

Supplementary Table SI. Pearson's correlation coefficient between carotid intima-media thickness measured in adulthood and cardiovascular risk factors in childhood and adulthood

Variable	Body mass index [kg/m ²]		Systolic BP [mm Hg]		Diastolic BP [mm Hg]		Cholesterol [mmol/l]		Glucose [mmol/l]	
	B	P	B	P	B	P	B	P	β	P
Childhood	0.362	< 0.001	0.330	< 0.001	0.443	< 0.001	0.144	< 0.001	0.149	< 0.001
Adulthood	0.321	< 0.001	0.246	< 0.001	0.305	< 0.001	0.181	< 0.001	0.212	< 0.001
Cumulative risk	0.348	< 0.001	0.335	< 0.001	0.457	< 0.001	0.186	< 0.001	0.200	< 0.001

Supplementary Table SII. Averages of 5 cardiovascular risk factors in childhood, adolescence and adulthood measured by quartile of adolescence and adulthood carotid intima-media thickness

Variables		Carotid intima-media thickness, mean [mm]						Carotid intima-media thickness, mean [mm]						
		Adolescence (12–18 y/o) (Period II: 2006–2008)						Adulthood (19–30 y/o) (Period II: 2006–2008)						
Male	Body	Q1	Q2	Q3	Q4	<i>P</i> ₁	<i>P</i>	Body	Q1	Q2	Q3	Q4	<i>P</i> ₁	<i>P</i> ₂
	mass index [kg/m ²]	< 0.40	0.40–0.42	0.42–0.45	≥ 0.45	<i>N</i> = 17	<i>N</i> = 24	<i>N</i> = 26	<i>N</i> = 133	< 0.41	0.41–0.43	0.43–0.46	≥ 0.46	<i>N</i> = 249
	Childhood (Period I)	19.2 ± 3.3	18.1 ± 2.5	19.7 ± 3.5	21.2 ± 4.8	0.871	0.584	Adolescence (Period I)	18.8 ± 3.0	18.3 ± 3.0	19.5 ± 3.5	21.7 ± 5.2	0.01	< 0.001
	Adolescence (Period II)	22.2 ± 3.6	20.8 ± 3.0	23.3 ± 4.3	24.4 ± 5.3	0.913	0.641	Adulthood (Period II)	21.8 ± 3.4	21.4 ± 3.2	23.0 ± 4.1	23.0 ± 4.1	0.02	< 0.001
	Cumulative risk	20.7 ± 3.2	19.5 ± 2.6	21.5 ± 3.7	22.8 ± 4.8	0.999	0.746	Cumulative risk	20.4 ± 2.8	19.7 ± 2.9	21.1 ± 3.4	23.2 ± 5.2	0.01	< 0.001
	Glucose [mmol/l]							Glucose [mmol/l]						

I/I]													
Child hood (Period I)	4.6 ±0.6	4.7 ±0.7	4.7 ±0.6	4.6 ±0.7	0.534	0.681	Adolescence (Period I)	4.6 ±0.6	4.8 ±0.9	4.7 ±0.7	4.7 ±0.8	0.723	0.996
Adolescence (Period II)	4.7 ±0.5	4.7 ±0.3	4.7 ±0.4	4.9 ±0.9	0.333	0.420	Adulthood (Period II)	4.7 ±0.4	4.9 ±1.2	4.7 ±0.3	5.0 ±1.0	0.216	0.184
Cumulative risk	4.7 ±0.4	4.7 ±0.4	4.7 ±0.9	4.8 ±0.6	0.611	0.932	Cumulative risk	4.7 ±0.4	4.8 ±1.0	4.7 ±0.4	4.8 ±0.7	0.315	0.649
Cholesterol [mmol/l]							Cholesterol [mmol/l]						
Child hood (Period I)	3.8 ±1.0	4.0 ±0.9	4.1 ±0.9	4.0 ±0.8	0.477	0.600	Adolescence (Period I)	3.9 ±0.9	4.1 ±0.9	4.0 ±0.8	4.2 ±0.9	0.247	0.178
Adolescence (Period II)	4.5 ±1.4	4.4 ±0.8	4.5 ±0.9	4.7 ±1.0	0.704	0.304	Adulthood (Period II)	4.3 ±1.2	4.4 ±0.8	4.4 ±0.9	4.8 ±1.0	0.264	0.017
Cumulative risk	4.2	4.2 ±0.8	4.3 ±0.9	4.4	0.721	0.	Cumulative risk	4.1	4.2	4.2 ±0.7	4.5	0.22	0.030

