

THE LANCET

Supplementary appendix

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Table 1. Characteristics of COHORTS participants included in the analytic sample or excluded owing, missing birth data or adult outcome data

	Have adult outcomes, lack complete anthropometry (n=2380 for all sites)				Analytic sample: have adult outcome and complete anthropometry (n=8296 for all sites)				Have birth weight, lack adult outcomes (n=9207 for all sites)		
	N	Mean	SD	p-value ¹	N	Mean	SD	p-value ²	N	Mean	SD
Brazil											
<i>Birth Measures</i>											
Maternal Education (years)	860	6.2	4.1		3583	6.6	4.2		1362	6.5	4.4
Maternal Height (cm)	860	156.6	6.0		3583	156.5	6.0		1362	156.3	6.1
Wealth Index	860	3.2	1.0		3583	3.3	1.2		1362	3.2	1.1
Birth Weight (g)	860	3216	537		3583	3231	518	p<0.0001	1362	3060	678
Gestational Age (weeks)	686	39.4	1.6		2886	39.4	1.8	p<0.0001	1024	39.0	2.4
<i>Adult Measures</i>											
Systolic BP (mmHg)	607	118.3	14.5		3580	117.6	15.1				
Glucose (log of mmol/L)	527	1.6	0.1		3084	1.6	0.1				
Height (cm)	602	167.2	9.4		3583	167.7	9.2				
BMI (kg/m ²)	601	23.6	4.2		3583	23.6	4.4				
Schooling (years)	592	9.0	3.3		3381	9.4	3.1				
Guatemala											
<i>Birth Measures</i>											
Maternal Education (years)	370	1.3	1.5		298	1.3	1.5		305	1.3	1.3
Maternal Height (cm)	370	148.8	5.0		298	148.6	5.0		305	148.8	5.4
Wealth Index	370	-0.2	0.8		298	-0.2	0.9		305	-0.1	0.7
Birth Weight (g)	370	3050	446		298	3055	483		305	2994	550
Gestational Age (weeks)	250	39.8	2.7		279	39.4	3.1		219	39.1	3.0
<i>Adult Measures</i>											
Systolic BP (mmHg)	332	110.7	11.9		285	112.8	11.5				
Glucose (log of mmol/L)	249	1.6	0.1		227	1.6	0.1				
Height (cm)	254	156.1	8.2		298	157.4	8.2				
BMI (kg/m ²)	254	25.2	4.1		298	25.4	4.2				
Schooling (years)	347	5.2	3.2		294	4.9	3.5				

Table 1, con't. Characteristics of COHORTS participants included in the analytic sample or excluded owing, missing birth data or adult outcome data

	Have adult outcomes, lack complete anthropometry				Analytic sample: have adult outcome and complete anthropometry				Have birth weight, lack adult outcomes		
India	N	Mean	SD	p-value¹	N	Mean	SD	p-value²	N	Mean	SD
<i>Birth Measures</i>											
Maternal Education (years)	100	5.9	4.0		1324	5.6	4.3	p=0.002	3920	5.1	4.6
Maternal Height (cm)	99	151.6	4.6		1326	151.8	4.5		903	152.3	5.7
Wealth Index	100	4.4	1.0		1324	4.5	0.9	p<0.0001	3920	4.0	1.2
Birth Weight (g)	100	2888	415		1326	2816	419		5383	2786	449.2
Gestational Age (weeks)	92	39.1	2.6		1214	38.9	2.5		na	na	na
<i>Adult Measures</i>											
Systolic BP (mmHg)	100	112.3	12.8		1313	113.6	12.6				
Glucose (log of mmol/L)	94	1.7	0.2		1299	1.7	0.2				
Height (cm)	98	163.9	10.0		1326	163.5	9.4				
BMI (kg/m ²)	98	25.1	5.2		1326	24.8	4.6				
Schooling (years)	100	13.3	3.5	p=0.048	1326	13.5	3.3				
Philippines	N	Mean	SD	p-value¹	N	Mean	SD	p-value²	N	Mean	SD
<i>Birth Measures</i>											
Maternal Education (years)	150	7.7	3.6		1887	7.0	3.3		992	7.4	3.4
Maternal Height (cm)	150	151.3	5.7		1887	150.6	4.9		992	150.6	5.1
Wealth Index	150	0.4	2.6	p=0.009	1887	0.0	2.0		991	0.0	2.2
Birth Weight (g)	150	3051	430		1887	3007	420	p=0.075	992	2946	468
Gestational Age (weeks)	149	38.8	2.1		1871	38.8	2.1		979	38.7	2.2
<i>Adult Measures</i>											
Systolic BP (mmHg)	119	104.3	12.6		1886	106.0	12.1				
Glucose (log of mmol/L)	97	1.5	0.1		1578	1.5	0.1				
Height (cm)	119	158.1	8.2		1887	157.4	8.2				
BMI (kg/m ²)	114	20.4	3.0		1887	20.7	3.1				
Schooling (years)	149	9.7	3.7		1887	10.0	2.9				

Table 1, con't. Characteristics of COHORTS participants included in the analytic sample or excluded owing, missing birth data or adult outcome data

South Africa	Have adult outcomes, lack complete anthropometry				Analytic sample: have adult outcome and complete anthropometry				Have birth weight, lack adult outcomes		
	N	Mean	SD	p-value ¹	N	Mean	SD	p-value ²	N	Mean	SD
<i>Birth Measures</i>											
Maternal Education (years)	900	9.8	2.7		1202	9.7	2.5		1165	9.3	3.3
Maternal Height (cm)	900	158.9	5.6		1202	158.6	5.7		1165	159.1	2.3
Wealth Index	900	3.9	1.5		1202	4.1	1.4	p<0.0001	1165	3.7	1.7
Birth Weight (g)	900	3041	513		1202	3071	507		1165	3093	518
Gestational Age (weeks)	865	38.2	1.9		1189	38.1	1.9		1114	38.2	1.9
<i>Adult Measures</i>											
Systolic BP (mmHg)	700	117.8	10.9		1169	117.5	10.6				
Glucose (log of mmol/L)	470	1.5	0.1		719	1.5	0.1				
Height (cm)	729	165.5	8.9		1202	165.0	8.9				
BMI (kg/m ²)	728	21.6	4.0		1202	21.9	4.3				
Schooling (years)	865	11.0	1.6		1169	11.1	1.4				

1. P values reported if <0.10, based on Bonferroni-adjusted comparison of analytic sample and sample with adult outcomes, but missing complete anthropometry.

2. P values reported if <0.10, based on Bonferroni-adjusted comparison of analytic sample and sample with birth weight, but missing adult outcomes.

Table 2. Association of birth weight (BW), conditional relative weight (CWh), and conditional height (CH) at age 2 y and mid-childhood (MC) with adult BMI (kg/m²). β -coefficients and 95% confidence intervals from linear regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex.

		BW	CWh-2y	CWh-MC	CH-2y	CH-MC	N	R ²
Brazil	M	0.53*** (0.35,0.70)	0.91*** (0.73,1.08)	1.44*** (1.27,1.61)	0.46*** (0.29,0.63)	0.31*** (0.14,0.48)	1882	0.20
	F	0.36** (0.14,0.57)	0.96*** (0.76,1.17)	1.53*** (1.32,1.74)	-0.06 (-0.27,0.14)	0.02 (-0.19,0.23)	1701	0.153
Guatemala	M	0.08 (-0.43,0.58)	0.50 (-0.04,1.04)	0.39 (-0.15,0.92)	0.28 (-0.24,0.79)	0.40 (-0.22,1.03)	157	0.049
	F	1.01* (0.22,1.81)	0.83* (0.04,1.62)	0.29 (-0.43,1.01)	0.46 (-0.29,1.22)	-0.14 (-0.90,0.62)	141	0.096
India	M	0.43** (0.15,0.72)	1.19*** (0.90,1.47)	0.88*** (0.60,1.17)	0.73*** (0.44,1.02)	0.17 (-0.10,0.44)	775	0.165
	F	1.09*** (0.66,1.51)	1.03*** (0.63,1.44)	0.71*** (0.31,1.10)	0.93*** (0.52,1.34)	0.16 (-0.23,0.55)	551	0.135
Philippines	M	0.29*** (0.13,0.46)	0.77*** (0.61,0.93)	1.34*** (1.18,1.50)	0.73*** (0.57,0.89)	0.36*** (0.20,0.52)	1004	0.319
	F	0.48*** (0.30,0.66)	0.58*** (0.40,0.75)	1.57*** (1.40,1.75)	0.16 (-0.01,0.33)	0.45*** (0.29,0.62)	883	0.316
South Africa	M	0.46** (0.18,0.75)	0.95*** (0.66,1.24)	1.07*** (0.80,1.35)	0.20 (-0.10,0.50)	0.06* (-0.21,0.34)	573	0.182
	F	0.71*** (0.40,1.03)	1.82*** (1.50,2.14)	1.26*** (0.95,1.56)	0.2 (-0.11,0.51)	-0.03 (-0.34,0.27)	630	0.243
All sites	M	0.43*** (0.32,0.54)	0.91*** (0.81,1.02)	1.23*** (1.12,1.33)	0.53*** (0.42,0.63)	0.25*** (0.15,0.36)	4391	0.31
Wald p¹		0.35	0.084	0.0001	0.019	0.43		
All sites	F	0.55*** (0.42,0.68)	1.02*** (0.89,1.15)	1.31*** (1.18,1.44)	0.19** (0.06,0.31)	0.12* (-0.01,0.24)	3906	0.259
Wald p¹		0.005	<0.0001	<0.0001	0.0001	0.063		
All sites, M+F		0.49*** (0.40,0.57)	0.96*** (0.88,1.04)	1.27*** (1.18,1.35)	0.36*** (0.28,0.45)	0.19*** (0.11,0.27)	8297	0.281
Wald p²		0.005	<0.0001	<0.0001	<0.0001	0.059		
Standard deviation of site-sex heterogeneity		0.10	0.30	0.34	0.22	0.12		

