.7 (78.9, 80.5)	79.7 (79.5, 79.9)	-0.0 (-0.8, 0.8)	0.988
Including post terms	9	78.3 (77.5, 79.2)	78.3 (77.8, 78.7)	0.0 (-0.7, 0.8)	0.913
Main analysis (adjusted)	11	73.4 (72.5, 74.2)	73.6 (73.1, 74.1)	-0.2 (-1.0, 0.6)	0.570
Complete case	11	72.8 (71.8, 73.9)	73.7 (73.1, 74.3)	-0.9 (-1.9, 0.1)	0.074
Unadjusted	11	75.1 (74.3, 75.8)	75.4 (75.2, 75.6)	-0.3 (-1.1, 0.5)	0.426
Including post terms	11	73.5 (72.6, 74.4)	73.7 (73.2, 74.2)	-0.2 (-1.0, 0.6)	0.650
Main analysis (adjusted)	13	70.6 (69.7, 71.5)	71.1 (70.6, 71.6)	-0.5 (-1.3, 0.3)	0.216
Complete case	13	70.3 (69.2, 71.4)	71.4 (70.8, 72.0)	-1.1 (-2.1, -0.1)	0.032
Unadjusted	13	72.7 (71.9, 73.5)	73.4 (73.1, 73.6)	-0.7 (-1.5, 0.1)	0.099
Including post terms	13	70.9 (70.0, 71.7)	71.3 (70.8, 71.8)	-0.5 (-1.3, 0.3)	0.261
Main analysis (adjusted)	15	70.1 (68.8, 71.3)	70.9 (70.3, 71.6)	-0.9 (-2.0, 0.3)	0.140
Complete case	15	70.1 (68.6, 71.6)	71.3 (70.5, 72.1)	-1.2 (-2.6, 0.2)	0.082
Unadjusted	15	72.5 (71.4, 73.6)	73.6 (73.3, 73.9)	-1.1 (-2.3, 0.0)	0.057
Including post terms	15	70.4 (69.1, 71.6)	71.2 (70.5, 71.8)	-0.8 (-1.9, 0.3)	0.163
Main analysis (adjusted)	18	62.9 (61.5, 64.4)	61.8 (61.0, 62.6)	1.1 (-0.2, 2.4)	0.100
Complete case	18	61.6 (59.9, 63.4)	61.6 (60.7, 62.5)	-0.0 (-1.6, 1.6)	0.996
Unadjusted	18	64.8 (63.5, 66.1)	63.9 (63.6, 64.3)	0.9 (-0.4, 2.2)	0.184
Including post terms	18	63.0 (61.5, 64.5)	61.8 (61.0, 62.6)	1.2 (-0.1, 2.5)	0.074
Main analysis (adjusted)	25	64.9 (63.3, 66.5)	64.8 (63.9, 65.6)	0.1 (-1.3, 1.5)	0.857
Complete case	25	65.3 (63.4, 67.1)	65.7 (64.7, 66.7)	-0.4 (-2.1, 1.3)	0.635
Unadjusted	25	67.2 (65.8, 68.5)	67.1 (66.7, 67.4)	0.1 (-1.3, 1.5)	0.870
Including post terms	25	65.0 (63.4, 66.5)	64.7 (63.9, 65.6)	0.3 (-1.1, 1.6)	0.710

Table S17 Predicted mean (logged) triglycerides (95% CI) at birth, 7, 9, 15, 18 and 25 years by preterm and full-term birth and the difference in their means (95% CI) from sensitivity analyses

		Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI) comparing pre- term to term born participants	P value for difference
Main analysis (adjusted)	0	-0.8 (-0.9, -0.8)	-0.6 (-0.6, -0.6)	-0.2 (-0.3, -0.2)	0.000
Complete case	0	-0.8 (-0.9, -0.7)	-0.6 (-0.6, -0.6)	-0.2 (-0.3, -0.2)	0.000
Unadjusted	0	-0.9 (-0.9, -0.8)	-0.7 (-0.7, -0.7)	-0.2 (-0.3, -0.1)	0.000
Including post terms	0	-0.8 (-0.9, -0.8)	-0.6 (-0.6, -0.6)	-0.2 (-0.3, -0.2)	0.000
Main analysis (adjusted)	7	-0.2 (-0.2, -0.1)	-0.1 (-0.1, -0.1)	-0.1 (-0.1, -0.0)	0.008
Complete case	7	-0.1 (-0.2, -0.1)	-0.1 (-0.1, -0.1)	-0.0 (-0.1, 0.0)	0.118
Unadjusted	7	-0.1 (-0.2, -0.1)	-0.1 (-0.1, -0.1)	-0.1 (-0.1, -0.0)	0.008
Including post terms	7	-0.2 (-0.2, -0.1)	-0.1 (-0.1, -0.1)	-0.1 (-0.1, -0.0)	0.005
Main analysis (adjusted)	9	0.0 (-0.0, 0.1)	0.0 (0.0, 0.1)	-0.0 (-0.0, 0.0)	0.904
Complete case	9	0.1 (0.0, 0.1)	0.0 (0.0, 0.1)	0.0 (-0.0, 0.1)	0.495
Unadjusted	9	0.1 (0.0, 0.1)	0.1 (0.1, 0.1)	-0.0 (-0.1, 0.0)	0.788
Including post terms	9	0.0 (-0.0, 0.1)	0.0 (0.0, 0.1)	-0.0 (-0.1, 0.0)	0.876
Main analysis (adjusted)	15	-0.2 (-0.3, -0.2)	-0.2 (-0.2, -0.2)	-0.0 (-0.1, 0.0)	0.427
Complete case	15	-0.2 (-0.2, -0.1)	-0.2 (-0.2, -0.2)	0.0 (-0.0, 0.0)	0.898