*p < 0.05, ** p < 0.01, *** p < 0.001. ¹p-value for Wald test of site heterogeneity within sex. ²p-value for Wald test of site-sex heterogeneity.

Table 3. Association of birth weight (BW), conditional relative weight (CWh), and conditional height (CH) at age 2 y and mid-childhood (MC) with adult overweight or obesity (BMI>25 kg/m²). Odds ratios and 95% confidence intervals from logistic regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex.

		BW	CWh-2y	CWh-MC	CH-2y	CH-MC	N
Brazil	M	1.30 ^{***} (1.16,1.45)	1.38 ^{***} (1.24,1.54)	1.83 ^{***} (1.64,2.05)	1.25 ^{***} (1.12,1.39)	1.20 ^{***} (1.08,1.33)	1882
	F	1.18 ^{**} (1.05,1.33)	1.52 ^{***} (1.35,1.70)	1.86 ^{***} (1.65,2.11)	0.98 (0.87,1.10)	1.08 (0.96,1.21)	1701
Guatemala	M	1.08 (0.77,1.52)	1.65 ^{**} (1.13,2.39)	1.02 (0.71,1.47)	1.22 (0.85,1.73)	1.49 (0.97,2.31)	157
	F	1.38 (0.94,2.01)	1.18 (0.81,1.72)	1.14 (0.81,1.61)	1.08 (0.75,1.54)	0.8 (0.56,1.15)	141
India	M	1.19 [*] (1.02,1.39)	1.66 ^{***} (1.42,1.96)	1.43 ^{***} (1.22,1.67)	1.29 ^{**} (1.10,1.52)	1.03 (0.89,1.20)	775
	F	1.52 ^{***} (1.24,1.86)	1.42 ^{***} (1.18,1.72)	1.27 ^{**} (1.06,1.53)	1.57 ^{***} (1.29,1.90)	1.09 (0.91,1.31)	551
Philippines	M	1.36 [*] (1.06,1.74)	1.88 ^{***} (1.48,2.40)	3.07 ^{***} (2.36,4.00)	2.09 ^{***} (1.62,2.69)	1.60 ^{***} (1.26,2.03)	1004
	F	1.65 ^{***} (1.24,2.21)	1.27 (0.97,1.66)	3.70 ^{***} (2.70,5.06)	1.33 [*] (1.02,1.75)	1.52 ^{**} (1.15,1.99)	883
South Africa	M	1.82 ^{***} (1.32, 2.50)	1.78 ^{***} (1.29,2.45)	2.32 ^{***} (1.66,3.25)	1.54 ^{**} (1.14,2.09)	1.17 (0.86,1.58)	573
	F	1.21 (0.99,1.48)	2.01 ^{**} (1.63,2.49)	1.73 ^{***} (1.42,2.12)	1.11 (0.92,1.35)	0.84 (0.69,1.02)	630
All sites	M	1.28 ^{***} (1.19,1.39)	1.53 ^{***} (1.41,1.66)	1.78 ^{***} (1.64,1.92)	1.34 ^{***} (1.24,1.45)	1.20 ^{***} (1.11,1.29)	4391
Wald p¹		0.16	0.085	<0.0001	0.005	0.032	
All sites	F	1.27 ^{***} (1.17,1.38)	1.51 ^{***} (1.39,1.63)	1.74 ^{***} (1.60,1.90)	1.13 ^{**} (1.04,1.22)	1.04 (0.96,1.13)	3906
Wald p¹		0.094	0.03	<0.0001	0.001	0.006	
All sites, M+F		1.28 ^{***} (1.21,1.35)	1.51 ^{***} (1.43,1.60)	1.76 ^{***} (1.66,1.86)	1.24 ^{***} (1.17,1.31)	1.12 ^{***} (1.06,1.18)	8297
Wald p²		0.10	0.026	<0.0001	<0.0001	0.0005	
Standard deviation of site-sex heterogeneity		0.00	0.13	0.60	0.16	0.11	

* p < 0.05, ** p < 0.01, *** p < 0.001. ¹p-value for Wald test of site heterogeneity within sex. ²p-value for Wald test of site-sex heterogeneity.

Table 4. Association of birth weight (BW), conditional relative weight (CWh), and conditional height (CH) at age 2 y and mid-childhood (MC) with adult fat mass (SD score). β -coefficients and 95% confidence intervals from linear regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex. No data available for Brazil females.

		BW	CWh-2y	CWh-MC	CH-2y	CH-MC	N	R ²
Brazil	M	0.19*** (0.15, 0.23)	0.21*** (0.17, 0.25)	0.32*** (0.28, 0.36)	0.31*** (0.26, 0.35)	0.16*** (0.12, 0.20)	1688	0.290
Guatemala	M	0.04 (-0.11, 0.20)	0.10 (-0.06, 0.27)	0.14 (-0.02, 0.30)	0.15 (-0.01, 0.30)	0.23* (0.04, 0.42)	153	0.090
	F	0.26** (0.10, 0.43)	0.16* (0.00, 0.33)	0.05 (-0.10, 0.20)	0.25** (0.09, 0.41)	0.02 (-0.14, 0.18)	140	0.164
India	M	0.13*** (0.07, 0.19)	0.23*** (0.17, 0.29)	0.19*** (0.12, 0.25)	0.28*** (0.21, 0.34)	0.09** (0.03, 0.15)	773	0.245
	F	0.26*** (0.18, 0.35)	0.16*** (0.08, 0.24)	0.14*** (0.06, 0.22)	0.31*** (0.23, 0.39)	0.09* (0.01, 0.17)	546	0.212
Philippines	M	0.09** (0.03, 0.14)	0.17*** (0.11, 0.23)	0.30*** (0.25, 0.36)	0.35*** (0.29, 0.40)	0.22*** (0.17, 0.28)	922	0.280
	F	0.18*** (0.12, 0.24)	0.18*** (0.13, 0.24)	0.43*** (0.37, 0.49)	0.24*** (0.19, 0.30)	0.23*** (0.18, 0.29)	761	0.355
South Africa	M	0.22*** (0.14, 0.30)	0.22*** (0.15, 0.30)	0.25*** (0.18, 0.33)	0.20*** (0.12, 0.27)	0.08* (0.01, 0.16)	539	0.197
	F	0.14*** (0.07, 0.21)	0.39*** (0.31, 0.46)	0.22*** (0.15, 0.29)	0.12*** (0.05, 0.19)	0.10** (0.03, 0.17)	602	0.224
All sites	M	0.16*** (0.13, 0.18)	0.20*** (0.17, 0.23)	0.27*** (0.25, 0.30)	0.29*** (0.26, 0.32)	0.15*** (0.12, 0.18)	4075	0.248
Wald p¹		0.014	0.42	0.004	0.015	0.019		
All sites	F	0.19*** (0.15, 0.23)	0.24*** (0.20, 0.28)	0.26*** (0.22, 0.30)	0.23*** (0.19, 0.27)	0.14*** (0.10, 0.18)	2049	0.226
Wald p¹		0.13	0.001	<0.001	0.021	0.007		
All sites, M+F		0.17*** (0.15, 0.19)	0.21*** (0.19, 0.24)	0.27*** (0.25, 0.30)	0.27*** (0.25, 0.29)	0.15*** (0.12, 0.17)	6124	0.239
Wald p²		0.008	0.005	<0.001	0.001	0.002		
Standard deviation of site-sex heterogeneity		0.04	0.05	0.09	0.05	0.05		

*p < 0.05, ** p < 0.01, *** p < 0.001. ¹p-value for Wald test of site heterogeneity within sex. ²p-value for Wald test of site-sex heterogeneity.