Unadjusted	15	-0.2 (-0.2, -0.2)	-0.2 (-0.2, -0.2)	-0.0 (-0.1, 0.0)	0.341
Including post terms	15	-0.2 (-0.3, -0.2)	-0.2 (-0.2, -0.2)	-0.0 (-0.1, 0.0)	0.431
Main analysis (adjusted)	18	-0.3 (-0.4, -0.3)	-0.3 (-0.3, -0.3)	-0.0 (-0.1, 0.0)	0.403
Complete case	18	-0.3 (-0.4, -0.2)	-0.3 (-0.3, -0.3)	-0.0 (-0.1, 0.1)	0.867
Unadjusted	18	-0.3 (-0.4, -0.3)	-0.3 (-0.3, -0.3)	-0.0 (-0.1, 0.0)	0.342
Including post terms	18	-0.3 (-0.4, -0.3)	-0.3 (-0.3, -0.3)	-0.0 (-0.1, 0.0)	0.415
Main analysis (adjusted)	25	-0.1 (-0.2, -0.0)	-0.0 (-0.1, -0.0)	-0.1 (-0.1, 0.0)	0.058
Complete case	25	-0.1 (-0.2, 0.0)	-0.0 (-0.1, 0.0)	-0.0 (-0.1, 0.0)	0.255
Unadjusted	25	-0.2 (-0.2, -0.1)	-0.1 (-0.1, -0.1)	-0.0 (-0.1, 0.0)	0.137
Including post terms	25	-0.1 (-0.2, -0.0)	-0.0 (-0.1, 0.0)	-0.1 (-0.1, 0.0)	0.063

Table S18 Predicted mean HDL-c (95% CI) at birth, 7, 9, 15, 18 and 25 years by preterm and full-term birth and the difference in their means (95% CI) from sensitivity analyses

		Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI) comparing pre- term to term born participants	P value for difference
Main analysis (adjusted)	0	0.6 (0.5, 0.6)	0.5 (0.5, 0.5)	0.1 (0.0, 0.1)	0.000
Complete case	0	0.6 (0.6, 0.7)	0.5 (0.5, 0.5)	0.1 (0.1, 0.1)	0.000
Unadjusted	0	0.6 (0.6, 0.6)	0.5 (0.5, 0.5)	0.1 (0.0, 0.1)	0.000
Including post terms	0	0.6 (0.5, 0.6)	0.5 (0.5, 0.5)	0.1 (0.0, 0.1)	0.000
Main analysis (adjusted)	7	1.6 (1.5, 1.6)	1.5 (1.5, 1.6)	0.0 (-0.0, 0.0)	0.712
Complete case	7	1.6 (1.5, 1.6)	1.5 (1.5, 1.6)	0.0 (-0.0, 0.1)	0.365
Unadjusted	7	1.5 (1.5, 1.5)	1.5 (1.5, 1.5)	0.0 (-0.0, 0.0)	0.652
Including post terms	7	1.6 (1.5, 1.6)	1.5 (1.5, 1.6)	0.0 (-0.0, 0.0)	0.622
Main analysis (adjusted)	9	1.5 (1.4, 1.5)	1.5 (1.5, 1.5)	0.0 (-0.0, 0.0)	0.730
Complete case	9	1.5 (1.4, 1.5)	1.5 (1.5, 1.5)	0.0 (-0.0, 0.0)	0.507
Unadjusted	9	1.5 (1.4, 1.5)	1.5 (1.5, 1.5)	0.0 (-0.0, 0.0)	0.822
Including post terms	9	1.5 (1.4, 1.5)	1.5 (1.5, 1.5)	0.0 (-0.0, 0.0)	0.616
Main analysis (adjusted)	15	1.3 (1.2, 1.3)	1.3 (1.2, 1.3)	0.0 (-0.0, 0.0)	0.890
Complete case	15	1.2 (1.2, 1.3)	1.3 (1.2, 1.3)	-0.0 (-0.0, 0.0)	0.715
Unadjusted	15	1.3 (1.3, 1.3)	1.3 (1.3, 1.3)	-0.0 (-0.0, 0.0)	0.545
Including post terms	15	1.3 (1.2, 1.3)	1.3 (1.2, 1.3)	0.0 (-0.0, 0.0)	0.729
Main analysis (adjusted)	18	1.1 (1.1, 1.2)	1.1 (1.1, 1.2)	0.0 (-0.0, 0.0)	0.975
Complete case	18	1.1 (1.1, 1.2)	1.1 (1.1, 1.2)	-0.0 (-0.1, 0.0)	0.461
Unadjusted	18	1.2 (1.2, 1.3)	1.2 (1.2, 1.2)	-0.0 (-0.1, 0.0)	0.406
Including post terms	18	1.1 (1.1, 1.2)	1.1 (1.1, 1.2)	0.0 (-0.0, 0.0)	0.821
Main analysis (adjusted)	25	1.4 (1.3, 1.5)	1.4 (1.4, 1.4)	0.0 (-0.1, 0.1)	0.889
Complete case	25	1.4 (1.4, 1.5)	1.4 (1.4, 1.5)	0.0 (-0.0, 0.1)	0.524
Unadjusted	25	1.6 (1.5, 1.6)	1.6 (1.6, 1.6)	-0.0 (-0.1, 0.0)	0.674
Including post terms	25	1.4 (1.3, 1.5)	1.4 (1.4, 1.4)	0.0 (-0.1, 0.1)	0.826

Table S19 Predicted mean non-HDL-c (95% CI) at birth, 7, 9, 15, 18 and 25 years by preterm and full-term birth and the difference in their means (95% CI) from sensitivity analyses

		Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI)	P value for difference
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				comparing pre-term to term born participants	
Main analysis (adjusted)	0	1.4 (1.3, 1.5)	1.4 (1.3, 1.4)	0.1 (-0.1, 0.2)	0.337
Complete case	0	1.4 (1.3, 1.6)	1.4 (1.3, 1.5)	0.1 (-0.1, 0.2)	0.478
Unadjusted	0	1.4 (1.3, 1.5)	1.4 (1.3, 1.4)	0.1 (-0.1, 0.2)	0.311
Including post terms	0	1.4 (1.3, 1.5)	1.4 (1.3, 1.4)	0.1 (-0.1, 0.2)	0.374
Main analysis (adjusted)	7	2.6 (2.5, 2.6)	2.6 (2.6, 2.6)	-0.0 (-0.1, 0.0)	0.530
Complete case	7	2.6 (2.5, 2.7)	2.6 (2.5, 2.6)	0.0 (-0.0, 0.1)	0.475
Unadjusted	7	2.6 (2.6, 2.7)	2.7 (2.7, 2.7)	-0.0 (-0.1, 0.0)	0.395
Including post terms	7	2.6 (2.5, 2.6)	2.6 (2.6, 2.6)	-0.0 (-0.1, 0.0)	0.504
Main analysis (adjusted)	9	2.4 (2.4, 2.5)	2.4 (2.4, 2.5)	-0.0 (-0.1, 0.0)	0.555
Complete case	9	2.5 (2.4, 2.5)	2.4 (2.4, 2.5)	0.0 (-0.0, 0.1)	0.419
Unadjusted	9	2.5 (2.5, 2.6)	2.5 (2.5, 2.5)	-0.0 (-0.1, 0.0)	0.340
Including post terms	9	2.4 (2.4, 2.5)	2.5 (2.4, 2.5)	-0.0 (-0.1, 0.0)	0.519
Main analysis (adjusted)	15	2.0 (1.9, 2.1)	2.0 (1.9, 2.0)	-0.0 (-0.1, 0.1)	0.839
Complete case	15	2.0 (1.9, 2.1)	2.0 (1.9, 2.0)	0.0 (-0.1, 0.1)	0.529
Unadjusted	15	2.1 (2.0, 2.1)	2.1 (2.1, 2.1)	-0.0 (-0.1, 0.0)	0.471
Including post terms	15	2.0 (1.9, 2.1)	2.0 (2.0, 2.0)	-0.0 (-0.1, 0.1)	0.789
Main analysis (adjusted)	18	1.8 (1.6, 1.9)	1.8 (1.7, 1.8)	-0.0 (-0.1, 0.1)	0.939
Complete case	18	1.8 (1.7, 1.9)	1.8 (1.7, 1.8)	0.0 (-0.1, 0.1)	0.608
Unadjusted	18	1.8 (1.7, 1.9)	1.9 (1.8, 1.9)	-0.0 (-0.1, 0.1)	0.567
Including post terms	18	1.8 (1.7, 1.9)	1.8 (1.7, 1.8)	-0.0 (-0.1, 0.1)	0.892
Main analysis (adjusted)	25	2.6 (2.4, 2.7)	2.5 (2.5, 2.6)	0.0 (-0.1, 0.2)	0.612
Complete case	25	2.6 (2.5, 2.8)	2.6 (2.5, 2.7)	0.0 (-0.1, 0.2)	0.739
Unadjusted	25	2.5 (2.3, 2.6)	2.4 (2.4, 2.4)	0.0 (-0.1, 0.2)	0.511
Including post terms	25	2.6 (2.5, 2.7)	2.6 (2.5, 2.6)	0.0 (-0.1, 0.2)	0.679

Table S20 Predicted mean glucose (95% CI) at ages 7, 9, 15, 18 and 25 years by preterm and full-term birth and the difference in their means (95% CI) from sensitivity analyses

		Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI) comparing pre-term to term born participants	P value for difference
Main analysis (adjusted)	7	4.2 (4.2, 4.3)	4.3 (4.2, 4.3)	-0.0 (-0.1, 0.0)	0.534
Complete case	7	4.2 (4.2, 4.3)	4.2 (4.2, 4.3)	-0.0 (-0.1, 0.1)	0.722
Unadjusted	7	4.2 (4.1, 4.2)	4.2 (4.2, 4.2)	-0.0 (-0.1, 0.0)	0.598
Including post terms	7	4.2 (4.2, 4.3)	4.2 (4.2, 4.3)	-0.0 (-0.1, 0.0)	0.543
Main analysis (adjusted)	9	4.5 (4.4, 4.6)	4.5 (4.5, 4.6)	-0.0 (-0.1, 0.0)	0.370
Complete case	9	4.5 (4.4, 4.6)	4.5 (4.5, 4.6)	-0.0 (-0.1, 0.0)	0.693
Unadjusted	9	4.4 (4.4, 4.5)	4.4 (4.4, 4.5)	-0.0 (-0.1, 0.0)	0.589
Including post terms	9	4.5 (4.4, 4.6)	4.5 (4.5, 4.5)	-0.0 (-0.1, 0.0)	0.347
Main analysis (adjusted)	15	5.3 (5.2, 5.4)	5.3 (5.3, 5.4)	-0.0 (-0.1, 0.0)	0.354
Complete case	15	5.3 (5.2, 5.4)	5.3 (5.3, 5.4)	-0.0 (-0.1, 0.1)	0.861
Unadjusted	15	5.3 (5.2, 5.3)	5.3 (5.3, 5.3)	-0.0 (-0.1, 0.1)	0.894
Including post terms	15	5.3 (5.2, 5.4)	5.3 (5.3, 5.4)	-0.0 (-0.1, 0.0)	0.279
Main analysis (adjusted)	18	5.2 (5.1, 5.3)	5.1 (5.1, 5.2)	0.1 (-0.0, 0.2)	0.121

Complete case	18	5.2 (5.1, 5.3)	5.1 (5.1, 5.2)	0.0 (-0.1, 0.1)	0.355
Unadjusted	18	5.1 (5.0, 5.2)	5.0 (5.0, 5.0)	0.1 (-0.0, 0.2)	0.079
Including post terms	18	5.2 (5.1, 5.3)	5.1 (5.1, 5.2)	0.1 (-0.0, 0.2)	0.149
Main analysis (adjusted)	25	5.6 (5.4, 5.7)	5.5 (5.4, 5.6)	0.1 (-0.0, 0.2)	0.200
Complete case	25	5.6 (5.5, 5.7)	5.5 (5.4, 5.6)	0.1 (-0.0, 0.2)	0.099
Unadjusted	25	5.4 (5.3, 5.5)	5.3 (5.3, 5.4)	0.1 (-0.0, 0.2)	0.179
Including post terms	25	5.6 (5.4, 5.7)	5.5 (5.4, 5.6)	0.1 (-0.0, 0.2)	0.258

Table S21 Predicted mean (logged) insulin (95% CI) at birth, 9, 15, 18 and 25 years by preterm and full-term birth and the difference in their means (95% CI) from sensitivity analyses