Table 5. Association of birth weight (BW), conditional relative weight (CWh), and conditional height (CH) at age 2 y and mid-childhood (MC) with adult fat-free mass (SD score). β -coefficients and 95% confidence intervals from linear regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex. No data available for Brazil females.

		BW	CWh-2y	CWh-MC	CH-2y	CH-MC	N	R ²
Brazil	M	0.28*** (0.24, 0.32)	0.20*** (0.16, 0.24)	0.26*** (0.22, 0.30)	0.36*** (0.32, 0.40)	0.20*** (0.16, 0.24)	1688	0.337
Guatemala	M	0.34*** (0.21, 0.47)	0.09 (-0.04, 0.23)	0.12 (-0.02, 0.26)	0.42*** (0.29, 0.55)	0.27*** (0.12, 0.43)	153	0.354
	F	0.35*** (0.20, 0.50)	0.16* (0.02, 0.31)	0.04 (-0.09, 0.17)	0.43*** (0.29, 0.57)	0.07 (-0.07, 0.21)	140	0.343
India	M	0.23*** (0.17, 0.29)	0.26*** (0.20, 0.32)	0.17*** (0.11, 0.23)	0.41*** (0.35, 0.47)	0.16*** (0.10, 0.22)	773	0.306
	F	0.32*** (0.25, 0.40)	0.23*** (0.16 to 0.30)	0.11** (0.04, 0.18)	0.47*** (0.39, 0.54)	0.13*** (0.06, 0.20)	546	0.352
Philippines	M	0.23*** (0.18, 0.28)	0.24*** (0.20, 0.29)	0.32*** (0.27, 0.37)	0.48*** (0.44, 0.53)	0.31*** (0.27, 0.36)	922	0.513
	F	0.30*** (0.24, 0.35)	0.19*** (0.14, 0.24)	0.39*** (0.33, 0.44)	0.32*** (0.27, 0.38)	0.32*** (0.27, 0.37)	761	0.472
South Africa	M	0.29*** (0.22, 0.36)	0.22*** (0.15, 0.29)	0.16*** (0.09, 0.22)	0.37*** (0.30, 0.44)	0.26*** (0.20, 0.33)	539	0.365
	F	0.26*** (0.19, 0.32)	0.31*** (0.24, 0.37)	0.20*** (0.14, 0.26)	0.36*** (0.30, 0.43)	0.21*** (0.15, 0.27)	602	0.366
All sites	M	0.26*** (0.24, 0.29)	0.22*** (0.20, 0.25)	0.24*** (0.21, 0.26)	0.40*** (0.38, 0.43)	0.23*** (0.20, 0.25)	4075	0.364
Wald p¹		0.24	0.16	<0.001	0.076	0.004		
All sites	F	0.29*** (0.26, 0.33)	0.23*** (0.20, 0.27)	0.23*** (0.19, 0.26)	0.38*** (0.35, 0.42)	0.22*** (0.19, 0.25)	2049	0.370
Wald p¹		0.5	0.15	<0.001	0.16	<0.001		
All sites, M+F		0.27*** (0.25, 0.29)	0.22*** (0.20, 0.25)	0.24*** (0.21, 0.26)	0.40*** (0.37, 0.42)	0.22*** (0.20, 0.24)	6124	0.366
Wald p²		0.26	0.14	<0.001	0.086	<0.001		
Standard deviation of site-sex heterogeneity		0.00	0.02	0.09	0.04	0.06		

*p < 0.05, ** p < 0.01, *** p < 0.001. ¹p-value for Wald test of site heterogeneity within sex. ²p-value for Wald test of site-sex heterogeneity

Table 6. Association of birth weight (BW), conditional relative weight (CWh), and conditional height (CH) at age 2 y and mid-childhood (MC) with percentage body fat (SD score). β -coefficients and 95% confidence intervals from linear regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex. No data available for Brazil females.

		BW	CWh-2y	CWh-MC	CH-2y	CH-MC	N	R ²
Brazil	M	0.11*** (0.07, 0.16)	0.18*** (0.14, 0.23)	0.30*** (0.26, 0.35)	0.23*** (0.18, 0.27)	0.11*** (0.07, 0.16)	1688	0.193
Guatemala	M	-0.03 (-0.19, 0.13)	0.08 (-0.08, 0.25)	0.13 (-0.04, 0.29)	0.07 (-0.09, 0.23)	0.20* (0.00, 0.39)	153	0.060
	F	0.22** (0.05, 0.39)	0.15 (-0.02, 0.31)	0.05 (-0.10, 0.21)	0.19* (0.03, 0.35)	-0.01 (-0.17, 0.15)	140	0.117
India	M	0.06 (-0.01, 0.12)	0.17*** (0.11, 0.24)	0.16*** (0.10, 0.23)	0.17*** (0.10, 0.24)	0.03 (-0.03, 0.10)	773	0.192
	F	0.19*** (0.10, 0.27)	0.10* (0.01, 0.18)	0.12** (0.04, 0.21)	0.18*** (0.10, 0.27)	0.06 (-0.02, 0.14)	546	0.107
Philippines	M	0.02 (-0.04, 0.09)	0.12*** (0.06, 0.18)	0.25*** (0.19, 0.31)	0.25*** (0.19, 0.31)	0.16*** (0.10, 0.22)	922	0.156
	F	0.07* (0.00, 0.14)	0.12*** (0.05, 0.19)	0.34*** (0.28, 0.41)	0.13*** (0.06, 0.20)	0.12*** (0.05, 0.18)	761	0.162
South Africa	M	0.14*** (0.06, 0.22)	0.17*** (0.09, 0.25)	0.22*** (0.14, 0.29)	0.08 (-0.0, 0.17)	-0.00 (-0.08, 0.08)	539	0.097
	F	0.05 (-0.02, 0.13)	0.32*** (0.24, 0.40)	0.18*** (0.11, 0.25)	-0.02 (-0.10, 0.05)	0.02 (-0.06, 0.09)	602	0.128
All sites	M	0.08*** (0.05, 0.11)	0.16*** (0.13, 0.19)	0.24*** (0.22, 0.27)	0.20*** (0.17, 0.23)	0.09*** (0.06, 0.12)	4075	0.154
Wald p¹		0.037	0.46	0.006	0.006	0.01		
All sites	F	0.10*** (0.06, 0.14)	0.17*** (0.13, 0.22)	0.21*** (0.17, 0.26)	0.10*** (0.06, 0.15)	0.06*** (0.02, 0.10)	2049	0.104
Wald p¹		0.042	0.002	<0.001	0.004	0.23		
All sites, M+F		0.09*** (0.06, 0.11)	0.16*** (0.14, 0.19)	0.23*** (0.21, 0.26)	0.17*** (0.14, 0.19)	0.08*** (0.06, 0.11)	6124	0.135
Wald p²		0.014	0.014	<0.001	<0.001	0.016		
Standard deviation of site-sex heterogeneity		0.04	0.05	0.07	0.06	0.04		

*p < 0.05, ** p < 0.01, *** p < 0.001. ¹p-value for Wald test of site heterogeneity within sex. ²p-value for Wald test of site-sex heterogeneity.

Table 7. Association of birth weight (BW), conditional relative weight (CWh), and conditional height (CH) at age 2 y and mid-childhood (MC) with adult waist circumference (cm). β -coefficients and 95% confidence intervals from linear regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex. No data available for South Africa.

		BW	CWh-2y	CWh-MC	CH-2y	CH-MC	N	R ²
Brazil	M	1.63*** (1.20, 2.07)	1.79*** (1.36, 2.21)	2.90*** (2.48, 3.32)	2.23*** (1.82, 2.65)	1.41*** (0.99, 1.83)	1880	0.197
	F	0.82** (0.33, 1.32)	1.63*** (1.16, 2.10)	2.92*** (2.44, 3.40)	0.62* (0.14, 1.10)	0.49* (0.00, 0.97)	1700	0.110
Guatemala	M	0.37 (-0.93, 1.67)	0.83 (-0.54, 2.21)	0.99 (-0.36, 2.34)	1.28 (-0.03, 2.59)	1.82* (0.23, 3.40)	153	0.085
	F	2.25* (0.32, 4.19)	1.09 (-0.82, 3.00)	0.70 (-1.05, 2.44)	2.10* (0.27, 3.94)	0.25 (-1.58, 2.09)	140	0.102
India	M	1.50*** (0.71, 2.28)	2.92*** (2.13, 3.71)	1.97*** (1.19, 2.75)	3.16*** (2.35, 3.96)	1.07** (0.33, 1.82)	775	0.199
	F	2.66*** (1.61, 3.72)	2.05*** (1.05, 3.05)	0.99* (0.01, 1.97)	2.80*** (1.79, 3.80)	1.79*** (0.82, 2.75)	551	0.137
Philippines	M	0.72*** (0.32, 1.11)	1.30*** (0.91, 1.69)	2.65*** (2.26, 3.04)	2.69*** (2.29, 3.09)	1.65*** (1.26, 2.04)	1002	0.323
	F	1.20*** (0.78, 1.62)	0.99*** (0.57, 1.40)	3.24*** (2.82, 3.65)	1.13*** (0.72, 1.54)	1.55*** (1.15, 1.96)	881	0.301
All sites	M	1.30*** (1.01, 1.59)	1.85*** (1.56, 2.14)	2.57*** (2.29, 2.86)	2.50*** (2.21, 2.79)	1.40*** (1.11, 1.68)	3810	0.433
Wald p¹		0.052	0.002	0.048	0.058	0.57		
All sites	F	1.26*** (0.92, 1.61)	1.53*** (1.20, 1.86)	2.55*** (2.22, 2.89)	1.17*** (0.83, 1.50)	0.95*** (0.62, 1.28)	3272	0.323
Wald p¹		0.011	0.12	<0.001	0.001	0.011		
All sites, M+F		1.28*** (1.05, 1.50)	1.69*** (1.48, 1.91)	2.57*** (2.35, 2.78)	1.87*** (1.66, 2.09)	1.19*** (0.98, 1.41)	7082	0.421
Wald p²		0.008	0.002	<0.001	<0.001	0.016		
Standard deviation of site-sex heterogeneity		0.43	0.41	0.74	0.54	0.30		