		Preterm Mean (95% CI)	Term Mean (95% CI)	Mean difference (95% CI) comparing pre- term to term born participants	P value for difference
Main analysis (adjusted)	0	0.9 (0.7, 1.1)	0.9 (0.8, 1.1)	-0.1 (-0.3, 0.2)	0.596
Complete case	0	0.9 (0.6, 1.1)	0.9 (0.8, 1.1)	-0.1 (-0.3, 0.2)	0.646
Unadjusted	0	1.0 (0.8, 1.2)	1.1 (1.1, 1.2)	-0.1 (-0.3, 0.1)	0.468
Including post terms	0	0.9 (0.7, 1.1)	0.9 (0.8, 1.0)	-0.0 (-0.3, 0.2)	0.717
Main analysis (adjusted)	9	1.3 (1.0, 1.6)	1.5 (1.3, 1.6)	-0.2 (-0.4, 0.1)	0.259
Complete case	9	1.4 (1.1, 1.7)	1.4 (1.3, 1.6)	-0.0 (-0.3, 0.3)	0.843
Unadjusted	9	1.4 (1.1, 1.6)	1.5 (1.5, 1.6)	-0.2 (-0.4, 0.1)	0.213
Including post terms	9	1.3 (1.1, 1.6)	1.5 (1.4, 1.6)	-0.2 (-0.4, 0.1)	0.238
Main analysis (adjusted)	15	2.1 (2.0, 2.2)	2.2 (2.1, 2.2)	-0.0 (-0.1, 0.0)	0.344
Complete case	15	2.1 (2.0, 2.2)	2.2 (2.1, 2.2)	-0.0 (-0.1, 0.1)	0.829
Unadjusted	15	2.2 (2.1, 2.3)	2.2 (2.2, 2.3)	-0.1 (-0.2, 0.0)	0.096
Including post terms	15	2.1 (2.0, 2.2)	2.2 (2.1, 2.2)	-0.0 (-0.1, 0.0)	0.344
Main analysis (adjusted)	18	1.8 (1.7, 1.9)	1.8 (1.8, 1.9)	-0.0 (-0.1, 0.1)	0.686
Complete case	18	1.8 (1.7, 1.9)	1.8 (1.8, 1.9)	-0.0 (-0.1, 0.1)	0.636
Unadjusted	18	1.9 (1.8, 2.0)	1.9 (1.9, 2.0)	-0.0 (-0.1, 0.1)	0.690
Including post terms	18	1.8 (1.7, 1.9)	1.8 (1.8, 1.9)	-0.0 (-0.1, 0.1)	0.798
Main analysis (adjusted)	25	2.0 (1.9, 2.2)	2.1 (2.0, 2.1)	-0.0 (-0.1, 0.1)	0.758
Complete case	25	2.1 (1.9, 2.2)	2.1 (2.0, 2.2)	-0.0 (-0.2, 0.1)	0.424
Unadjusted	25	2.1 (2.0, 2.2)	2.1 (2.0, 2.1)	-0.0 (-0.1, 0.1)	0.866
Including post terms	25	2.1 (1.9, 2.2)	2.1 (2.0, 2.1)	-0.0 (-0.1, 0.1)	0.820

Table S22 Comparison of observed and predicted values for lean mass and fat mass by preterm/full term birth

	Total number of observations	Mean observed (SD), kg	Mean predicted (SD), kg	Mean difference (observed – predicted), kg
Lean mass				
Preterm:				
9 years	397	24.07 (2.98)	24.01 (2.23)	0.06 (3.54)
9-13 years	375	29.30 (4.20)	29.66 (4.40)	-0.35 (3.49)
13-15 years	320	38.07 (6.10)	37.48 (6.17)	0.59 (2.88)

15-18 years	430	44.84 (8.99)	44.98 (7.07)	-0.14 (2.99)
18-25 years	259	46.27 (9.50)	46.35 (6.93)	-0.08 (3.87)
Overall	1781	35.93 (11.00)	35.93 (10.34)	0.00 (3.36)
Full term: 9 years	6476	24.59 (3.24)	24.49 (2.41)	0.10 (3.70)
9-13 years	6251	29.77 (4.44)	30.11 (4.69)	-0.33 (3.85)
13-15 years	5412	37.94 (6.48)	37.50 (6.69)	0.44 (2.91)
15-18 years	7999	44.03 (9.17)	44.14 (7.20)	-0.11 (3.16)
18-25 years	4298	46.83 (9.92)	46.85 (7.24)	-0.02 (3.93)
Overall	30436	36.28 (10.93)	36.28 (10.22)	0.00 (3.51)
Log fat mass				
Preterm:				
9 years	397	1.89 (0.61)	1.90 (0.58)	-0.01 (0.09)
9-13 years	375	2.24 (0.62)	2.22 (0.58)	0.02 (0.12)
13-15 years	320	2.36 (0.63)	2.39 (0.59)	-0.03 (0.13)
15-18 years	430	2.48 (0.62)	2.47 (0.60)	0.01 (0.10)
18-25 years	259	2.96 (0.49)	2.96 (0.45)	0.00 (0.09)
Overall	1781	2.34 (0.69)	2.34 (0.65)	-0.00 (0.11)
Full term: 9 years	6476	1.98 (0.58)	1.99 (0.55)	-0.01 (0.09)
9-13 years	6251	2.31 (0.57)	2.29 (0.54)	0.02 (0.11)
13-15 years	5412	2.46 (0.59)	2.48 (0.55)	-0.02 (0.13)
15-18 years	7999	2.63 (0.61)	2.63 (0.58)	0.01 (0.10)
18-25 years	4298	3.00 (0.48)	3.00 (0.43)	0.00 (0.09)
Overall	30436	2.45 (0.66)	2.45 (0.63)	0.00 (0.11)

Table S23 Comparison of observed and predicted values for SBP, DBP and pulse rate by preterm/full term birth

	Total number of observations	Mean observed (SD), mmHg	Mean predicted (SD), mmHg	Mean difference (observed – predicted), mmHg/bpm
SBP				
Preterm:				
7 years	442	99.95 (9.65)	100.15 (4.66)	-0.20 (7.59)
7-12 years	1130	105.65 (9.37)	105.25 (5.45)	0.40 (6.37)
12-16 years	949	114.09 (11.44)	114.49 (7.21)	-0.40 (7.53)
16-18 years	194	119.95 (9.47)	120.23 (5.87)	-0.28 (6.92)
18-25 years	256	117.71 (10.93)	117.44 (6.81)	0.27 (6.74)
Overall	2971	109.47 (12.00)	109.47 (8.84)	0.00 (7.02)
Full term: 7 years	7174	98.82 (9.15)	98.96 (4.75)	-0.14 (7.08)
7-12 years	18670	103.99 (9.38)	103.74 (5.56)	0.25 (6.36)
12-16 years	16053	112.66 (11.90)	112.89 (7.55)	-0.23 (7.69)
16-18 years	3738	117.00 (10.25)	117.23 (6.69)	-0.23 (7.04)
18-25 years	4343	115.97 (11.28)	115.79 (7.25)	0.18 (6.66)
Overall	49978	108.05 (12.08)	108.05 (8.88)	-0.00 (6.99)
DBP				
Preterm:				
7 years	442	57.20 (6.82)	57.89 (3.06)	-0.68 (6.87)

7-12 years	1131	59.03 (7.21)	57.83 (3.30)	1.20 (5.68)
12-16 years	949	60.01 (9.10)	61.10 (4.16)	-1.09 (6.56)
16-18 years	194	64.04 (6.08)	64.83 (3.63)	-0.79 (6.27)
18-25 years	256	66.48 (7.95)	65.93 (4.84)	0.55 (6.90)
Overall	2972	60.04 (8.19)	60.04 (4.62)	-0.00 (6.38)
Full term: 7 years	7172	56.44 (6.64)	57.19 (2.94)	-0.75 (6.37)
7-12 years	18672	58.76 (7.05)	57.51 (3.38)	1.25 (5.50)
12-16 years	16053	59.99 (8.82)	61.10 (4.30)	-1.11 (6.08)
16-18 years	3738	64.21 (6.39)	64.65 (4.11)	-0.44 (7.19)
18-25 years	4343	66.55 (7.65)	66.19 (4.46)	0.36 (6.18)
Overall	49978	59.90 (8.09)	59.90 (4.82)	-0.00 (6.11)
Pulse rate				
Preterm:				
7 years	441	83.57 (11.32)	83.11 (6.18)	0.46 (7.67)
7-12 years	1147	74.96 (11.65)	75.37 (6.99)	-0.41 (7.85)
12-16 years	949	72.64 (11.76)	72.31 (7.23)	0.33 (7.98)
16-18 years	194	65.70 (10.83)	66.47 (6.93)	-0.76 (8.71)
18-25 years	256	67.26 (10.70)	66.88 (6.03)	0.39 (9.22)
Overall	2987	74.23 (12.45)	74.23 (8.31)	-0.00 (8.06)
Full term: 7 years	7171	83.30 (10.74)	82.82 (5.83)	0.48 (7.57)
7-12 years	18911	75.66 (11.36)	75.98 (6.60)	-0.31 (7.99)
12-16 years	16052	73.45 (11.40)	73.28 (6.89)	0.17 (7.66)
16-18 years	3738	66.07 (10.57)	66.61 (6.64)	-0.54 (8.46)
18-25 years	4343	66.89 (10.16)	66.46 (5.76)	0.43 (8.56)
Overall	50215	74.57 (12.09)	74.57 (8.00)	0.00 (7.92)

Table S24 Comparison of observed and predicted values for lipids by preterm/full term birth

	Total number of observations	Mean observed (SD), mmol/l	Mean predicted (SD), mmol/l	Mean difference (observed – predicted), mmol/l
HDL-c				
Preterm:				
Birth	223	0.60 (0.29)	0.60 (0.13)	-0.00 (0.15)
7-18 years	865	1.41 (0.33)	1.41 (0.25)	-0.00 (0.13)
18-25 years	210	1.47 (0.39)	1.47 (0.33)	0.00 (0.11)
Overall	1298	1.28 (0.45)	1.28 (0.40)	0.00 (0.13)
Full term Birth	4401	0.53 (0.24)	0.53 (0.11)	0.00 (0.13)
7-18 years	14799	1.39 (0.32)	1.39 (0.24)	-0.00 (0.13)
18-25 years	3475	1.50 (0.42)	1.50 (0.35)	0.00 (0.11)
Overall	22675	1.24 (0.48)	1.24 (0.43)	0.00 (0.13)
Non-HDL-c				
Preterm:				
Birth	223	1.33 (0.66)	1.35 (0.52)	-0.02 (0.15)
0-9 years	296	2.84 (0.66)	2.74 (0.43)	0.10 (0.32)
9-18 years	569	2.62 (0.66)	2.67 (0.54)	-0.05 (0.28)
18-25 years	210	2.85 (0.81)	2.83 (0.67)	0.02 (0.24)

Overall	1298	2.49 (0.87)	2.49 (0.75)	-0.00 (0.27)
Full term Birth	4400	1.30 (0.86)	1.32 (0.67)	-0.02 (0.19)
0-9 years	4811	2.88 (0.63)	2.78 (0.43)	0.10 (0.30)
9-18 years	9989	2.66 (0.67)	2.70 (0.53)	-0.04 (0.30)
18-25 years	3475	2.82 (0.84)	2.81 (0.68)	0.01 (0.25)
Overall	22675	2.47 (0.93)	2.47 (0.80)	-0.00 (0.28)
Log triglycerides				
Preterm:	221	-0.89 (0.41)	-0.88 (0.18)	-0.01 (0.23)
Birth				
0-9 years	296	-0.06 (0.46)	-0.09 (0.20)	0.03 (0.30)
9-18 years	569	-0.15 (0.42)	-0.13 (0.24)	-0.02 (0.27)
18-25 years	210	-0.17 (0.42)	-0.18 (0.20)	0.02 (0.30)
Overall	1296	-0.26 (0.51)	-0.26 (0.36)	0.00 (0.27)
Full term Birth	4477	-0.67 (0.45)	-0.67 (0.20)	-0.00 (0.25)
0-9 years	4811	-0.04 (0.44)	-0.05 (0.20)	0.01 (0.30)
9-18 years	9989	-0.12 (0.43)	-0.12 (0.24)	-0.01 (0.28)
18-25 years	3474	-0.14 (0.42)	-0.15 (0.21)	0.01 (0.28)
Overall	22751	-0.22 (0.49)	-0.22 (0.32)	0.00 (0.28)

Table S25 Comparison of observed and predicted values for glucose and insulin by preterm/full term birth