p < 0.05, ** p < 0.01, *** p < 0.001. ¹p-value for Wald test of site heterogeneity within sex. ²p-value for Wald test of site-sex heterogeneity.

Table 8. Association of birth weight (BW), conditional relative weight (CWh), and conditional height (CH) at age 2 y, mid-childhood (MC), and adulthood, with adult systolic blood pressure (mmHg). β -coefficients and 95% confidence intervals from linear regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex.

		BW	CWh-2y	CWh-MC	CWh-Adult	CH-2y	CH-MC	CH-Adult	N	R ²
Brazil	M	-0.42 (-1.07,0.23)	0.40 (-0.24,1.03)	1.98*** (1.36,2.60)	4.50*** (3.87,5.12)	1.05** (0.42,1.67)	0.97** (0.35,1.60)	0.01 (-0.60,0.62)	1879	0.125
	F	-0.4 (-1.02,0.22)	0.60* (0.01,1.19)	0.87** (0.26,1.47)	3.53*** (2.94,4.13)	0.93** (0.34,1.53)	0.50 (-0.10,1.10)	0.15 (-0.44,0.74)	1701	0.088
Guatemala	M	0.95 (-0.60,2.49)	-0.76 (-2.40,0.88)	0.16 (-1.52,1.85)	3.12*** (1.55,4.70)	1.09 (-0.47,2.64)	-1.06 (-3.00,0.87)	0.88 (-0.81,2.56)	147	0.139
	F	1.12 (-0.48,2.72)	0.67 (-0.92,2.26)	1.56* (0.10,3.03)	5.27*** (3.72,6.82)	3.89*** (2.37,5.41)	0.41 (-1.11,1.93)	-1.71* (-3.30,-0.13)	138	0.393
India	M	-0.13 (-0.91,0.65)	0.72 (-0.07,1.50)	0.71 (-0.07,1.50)	4.03*** (3.26,4.80)	1.62*** (0.82,2.42)	0.3 (-0.44,1.05)	0.71 (-0.05,1.46)	769	0.149
	F	0.00 (-0.99,0.99)	0.06 (-0.88,1.00)	0.84 (-0.08,1.76)	3.02*** (2.09,3.95)	0.00 (-0.95,0.95)	-0.27 (-1.19,0.64)	-0.14 (-1.05,0.77)	544	0.078
Philippines	M	-0.16 (-0.81,0.48)	0.35 (-0.29,0.98)	1.05** (0.41,1.68)	3.02*** (2.39,3.64)	1.81*** (1.15,2.46)	1.24*** (0.61,1.88)	-0.79* (-1.42,-0.16)	1004	0.142
	F	0.06 (-0.59,0.71)	0.29 (-0.35,0.94)	1.10*** (0.45,1.74)	2.89*** (2.26,3.52)	0.4 (-0.23,1.04)	0.96** (0.34,1.58)	-0.03 (-0.66,0.60)	882	0.107
South Africa	M	0.05 (-0.79,0.90)	1.25** (0.39,2.11)	0.99* (0.18,1.80)	3.40*** (2.54,4.26)	0.74 (-0.13,1.61)	0.64 (-0.17,1.45)	0.43 (-0.44,1.29)	554	0.129
	F	0.08 (-0.69,0.84)	0.84* (0.08,1.60)	0.23 (-0.49,0.95)	2.66*** (1.92,3.40)	0.99** (0.24,1.73)	-0.05 (-0.78,0.68)	0.88* (0.14,1.62)	615	0.113
All sites	M	-0.2 (-0.56,0.16)	0.51** (0.15,0.87)	1.38*** (1.02,1.74)	3.86*** (3.50,4.21)	1.29*** (0.92,1.65)	0.82*** (0.46,1.17)	0.02 (-0.33,0.38)	4353	0.224
Wald p¹		0.68	0.38	0.045	0.016	0.38	0.22	0.072		
All sites	F	-0.09 (-0.45,0.28)	0.49** (0.13,0.84)	0.83*** (0.48,1.18)	3.24*** (2.89,3.59)	0.81*** (0.46,1.16)	0.41* (0.06,0.76)	0.13 (-0.22,0.47)	3880	0.249
Wald p¹		0.55	0.77	0.55	0.077	0.005	0.25	0.15		
All sites, M+F		-0.15 (-0.41,0.11)	0.50*** (0.25,0.75)	1.12*** (0.87,1.37)	3.56*** (3.32,3.81)	1.06*** (0.80,1.31)	0.62*** (0.37,0.87)	0.07 (-0.18,0.32)	8233	0.348
Wald p²		0.80	0.72	0.042	0.001	0.01	0.13	0.074		
Standard deviation of site-sex heterogeneity		0.00	0.00	0.25	0.44	0.51	0.22	0.40		

* p < 0.05, ** p < 0.01, *** p < 0.001. ¹p-value for Wald test of site heterogeneity within sex. ²p-value for Wald test of site-sex heterogeneity.

Table 9. Association of birth weight (BW), conditional relative weight (CWh), and conditional height (CH) at age 2 y, mid-childhood (MC), and adulthood, with adult diastolic blood pressure (mmHg). β -coefficients and 95% confidence intervals from linear regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex.

		BW	CWh-2y	CWh-MC	CWh-Adult	CH-2y	CH-MC	CH-Adult	N	R ²
Brazil	M	-0.61* (-1.14,-0.08)	0.19 (-0.33,0.72)	1.30*** (0.79,1.81)	3.30*** (2.79,3.81)	0.31 (-0.20,0.83)	0.40 (-0.11,0.91)	-0.31 (-0.82,0.19)	1879	0.098
	F	-0.1 (-0.62,0.42)	0.31 (-0.19,0.81)	0.75** (0.24,1.26)	2.19*** (1.69,2.69)	0.69** (0.19,1.19)	0.52* (0.02,1.03)	-0.16 (-0.65,0.34)	1701	0.054
Guatemala	M	1.24 (-0.20,2.67)	0.29 (-1.23,1.82)	-0.56 (-2.13,1.00)	2.52*** (1.05,3.98)	0.21 (-1.24,1.65)	-1.34 (-3.14,0.46)	0.67 (-0.90,2.24)	147	0.122
	F	-0.06 (-1.48,1.36)	-0.42 (-1.83,0.99)	1.22 (-0.08,2.52)	2.99*** (1.61,4.37)	2.40*** (1.05,3.75)	-0.16 (-1.51,1.18)	-1.21 (-2.61,0.20)	138	0.234
India	M	-0.15 (-0.85,0.55)	0.65 (-0.05,1.35)	0.53 (-0.17,1.22)	3.87*** (3.19,4.56)	1.63*** (0.91,2.35)	0.23 (-0.43,0.90)	0.14 (-0.54,0.82)	769	0.169
	F	-0.26 (-1.04,0.52)	0.6 (-0.14,1.33)	0.54 (-0.18,1.27)	3.77*** (3.04,4.50)	0.35 (-0.40,1.09)	-0.27 (-0.99,0.45)	-0.76* (-1.47,-0.04)	544	0.178
Philippines	M	-0.1 (-0.68,0.48)	0.63* (0.05,1.20)	0.91* (0.33,1.48)	1.97*** (1.40,2.53)	1.01** (0.42,1.60)	0.57* (0.01,1.14)	-0.95** (-1.52,-0.38)	1004	0.11
	F	0.17 (-0.40,0.73)	0.33 (-0.23,0.89)	0.51 (-0.05,1.07)	2.34*** (1.79,2.88)	0.2 (-0.35,0.75)	0.47 (-0.07,1.01)	0.29 (-0.25,0.84)	882	0.094
South Africa	M	-0.05 (-0.78,0.68)	0.43 (-0.31,1.17)	0.34 (-0.36,1.04)	1.15** (0.41,1.89)	-0.28 (-1.03,0.48)	0.67 (-0.03,1.37)	0.29 (-0.46,1.04)	554	0.03
	F	0.17 (-0.51,0.85)	0.38 (-0.30,1.06)	-0.16 (-0.80,0.49)	1.41*** (0.75,2.07)	0.79* (0.12,1.46)	-0.11 (-0.77,0.54)	0.39 (-0.27,1.05)	615	0.056
All sites	M	-0.27 (-0.59,0.04)	0.41** (0.10,0.72)	0.93*** (0.63,1.24)	2.77*** (2.46,3.07)	0.61*** (0.30,0.92)	0.40* (0.09,0.70)	-0.28 (-0.59,0.02)	4353	0.12
Wald p¹		0.20	0.80	0.079	<0.0001	0.007	0.43	0.073		
All sites	F	0.01 (-0.29,0.32)	0.34* (0.04,0.63)	0.54*** (0.24,0.83)	2.34*** (2.04,2.63)	0.62*** (0.32,0.92)	0.28 (-0.02,0.57)	-0.1 (-0.39,0.20)	3880	0.101
Wald p¹		0.91	0.87	0.26	0.0007	0.12	0.32	0.10		
All sites, M+F		-0.14 (-0.36,0.08)	0.37** (0.16,0.59)	0.75*** (0.53,0.96)	2.57*** (2.35,2.78)	0.62*** (0.40,0.84)	0.34** (0.13,0.55)	-0.2 (-0.41,0.02)	8233	0.149
Wald p²		0.48	0.96	0.058	<0.0001	0.009	0.45	0.047		
Standard deviation of site-sex heterogeneity		0.00	0.00	0.21	0.82	0.46	0.00	0.34		