	Total number of observations	Mean observed (SD), mmol/l	Mean predicted (SD), mmol/l	Mean difference (observed – predicted), mmol/l
Glucose				
Preterm:				
7-15 years	327	4.27 (0.56)	4.26 (0.18)	0.01 (0.41)
15-18 years	294	5.15 (0.43)	5.15 (0.22)	0.00 (0.51)
18-25 years	210	5.27 (0.48)	5.29 (0.20)	-0.02 (0.42)
Overall	831	4.84 (0.67)	4.84 (0.51)	-0.00 (0.45)
Full term: 7-15 years	5706	4.30 (0.56)	4.29 (0.20)	0.01 (0.41)
15-18 years	5421	5.13 (0.42)	5.15 (0.23)	-0.02 (0.49)
18-25 years	3466	5.24 (0.51)	5.23 (0.23)	0.01 (0.43)
Overall	14593	4.83 (0.66)	4.83 (0.49)	0.00 (0.45)
Log insulin				
Preterm:				
Birth	26	1.04 (0.48)	1.04 (0.15)	-0.00 (0.34)
9-15 years	35	1.47 (0.61)	1.47 (0.33)	0.00 (0.29)
15-18 years	292	2.05 (0.59)	2.05 (0.24)	0.00 (0.46)
18-25 years	209	2.02 (0.62)	2.03 (0.30)	-0.00 (0.38)
Overall	562	1.96 (0.64)	1.96 (0.36)	0.00 (0.41)
Full term Birth	613	1.10 (0.56)	1.10 (0.18)	0.00 (0.38)
9-15 years	874	1.66 (0.68)	1.66 (0.38)	-0.00 (0.32)
15-18 years	5379	2.09 (0.54)	2.10 (0.23)	-0.00 (0.43)
18-25 years	3467	2.03 (0.62)	2.03 (0.30)	0.00 (0.36)
Overall	10333	1.98 (0.63)	1.98 (0.37)	-0.00 (0.39)

Table S26 Summary of the number of participants included across each analysis

		Pre-term	Full term
BMI	main analysis	676	10534
	complete case	430	7051
	including 41 weeks	676	11413
	excluding pregnancy complications	456	10534
	offspring males	378	5309
	offspring females	298	5225
Fat mass/lean mass	main analysis	494	7386
	complete case	330	5180
	including 41 weeks	494	7992
	excluding pregnancy complications	329	7386
	offspring males	266	3584
	offspring females	228	3802
SBP/DBP/pulse rate	main analysis	559	8195
	complete case	368	5674
	including 41 weeks	559	8882
	excluding pregnancy complications	373	8195
	offspring males	310	4047
	offspring females	249	4148
Lipids	main analysis	542	8566
	complete case	345	5733
	including 41 weeks	542	9262
	excluding pregnancy complications	367	8566
	offspring males	303	4279
	offspring females	239	4287
Glucose	main analysis	417	6339
	complete case	280	4452
	including 41 weeks	417	6837
	excluding pregnancy complications	280	6339
	offspring males	233	3110
	offspring females	184	3229
Insulin	main analysis	311	4973
	complete case	214	3546
	including 41 weeks	311	5365
	excluding pregnancy complications	205	4973
	offspring males	161	2318
	offspring females	150	2655

Table S27 Estimated mean difference in cardiometabolic risk factors per 1 week decrease in gestational age

Risk factors	Ages	MD (95% CI) per 1 week decrease in gestational age
BMI	Age 1yr (log BMI, kg/m ²)	-0.007 (-0.023, 0.010)
	Age 3yr (log BMI, kg/m ²)	-0.003 (-0.010, 0.003)
	Age 7yr (log BMI, kg/m ²)	-0.002 (-0.004, 0.000)
	Age 9yr (log BMI, kg/m ²)	-0.002 (-0.003, 0.000)
	Age 11yr (log BMI, kg/m ²)	-0.002 (-0.003, 0.000)
	Age 13yr (log BMI, kg/m ²)	-0.001 (-0.003, 0.000)
	Age 15yr (log BMI, kg/m ²)	-0.001 (-0.003, 0.000)
	Age 18yr (log BMI, kg/m ²)	-0.001 (-0.003, 0.000)
	Age 25yr (log BMI, kg/m ²)	-0.001 (-0.004, 0.001)
Lean mass	Age 9yr (kg)	-0.105 (-0.153, -0.057)
	Age 11yr (kg)	-0.099 (-0.145, -0.053)
	Age 13yr (kg)	-0.094 (-0.171, -0.017)
	Age 15yr (kg)	-0.088 (-0.165, -0.011)
	Age 18yr (kg)	-0.139 (-0.219, -0.059)
	Age 25yr (kg)	-0.155 (-0.239, -0.071)
Fat mass (logged)	Age 9yr (kg)	-0.010 (-0.019, -0.002)
	Age 11yr (kg)	-0.008 (-0.014, -0.001)
	Age 13yr (kg)	-0.005 (-0.012, 0.002)
	Age 15yr (kg)	-0.007 (-0.014, 0.000)
	Age 18yr (kg)	-0.006 (-0.014, 0.001)
	Age 25yr (kg)	-0.003 (-0.011, 0.004)
SBP	Age 7yr (mmHg)	0.188 (0.068, 0.307)
	Age 9yr (mmHg)	0.205 (0.115, 0.295)
	Age 11yr (mmHg)	0.223 (0.130, 0.317)
	Age 13yr (mmHg)	0.212 (0.117, 0.308)
	Age 15yr (mmHg)	0.172 (0.039, 0.306)
	Age 18yr (mmHg)	0.363 (0.208, 0.519)
	Age 25yr (mmHg)	0.116 (-0.069, 0.302)
DBP	Age 7yr (mmHg)	0.115 (0.027, 0.202)
	Age 9yr (mmHg)	0.076 (0.012, 0.139)
	Age 11yr (mmHg)	0.036 (-0.032, 0.105)
	Age 13yr (mmHg)	-0.009 (-0.077, 0.059)
	Age 15yr (mmHg)	-0.060 (-0.166, 0.046)
	Age 18yr (mmHg)	0.058 (-0.053, 0.169)
	Age 25yr (mmHg)	-0.079 (-0.232, 0.074)
Pulse rate	Age 7yr (bpm)	0.118 (-0.024, 0.259)
	Age 9yr (bpm)	0.068 (-0.038, 0.173)
	Age 11yr (bpm)	0.018 (-0.089, 0.125)
	Age 13yr (bpm)	-0.054 (-0.163, 0.055)
	Age 15yr (bpm)	-0.146 (-0.296, 0.004)
	Age 18yr (bpm)	0.212 (0.037, 0.386)
	Age 25yr (bpm)	-0.021 (-0.209, 0.167)
Triglycerides (logged)	Birth (mmol/l)	-0.051 (-0.059, -0.043)

	Age 7yr (mmol/l)	-0.011 (-0.016, -0.006)
	Age 9yr (mmol/l)	0.001 (-0.005, 0.007)
	Age 15yr (mmol/l)	-0.003 (-0.008, 0.002)
	Age 18yr (mmol/l)	-0.004 (-0.011, 0.002)
	Age 25yr (mmol/l)	-0.013 (-0.022, -0.004)
HDL-c	Birth (mmol/l)	0.015 (0.010, 0.019)
	Age 7yr (mmol/l)	0.003 (-0.002, 0.007)
	Age 9yr (mmol/l)	0.002 (-0.002, 0.006)
	Age 15yr (mmol/l)	0.000 (-0.004, 0.004)
	Age 18yr (mmol/l)	-0.001 (-0.005, 0.004)
	Age 25yr (mmol/l)	0.002 (-0.006, 0.010)
Non-HDL-c	Birth (mmol/l)	-0.004 (-0.019, 0.011)
	Age 7yr (mmol/l)	0.002 (-0.006, 0.010)
	Age 9yr (mmol/l)	0.004 (-0.006, 0.014)
	Age 15yr (mmol/l)	-0.002 (-0.011, 0.007)
	Age 18yr (mmol/l)	-0.005 (-0.016, 0.006)
	Age 25yr (mmol/l)	0.001 (-0.016, 0.017)
Glucose	Age 7yr (mmol/l)	0.003 (-0.006, 0.012)
	Age 9yr (mmol/l)	0.001 (-0.006, 0.008)
	Age 15yr (mmol/l)	-0.004 (-0.013, 0.005)
	Age 18yr (mmol/l)	0.003 (-0.008, 0.014)
	Age 25yr (mmol/l)	0.008 (-0.006, 0.021)
Insulin (logged)	Birth (mmol/l)	0.035 (0.005, 0.065)
	Age 9yr (mmol/l)	-0.011 (-0.048, 0.025)
	Age 15yr (mmol/l)	-0.005 (-0.016, 0.006)
	Age 18yr (mmol/l)	-0.008 (-0.021, 0.004)
	Age 25yr (mmol/l)	-0.006 (-0.020, 0.008)

Gestational age restricted to less than 42 weeks. All models adjusted for (and entered into the models as main effects and interactions with offspring age) offspring sex and maternal characteristics: age, parity, smoking status, alcohol intake, pre pregnancy BMI, HDP or preexisting hypertension, existing diabetes or GDM or glycosuria, ethnicity (white European compared to non-white European) and any treatments to help conception in this pregnancy (including IVF) (compared to none) .

Figure S1. Estimated mean difference (95% CI) between those born preterm versus full term (blue, main analysis) and additionally adjusted for birthweight (red, sensitivity analysis) Full terms restricted to less than 42 weeks. All models adjusted for (and entered into the models as main effects and interactions with offspring age) offspring sex and maternal characteristics: age, parity, smoking status, alcohol intake, pre pregnancy BMI, HDP or preexisting hypertension, existing diabetes or GDM or glycosuria, ethnicity (white European compared to non-white European) and any treatments to help conception in this pregnancy (including IVF) (compared to none). Estimates <0 mean lower values for preterm vs term, MD=mean difference.