* p < 0.05, ** p < 0.01, *** p < 0.001. ¹p-value for Wald test of site heterogeneity within sex. ²p-value for Wald test of site-sex heterogeneity.

Table 10. Association of birth weight (BW), conditional relative weight (CWh), and conditional height (CH) at age 2 y, mid-childhood (MC), and adulthood, with adult elevated blood pressure. Odds ratios and 95% confidence intervals from logistic regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex.

		BW	CWh-2y	CWh-MC	CWh-Adult	CH-2y	CH-MC	CH-Adult	N
Brazil	M	0.93 (0.84,1.03)	1.09 (0.98,1.20)	1.25*** (1.13,1.38)	1.67*** (1.51,1.85)	1.07 (0.97,1.18)	1.1 (1.00,1.22)	1 (0.90,1.10)	1879
	F	0.91 (0.78,1.06)	1.1 (0.95,1.27)	1.16* (1.01,1.34)	1.61*** (1.40,1.86)	1.02 (0.88,1.17)	1.19* (1.03,1.37)	0.94 (0.82,1.09)	1701
Guatemala	M	0.99 (0.63,1.55)	0.77 (0.47,1.27)	1.13 (0.69,1.86)	1.71* (1.09,2.67)	1.37 (0.86,2.19)	0.86 (0.50,1.48)	1.26 (0.77,2.06)	147
	F	0.74 (0.35,1.59)	0.57 (0.26,1.24)	1.66 (0.79,3.50)	2.50* (1.17,5.34)	2.34* (1.07,5.13)	0.64 (0.30,1.38)	0.89 (0.42,1.88)	138
India	M	0.95 (0.80,1.14)	1.05 (0.88,1.25)	1.19 (0.99,1.41)	1.96*** (1.63,2.37)	1.35** (1.12,1.62)	1.07 (0.91,1.27)	1.04 (0.87,1.23)	769
	F	0.93 (0.71,1.24)	1.04 (0.80,1.36)	1.13 (0.86,1.49)	1.80*** (1.36,2.38)	1.14 (0.86,1.50)	0.86 (0.66,1.11)	0.98 (0.75,1.27)	544
Philippines	M	0.9 (0.76,1.08)	1.06 (0.89,1.25)	1.23* (1.04,1.46)	1.60*** (1.35,1.89)	1.36*** (1.14,1.62)	1.01 (0.86,1.20)	0.81* (0.68,0.96)	1004
	F	0.78 (0.49,1.26)	1.45 (0.93,2.27)	1.56* (1.01,2.43)	2.31*** (1.46,3.65)	0.96 (0.59,1.56)	0.9 (0.58,1.42)	1.14 (0.72,1.83)	882
South Africa	M	1.02 (0.82,1.26)	1.13 (0.92,1.40)	1.31** (1.07,1.60)	1.91*** (1.52,2.40)	1.08 (0.87,1.35)	1.17 (0.95,1.44)	1.19 (0.96,1.48)	554
	F	0.94 (0.71,1.23)	1.02 (0.77,1.35)	1.14 (0.88,1.49)	1.69*** (1.28,2.22)	1.12 (0.85,1.49)	0.96 (0.73,1.27)	1.05 (0.80,1.37)	615
All sites	M	0.94 (0.87,1.01)	1.07 (1.00,1.15)	1.25*** (1.16,1.34)	1.72*** (1.60,1.85)	1.17*** (1.08,1.25)	1.08* (1.01,1.16)	0.99 (0.92,1.06)	4353
Wald p¹		0.93	0.72	0.95	0.43	0.051	0.75	0.053	
All sites	F	0.91 (0.81,1.02)	1.07 (0.96,1.20)	1.18** (1.06,1.32)	1.70*** (1.52,1.90)	1.07 (0.96,1.20)	1.05 (0.94,1.17)	0.98 (0.87,1.09)	3880
Wald p¹		0.95	0.34	0.64	0.50	0.31	0.11	0.92	
All sites, M+F		0.93* (0.88,0.99)	1.07* (1.01,1.13)	1.22*** (1.15,1.30)	1.71*** (1.61,1.82)	1.12*** (1.06,1.19)	1.07* (1.01,1.13)	0.99 (0.93,1.05)	8233
Wald p²		0.99	0.68	0.93	0.61	0.07	0.39	0.32	
Standard deviation of site-sex heterogeneity		0.00	0.00	0.00	0.00	0.06	0.00	0.05	

* p < 0.05, ** p < 0.01, *** p < 0.001. ¹p-value for Wald test of site heterogeneity within sex. ²p-value for Wald test of site-sex heterogeneity.

Table 11. Association of birth weight (BW), conditional relative weight (CWh), and conditional height (CH) at age 2 yr and mid-childhood (MC) with adult log glucose (SD units). β -coefficients and 95% confidence intervals from linear regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex.