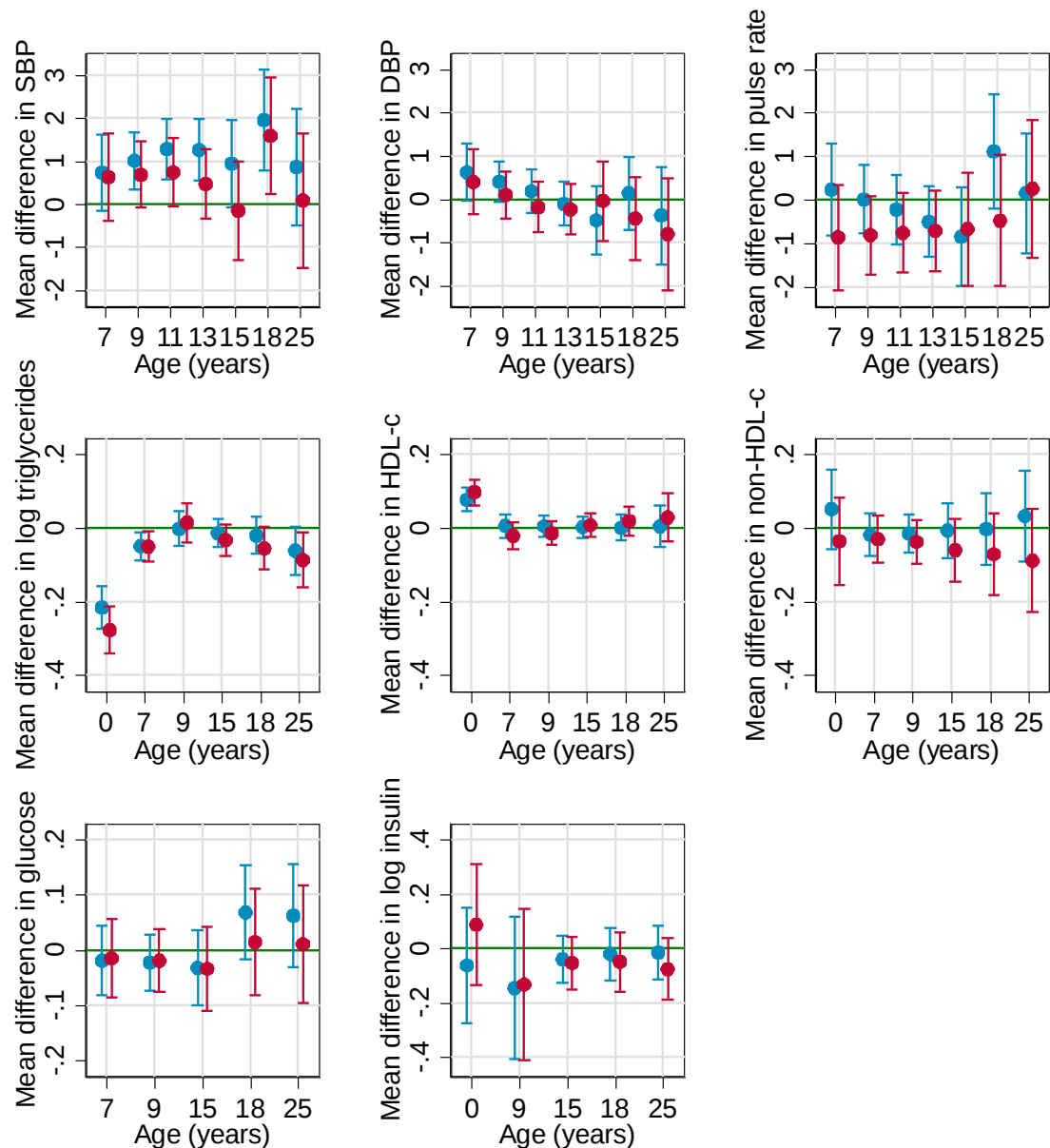


Figure S2. Estimated mean difference (95% CI) between those born preterm versus full term in females (blue) and males (red) Full terms restricted to less than 42 weeks. All models adjusted for (and entered into the models as main effects and interactions with offspring age) maternal characteristics: age, parity, smoking status, alcohol intake, pre pregnancy BMI, HDP or existing hypertension, existing diabetes or GDM or glycosuria, ethnicity (white European compared to non-white European) and any treatments to help conception in this pregnancy (including IVF) (compared to none). Preterm/full terms Ns for BMI, lean/fat mass, SBP/DBP/pulse rate, triglycerides/HDL/HDL, glucose and insulin were females: 372/5282, 261/3557, 305/4023, 299/4254, 229/3091, 160/2301; males 294/5209, 225/3790, 245/4136, 235/4275, 182/3220, 148/2647.

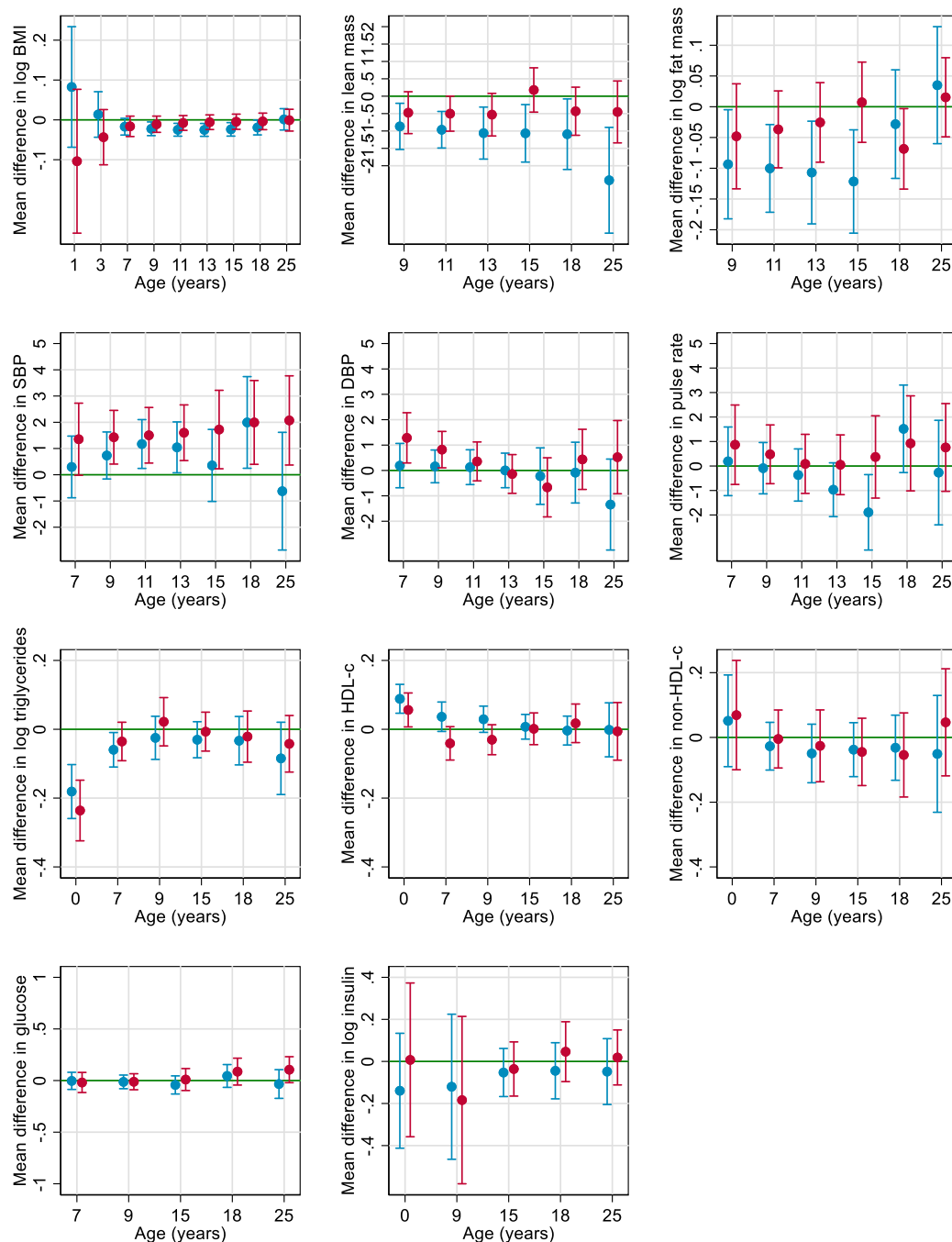


Figure S3. Estimated mean difference (95% CI) between those born preterm versus full term (blue, main analysis) and when only including preterm births who had a spontaneous labour (red, spontaneous labour) Full terms restricted to less than 42 weeks. Pre terms births were restricted to when the method of delivery was 'spontaneous'. Preterm/full terms Ns for BMI, lean/fat mass, SBP/DBP/pulse rate. triglycerides/HDL/HDL, glucose and insulin in the main analysis: 676/10534, 493/7380, 559/8195. 542/8566, 417/6339, 311/4973; spontaneous subgroup: 382/10534, 279/7380, 319/8195. 319/8566, 239/6338, 180/4973. All models adjusted for (and entered into the models as main effects and interactions with offspring age) offspring sex and maternal characteristics: age, parity, smoking status, alcohol intake, pre pregnancy BMI, ethnicity (white European compared to non-white European) and any treatments to help conception in this pregnancy (including IVF) (compared to none)