		BW	CWh-2y	CWh-MC	CWh-Adult	CH-2y	CH-MC	CH-Adult	N	R ²
Brazil	M	-0.02 (-0.07, 0.03)	0.00 (-0.05, 0.05)	0.00 (-0.05, 0.05)	0.14*** (0.09, 0.19)	-0.02 (-0.07, 0.03)	0.01 (-0.04, 0.06)	0.01 (-0.04, 0.06)	1586	0.020
	F	-0.05* (-0.11, -0.00)	-0.00 (-0.05, 0.05)	0.08** (0.03, 0.13)	0.13*** (0.08, 0.18)	-0.04 (-0.09, 0.02)	-0.05 (-0.10, 0.00)	0.01 (-0.04, 0.06)	1498	0.030
Guatemala	M	-0.25** (-0.44, -0.07)	-0.00 (-0.21, 0.20)	-0.15 (-0.35, 0.05)	-0.05 (-0.25, 0.14)	-0.24* (-0.43, -0.05)	-0.04 (-0.27, 0.20)	-0.06 (-0.26, 0.13)	106	0.143
	F	0.03 (-0.14, 0.21)	-0.07 (-0.25, 0.12)	0.01 (-0.17, 0.18)	0.33*** (0.15, 0.50)	0.01 (-0.16, 0.18)	0.07 (-0.10, 0.24)	0.01 (-0.17, 0.20)	121	0.127
India	M	-0.04 (-0.12, 0.03)	0.05 (-0.03, 0.12)	-0.01 (-0.08, 0.06)	0.07 (-0.01, 0.14)	0.10** (0.03, 0.18)	-0.02 (-0.09, 0.05)	0.03 (-0.05, 0.10)	761	0.037
	F	-0.05 (-0.14, 0.04)	-0.07 (-0.15, 0.02)	0.00 (-0.08, 0.09)	0.12** (0.04, 0.21)	0.08 (-0.01, 0.16)	0.03 (-0.05, 0.12)	0.06 (-0.02, 0.15)	538	0.038
Philippines	M	0.01 (-0.06, 0.08)	-0.01 (-0.08, 0.06)	-0.01 (-0.08, 0.06)	0.04 (-0.02, 0.11)	0.06 (-0.01, 0.13)	0.04 (-0.03, 0.11)	0.04 (-0.02, 0.11)	869	0.023
	F	-0.07 (-0.15, 0.01)	0.03 (-0.04, 0.11)	0.08 (0.00, 0.15)	0.08* (0.01, 0.16)	-0.04 (-0.11, 0.04)	-0.02 (-0.10, 0.05)	-0.02 (-0.09, 0.06)	709	0.023
South Africa	M	0.02 (-0.08, 0.13)	0.02 (-0.18, 0.13)	0.04 (-0.06, 0.14)	0.10 (-0.02, 0.22)	0.04 (-0.07, 0.16)	0.07 (-0.04, 0.17)	0.00 (-0.11, 0.11)	354	0.017
	F	0.01 (-0.10, 0.11)	-0.03 (-0.14, 0.08)	-0.00 (-0.10, 0.10)	0.08 (-0.02, 0.18)	0.13* (0.03, 0.24)	0.05 (-0.05, 0.16)	0.10 (-0.01, 0.20)	365	0.049
All sites	M	-0.02 (-0.05, 0.01)	0.01 (-0.02, 0.04)	-0.00 (-0.03, 0.03)	0.09*** (0.06, 0.13)	0.02 (-0.01, 0.06)	0.01 (-0.02, 0.05)	0.02 (-0.01, 0.05)	3676	0.017
Wald p¹		0.12	0.73	0.64	0.066	0.005	0.52	0.84		
All sites	F	-0.05* (-0.08, -0.01)	-0.01 (-0.04, 0.03)	0.05** (0.02, 0.09)	0.12*** (0.08, 0.15)	0.00 (-0.03, 0.04)	-0.01 (-0.05, 0.02)	0.02 (-0.01, 0.06)	3231	0.024
Wald p¹		0.75	0.46	0.32	0.16	0.018	0.29	0.41		
All sites, M+F		-0.03** (-0.06, -0.01)	0.00 (-0.02, 0.03)	0.02 (0.00, 0.05)	0.11*** (0.08, 0.13)	0.01 (-0.01, 0.04)	0.00 (-0.02, 0.02)	0.02 (-0.00, 0.04)	6907	0.018
Wald p²		0.31	0.72	0.21	0.056	0.001	0.38	0.80		
Standard deviation of site-sex heterogeneity		0.00	0.00	0.00	0.02	0.06	0.00	0.00		

* p < 0.05, ** p < 0.01, *** p < 0.001. ¹ p-value for Wald test of site heterogeneity within sex. ² p-value for Wald test of site-sex heterogeneity.

Table 12. Association of birth weight (BW), ondional relative weight (CWh), and conditional height (CH) at age 2 y, mid-childhood (MC), and adulthood, with dysglycaemia. Odds ratios and 95% confidence intervals from logistic regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex.

		BW	CWh-2y	CWh-MC	CWh-Adult	CH-2y	CH-MC	CH-Adult	N
Brazil	M	0.89 (0.74, 1.07)	0.88 (0.74, 1.05)	1.08 (0.92, 1.28)	1.38** (1.17, 1.64)	0.95 (0.80, 1.14)	0.92 (0.77, 1.10)	1.08 (0.91, 1.28)	1587
	F	0.82 (0.66, 1.02)	0.93 (0.76, 1.14)	1.08 (0.87, 1.33)	1.28* (1.05, 1.57)	0.98 (0.79, 1.21)	0.86 (0.70, 1.06)	0.95 (0.77, 1.18)	1502
Guatemala	M	0.33 (0.10, 1.15)	0.61 (0.13, 2.84)	0.42 (0.09, 1.94)	1.26 (0.37, 4.29)	0.36 (0.09, 1.41)	0.49 (0.11, 2.23)	1.04 (0.30, 3.58)	106
	F	1.57 (0.41, 5.96)	0.73 (0.24, 2.20)	0.94 (0.30, 2.96)	2.27 (0.63, 8.13)	0.87 (0.33, 2.28)	1.43 (0.49, 4.15)	1.04 (0.32, 3.38)	121
India	M	0.97 (0.81, 1.17)	1.09 (0.91, 1.32)	1.02 (0.85, 1.22)	1.17 (0.97, 1.40)	1.21* (1.00, 1.46)	0.85 (0.72, 1.02)	1.11 (0.93, 1.33)	762
	F	0.82 (0.63, 1.08)	0.74* (0.57, 0.96)	1.04 (0.81, 1.34)	1.48** (1.15, 1.90)	0.93 (0.72, 1.21)	1.33* (1.03, 1.72)	0.96 (0.74, 1.25)	539
Philippines	M	0.80 (0.39, 1.66)	1.89 (0.92, 3.88)	1.23 (0.66, 2.29)	1.95 (0.97, 3.91)	0.95 (0.47, 1.91)	1.80 (0.92, 3.52)	0.85 (0.42, 1.73)	869
	F	0.88 (0.39, 2.00)	0.84 (0.36, 1.99)	1.66 (0.84, 3.30)	1.27 (0.63, 2.54)	0.57 (0.25, 1.30)	0.90 (0.46, 1.76)	0.42 (0.19, 0.94)	709
All sites	M	0.91 (0.80, 1.03)	0.99 (0.88, 1.12)	1.06 (0.94, 1.19)	1.30*** (1.15, 1.46)	1.05 (0.92, 1.18)	0.90 (0.80, 1.01)	1.08 (0.96, 1.22)	3324
		Wald p¹	0.36	0.084	0.63	0.34	0.11	0.20	0.85
All sites	F	0.83* (0.71, 0.98)	0.86 (0.74, 1.00)	1.09 (0.93, 1.27)	1.35*** (1.17, 1.57)	0.93 (0.80, 1.09)	1.02 (0.88, 1.19)	0.93 (0.79, 1.09)	2871
		Wald p¹	0.82	0.59	0.62	0.70	0.69	0.086	0.28
All sites, M+F		0.88* (0.79, 0.97)	0.94 (0.85, 1.03)	1.07 (0.97, 1.18)	1.32*** (1.20, 1.45)	1.00 (0.91, 1.10)	0.95 (0.86, 1.04)	1.03 (0.93, 1.13)	6195
		Wald p²	0.69	0.14	0.82	0.65	0.24	0.07	0.43
Standard deviation of site-sex heterogeneity		0.00	0.05	0.00	0.00	0.01	0.09	0.00	

* p < 0.05, ** p < 0.01, *** p < 0.001. ¹p-value for Wald test of site heterogeneity within sex. ²p-value for Wald test of site-sex heterogeneity.

Table 13. Association of birth weight (BW), conditional relative weight CWh), and conditional height (CH) at age 2 y and mid-childhood (MC), with adult height (cm). β -coefficients and 95% confidence intervals from linear regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex.

		BW	CWh-2y	CWh-MC	CH-2y	CH-MC	N	R2
Brazil	M	1.89*** (1.67,2.11)	0.16 (-0.05,0.37)	-0.25* (-0.46,-0.05)	3.52*** (3.29,3.76)	2.00*** (1.79,2.21)	1883	0.58
	F	1.63*** (1.42,1.83)	-0.21* (-0.40,-0.01)	-0.27** (-0.47,-0.07)	3.21*** (2.98,3.43)	1.70*** (1.50,1.90)	1701	0.573
Guatemala	M	2.20*** (1.52,2.88)	-0.70* (-1.37,-0.02)	0.31 (-0.36,0.98)	2.78*** (2.09,3.48)	1.53*** (0.73,2.33)	157	0.585
	F	1.09** (0.45,1.74)	-0.11 (-0.75,0.52)	0.03 (-0.56,0.63)	2.41*** (1.76,3.05)	1.01** (0.39,1.64)	141	0.557
India	M	1.42*** (1.09,1.75)	0.2 (-0.12,0.53)	0.19 (-0.13,0.51)	3.08*** (2.71,3.44)	1.35*** (1.04,1.66)	774	0.517
	F	1.50*** (1.16,1.85)	0.21 (-0.13,0.55)	-0.11 (-0.43,0.21)	3.23*** (2.86,3.61)	1.45*** (1.13,1.77)	550	0.557
Philippines	M	1.08*** (0.85,1.31)	0.09 (-0.13,0.31)	-0.41*** (-0.63,-0.18)	3.34*** (3.08,3.59)	2.47*** (2.24,2.70)	1004	0.642
	F	1.29*** (1.05,1.52)	0.19 (-0.04,0.41)	-0.40*** (-0.63,-0.18)	3.05*** (2.81,3.29)	2.11*** (1.89,2.33)	888	0.633
South Africa	M	1.48*** (1.01,1.95)	0.23 (-0.24,0.70)	-0.46* (-0.90,-0.01)	3.30*** (2.80,3.80)	2.71*** (2.25,3.16)	573	0.501
	F	1.10*** (0.76,1.45)	0.09 (-0.26,0.44)	-0.40* (-0.73,-0.08)	2.70*** (2.35,3.06)	2.07*** (1.73,2.40)	631	0.548
All sites	M	1.57*** (1.43,1.71)	0.13 (-0.01,0.26)	-0.22** (-0.35,-0.09)	3.31*** (3.16,3.46)	2.07*** (1.93,2.20)	4391	0.688
Wald p1		0.0001	0.24	0.019	0.16	<0.0001		
All sites	F	1.42*** (1.29,1.55)	0 (-0.13,0.12)	-0.29*** (-0.41,-0.17)	3.04*** (2.90,3.17)	1.80*** (1.67,1.92)	3911	0.712
Wald p1		0.039	0.074	0.49	0.031	0.0008		
All sites, M+F		1.49*** (1.40,1.59)	0.06 (-0.03,0.16)	-0.25*** (-0.34,-0.16)	3.18*** (3.07,3.28)	1.94*** (1.85,2.03)	8302	0.819
Wald p2		<0.0001	0.067	0.055	0.004	<0.0001		
Standard deviation of site-sex heterogeneity		0.24	0.09	0.10	0.12	0.40		

* p < 0.05, ** p < 0.01, *** p < 0.001. ¹p-value for Wald test of site heterogeneity within sex. ²p-value for Wald test of site-sex heterogeneity.

Table 14. Association of birth weight (BW), conditional relative weight (CWh), and conditional height (CH) at age 2 y and mid-childhood (MC), with short adult stature. Odds ratios and 95% confidence intervals from logistic regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex.

		BW	CWh-2y	CWh-MC	CH-2y	CH-MC	N
Brazil	M	0.39*** (0.28,0.55)	0.8 (0.59,1.07)	1.18 (0.91,1.55)	0.24*** (0.17,0.35)	0.42*** (0.31,0.59)	1883
	F	0.31*** (0.21,0.47)	0.96 (0.69,1.33)	0.8 (0.58,1.10)	0.19*** (0.12,0.30)	0.43*** (0.30,0.62)	1701
Guatemala	M	0.27*** (0.15,0.49)	1.06 (0.67,1.67)	0.85 (0.53,1.35)	0.26*** (0.15,0.47)	0.50* (0.28,0.88)	157
	F	0.40** (0.21,0.75)	1.87* (1.00,3.49)	1.04 (0.61,1.77)	0.17*** (0.08,0.35)	0.44** (0.26,0.75)	141
India	M	0.50*** (0.36,0.69)	0.92 (0.68,1.24)	0.9 (0.68,1.19)	0.28*** (0.19,0.41)	0.51*** (0.38,0.69)	774
	F	0.58*** (0.42,0.80)	1.1 (0.81,1.49)	0.88 (0.67,1.16)	0.19*** (0.13,0.29)	0.55*** (0.41,0.74)	550
Philippines	M	0.53*** (0.44,0.64)	0.94 (0.79,1.11)	1.28** (1.07,1.52)	0.20*** (0.16,0.26)	0.31*** (0.25,0.38)	1004
	F	0.49*** (0.39,0.60)	0.82* (0.67,0.99)	1.42*** (1.17,1.72)	0.18*** (0.14,0.24)	0.31*** (0.24,0.39)	888
South Africa	M	0.39*** (0.25,0.61)	0.98 (0.62,1.54)	1.25 (0.81,1.94)	0.18*** (0.10,0.33)	0.21*** (0.12,0.35)	573
	F	0.69 (0.46,1.02)	0.95 (0.63,1.42)	1.22 (0.84,1.76)	0.29*** (0.17,0.48)	0.50** (0.33,0.76)	631
All sites	M	0.48*** (0.42,0.55)	0.93 (0.82,1.04)	1.13* (1.01,1.27)	0.24*** (0.21,0.28)	0.38*** (0.33,0.43)	4391
Wald p1		0.14	0.84	0.18	0.58	0.008	
All sites	F	0.50*** (0.43,0.57)	0.95 (0.84,1.08)	1.13* (1.00,1.28)	0.21*** (0.17,0.24)	0.41*** (0.36,0.47)	3911
Wald p1		0.065	0.11	0.01	0.63	0.03	
All sites, M+F		0.49*** (0.44,0.54)	0.94 (0.86,1.03)	1.13** (1.04,1.23)	0.22*** (0.20,0.25)	0.39*** (0.36,0.43)	8302
Wald p2		0.065	0.43	0.02	0.64	0.002	
Standard deviation of site-sex heterogeneity		0.07	0.00	0.16	0.00	0.08	

* p < 0.05, ** p < 0.01, *** p < 0.001. ¹p-value for Wald test of site heterogeneity within sex. ²p-value for Wald test of site-sex heterogeneity.

Table 15. Association of birth weight (BW), conditional relative weight (CWh), and conditional height (CH) at age 2 y and mid-childhood (MC), with attained schooling (highest grade). β -coefficients and 95% confidence intervals from linear regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex.

		BW	CWh-2y	CWh-MC	CH-2y	CH-MC	N	R ²
Brazil	M	0.26*** (0.14,0.39)	0.17** (0.04,0.29)	-0.05 (-0.17,0.07)	0.56*** (0.44,0.69)	0.07 (-0.05,0.20)	1770	0.335
	F	0.27*** (0.15,0.40)	0.04 (-0.08,0.16)	-0.07 (-0.19,0.05)	0.59*** (0.47,0.72)	0.21*** (0.09,0.34)	1619	0.383
Guatemala	M	-0.04 (-0.53,0.46)	-0.51* (-1.00,-0.01)	-0.13 (-0.62,0.36)	0.61* (0.12,1.10)	0.4 (-0.17,0.96)	168	0.219
	F	-0.03 (-0.60,0.53)	-0.32 (-0.90,0.26)	0.08 (-0.45,0.61)	0.29 (-0.26,0.84)	0.51 (-0.04,1.05)	154	0.158
India	M	0.29* (0.07,0.51)	0.25* (0.03,0.48)	-0.04 (-0.26,0.19)	0.37** (0.13,0.62)	-0.05 (-0.26,0.16)	774	0.201
	F	0.37** (0.11,0.63)	0.17 (-0.09,0.43)	-0.04 (-0.29,0.20)	0.53*** (0.26,0.80)	0.18 (-0.06,0.42)	552	0.176
Philippines	M	0.07 (-0.10,0.24)	0.16 (-0.01,0.32)	-0.11 (-0.28,0.06)	0.43*** (0.24,0.61)	0.29*** (0.13,0.46)	1006	0.255
	F	0.13 (-0.02,0.28)	0.16* (0.00,0.31)	-0.13 (-0.29,0.02)	0.44*** (0.28,0.59)	0.06 (-0.09,0.20)	889	0.288
South Africa	M	0.12 (-0.00,0.24)	0.03 (-0.09,0.15)	-0.06 (-0.18,0.05)	0.12 (-0.01,0.24)	0.06 (-0.06,0.18)	568	0.068
	F	0.16*** (0.07,0.26)	-0.02 (-0.12,0.07)	0.08 (-0.01,0.17)	0.02 (-0.07,0.12)	0.01 (-0.08,0.10)	621	0.081
All sites	M	0.21*** (0.13,0.29)	0.14** (0.05,0.22)	-0.07 (-0.15,0.01)	0.47*** (0.39,0.56)	0.12** (0.04,0.20)	4286	0.454
Wald p¹		0.20	0.016	0.97	0.014	0.041		
All sites	F	0.23*** (0.15,0.30)	0.05 (-0.03,0.12)	-0.04 (-0.12,0.04)	0.45*** (0.37,0.53)	0.17*** (0.09,0.25)	3835	0.479
Wald p¹		0.22	0.16	0.45	<0.0001	0.074		
All sites, M+F		0.22*** (0.16,0.27)	0.09** (0.04,0.15)	-0.05 (-0.11,0.00)	0.46*** (0.40,0.52)	0.14*** (0.09,0.20)	8121	0.47
Wald p²		0.21	0.013	0.92	<0.0001	0.025		
Standard deviation of site-sex heterogeneity		0.02	0.03	0.03	0.19	0.07		

* p < 0.05, ** p < 0.01, *** p < 0.001. ¹p-value for Wald test of site heterogeneity within sex. ²p-value for Wald test of site-sex heterogeneity

Table 16. Association of birth weight (BW), conditional relative weight (CWh), and conditional height (CH) at age 2 y and mid-childhood (MC), with failure to complete high school. Odds ratios from logistic regression models stratified by site and sex, stratified by sex and adjusted for site, and pooled with adjustment for site and sex.

		BW	CWh-2y	CWh-MC	CH-2y	CH-MC	N
Brazil	M	0.80*** (0.71,0.90)	0.94 (0.84,1.05)	1.01 (0.90,1.13)	0.71*** (0.63,0.80)	0.9 (0.81,1.01)	1770
	F	0.79*** (0.70,0.89)	0.9 (0.80,1.02)	1.03 (0.91,1.16)	0.64*** (0.56,0.73)	0.84** (0.75,0.95)	1619
Guatemala	M	0.59 (0.31,1.15)	1.44 (0.75,2.78)	0.74 (0.38,1.46)	0.45* (0.21,0.97)	0.33* (0.13,0.87)	168
	F	2.36 (0.96,5.79)	1.42 (0.61,3.31)	1.81 (0.83,3.96)	0.76 (0.35,1.66)	0.69 (0.29,1.60)	154
India	M	0.73** (0.58,0.93)	0.86 (0.68,1.08)	1.04 (0.83,1.29)	0.86 (0.68,1.09)	1.04 (0.84,1.30)	774
	F	0.64* (0.42,0.96)	0.79 (0.54,1.15)	1.03 (0.74,1.42)	0.71 (0.48,1.05)	0.86 (0.61,1.21)	552
Philippines	M	0.99 (0.85,1.14)	0.97 (0.83,1.12)	1.22** (1.05,1.41)	0.75*** (0.63,0.88)	0.81** (0.70,0.93)	1006
	F	0.91 (0.76,1.09)	0.95 (0.79,1.13)	1.06 (0.88,1.27)	0.72*** (0.60,0.87)	0.86 (0.73,1.03)	889
South Africa	M	0.87 (0.73,1.03)	1.02 (0.86,1.21)	1.04 (0.88,1.23)	0.92 (0.77,1.11)	0.89 (0.76,1.06)	568
	F	0.73** (0.60,0.88)	1.06 (0.87,1.29)	0.9 (0.76,1.08)	0.89 (0.74,1.08)	0.98 (0.82,1.17)	621
All sites	M	0.84*** (0.78,0.91)	0.96 (0.89,1.03)	1.06 (0.99,1.14)	0.76*** (0.70,0.82)	0.88*** (0.82,0.95)	4286
Wald p¹		0.21	0.47	0.77	0.045	0.22	
All sites	F	0.80*** (0.74,0.87)	0.94 (0.87,1.03)	1.01 (0.93,1.10)	0.71*** (0.65,0.77)	0.87*** (0.80,0.94)	3835
Wald p¹		0.024	0.34	0.11	0.043	0.17	
All sites, M+F		0.82*** (0.78,0.87)	0.95 (0.90,1.00)	1.04 (0.99,1.10)	0.74*** (0.69,0.78)	0.87*** (0.83,0.92)	8121
Wald p²		0.044	0.51	0.40	0.009	0.20	
Standard deviation of site-sex heterogeneity		0.02	0.00	0.00	0.05	0.00	

* p < 0.05, ** p < 0.01, *** p < 0.001. ¹p-value for Wald test of site heterogeneity within sex. ²p-value for Wald test of site-sex heterogeneity.

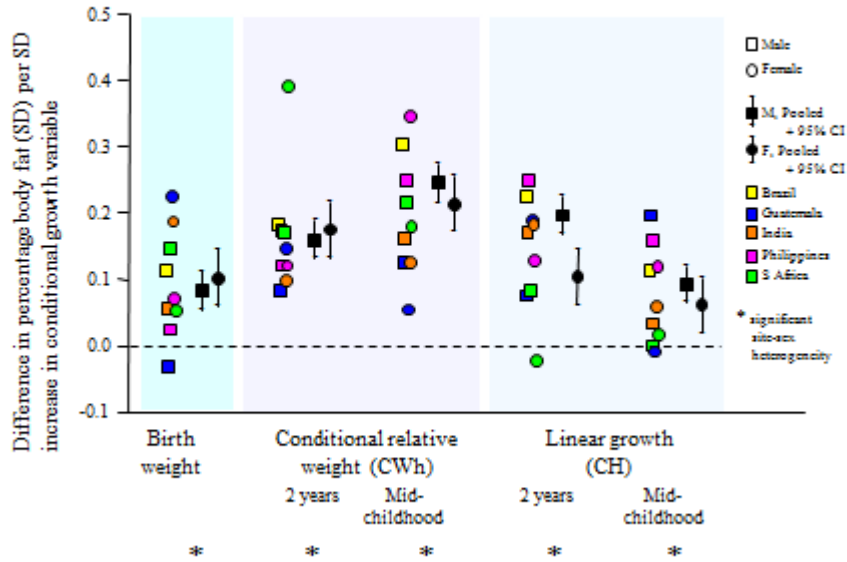
Table 17. Gram or kilogram and centimetre equivalents of birth weight (BW), conditional relative weight (CWh), and conditional height (CH) measures¹ used in the analysis

		BW	CWh	CWh	CWh	CH	CH	CH
		(g)	2 years (kg)	mid- childhood (kg)	adulthood (kg)	2 years (cm)	mid- childhood (cm)	adulthood (cm)
Brazil	Females	546	.85	.99	10.3	3.46	2.39	4.39
	Males	567	.89	.99	10.5	3.37	2.36	4.84
Guatemala	Females	469	.66	.63	10.2	3.56	2.19	3.94
	Males	508	.69	.71	8.5	3.43	2.54	4.27
India	Females	429	.81	.77	11.1	3.55	2.24	3.99
	Males	451	.85	.77	11.3	3.52	2.08	4.84
Philippines	Females	430	.68	1.57	5.4	3.44	3.88	3.52
	Males	442	.76	1.41	5.8	3.48	3.71	3.61
South Africa	Females	498	1.24	.98	9.1	3.17	2.36	4.42
	Males	515	1.29	1.07	8.3	3.33	2.30	5.20

¹Values represent site-specific estimates of the increase in cm, grams, or kg related to one standard deviation of birth weight (BW), conditional relative weight (CWh) or conditional height (CH) from 0-2 years, 2 years to mid-childhood, and mid-childhood to adulthood.

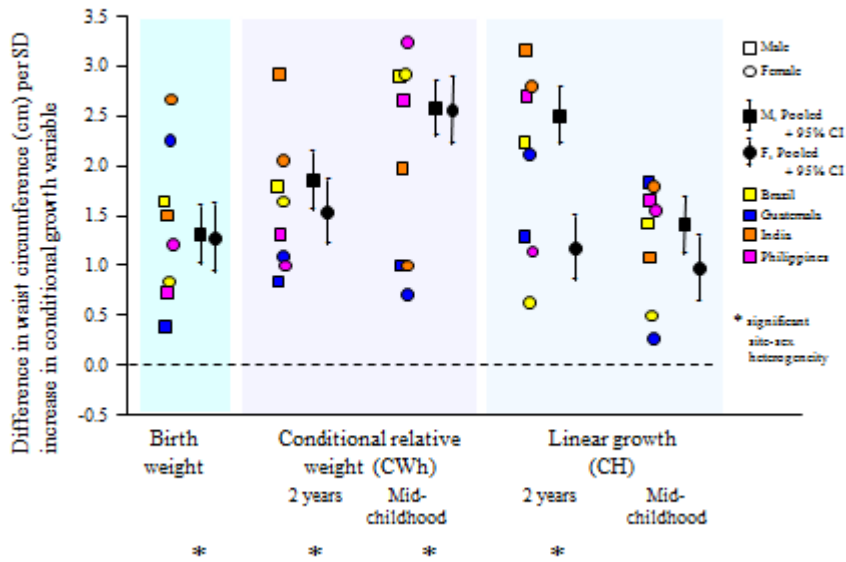
Appendix Figure 1. Percentage Body Fat

Association of conditional relative weight (CWh) and linear growth (CH) with percentage body fat. Site-specific data points represent β coefficients from linear regression models conducted separately for each site-sex stratum. Pooled estimates from sex-stratified models adjusted for site are presented as β coefficients with 95% confidence intervals. Significant site-sex heterogeneity (noted by the *) was further assessed in models with males and females and all sites pooled.



Appendix Figure 2. Waist Circumference

Association of conditional relative weight (CWh) and linear growth (CH) with waist circumference. Site-specific data points represent β coefficients from linear regression models conducted separately for each site-sex stratum. Pooled estimates from sex-stratified models adjusted for site are presented as β coefficients with 95% confidence intervals. Significant site-sex heterogeneity (noted by the *) was further assessed in models with males and females and all sites pooled.



Appendix Figure 3. Diastolic Blood Pressure

Association of conditional relative weight (CWh) and linear growth (CH) with diastolic blood pressure (mmHg). Site-specific data points represent β coefficients from linear regression models conducted separately for each site-sex stratum. Pooled estimates from sex-stratified models adjusted for site are presented as β coefficients with 95% confidence intervals. Significant site-sex heterogeneity (noted by the *) was further assessed in models with males and females and all sites pooled.