lative risk	±1.1			±0.8		93	ve risk	±1.0	±0.8		±0.9	2	
Systolic BP [mm Hg]							Systolic BP [mm Hg]						
Childhood (Period I)	111.9 ±18.4	109.0 ±14.7	117.4 ±18.4	119.7 ±18.2	0.565	0.638	Adolescence (Period I)	109.6 ±17.6	110.9 ±16.2	115.5 ±19.5	120.3 ±16.8	0.023	0.001
Adolescence (Period II)	114.6 ±14.7	112.4 ±9.9	115.0 ±14.5	118.1 ±16.3	0.730	0.205	Adulthood (Period II)	114.0 ±13.2	112.1 ±12.3	114.62±2.7	119.4 ±17.7	0.236	0.096
Cumulative risk	113.2 ±13.3	110.7 ±9.6	116.2 ±13.2	118.9 ±13.8	0.547	0.199	Cumulative risk	112.0 ±11.4	111.0 ±11.5	114.8 ±12.9	119.0 ±13.4	0.027	<0.001
Diastolic BP [mm Hg]							Diastolic BP [mm Hg]						
Childhood (Period I)	66.3 ±11.5	67.4 ±9.6	71.6 ±10.7	78.1 ±15.5	0.736	0.802	Adolescence (Period I)	67.4 ±11.5	67.9 ±10.1	70.7 ±11.3	80.9 ±15.1	<0.001	<0.001

	Adole scenc e (Perio d II)	71.4 ±11.0	68.5 ±7.9	69.4 ±9.3	74.8 ±13.4	0.769	0.	Adulthoo d (Period II)	70.6 ±10.4	68.6 ±8.3	69.7 ±9.5	76.1 ±14.2	0.15 1	0.012
	Cumu lative risk	68.9 ±9.3	67.9 ±7.1	70.5 ±7.9	76.4 ±11.9	0.705	0.	Cumulati ve risk	69.1 ±8.5	68.1 ±7.2	70.03 ±8.2	78.0 ±11.8	<0. 001	<0.001
Female	Body mass index [kg/m ²]							Body mass index [kg/m ²]						
	Child hood (Perio d I)	15.5 ±2.1	17.9 ±3.0	16.9 ±2.5	17.2 ±3.1	0.070	0.	Adolesce nce (Period I)	18.7 ±3.2	18.6 ±3.1	18.8 ±2.7	20.7 ±4.6	<0. 001	<0.001
	Adole scenc e (Perio d II)	20.9 ±5.1	21.0 ±2.2	20.1 ±1.8	21.6 ±3.2	0.586	0.	Adulthoo d (Period II)	21.0 ±3.9	20.5 ±3.1	20.8 ±2.7	22.1 ±4.5	0.05 5	0.025
	Cumu lative risk	18.2 ±3.1	19.5 ±2.3	18.5 ±2.0	19.4 ±2.9	0.222	0.	Cumulati ve risk	19.9 ±3.2	19.6 ±2.8	19.8 ±2.5	21.4 ±4.3	0.00 5	0.002
	Gluco se							Glucose [mmol/l]						

[mmo l/l]													
Child hood (Perio d I)	4.7 ±0.6	4.5 ±0.7	4.4 ±0.4	5.1±2.2	0.467	0. 87 3	Adolesce nce (Period I)	4.5 ±0.7	4.8 ±0.9	4.8 ±1.4	5.1 ±1.9	0.01 1	0.106
Adole scenc e (Perio d II)	4.8 ±0.2	4.7 ±0.3	4.7 ±0.3	5.2 ±1.8	0.364	0. 45 0	Adulthoo d (Period II)	4.8 ±0.6	4.7 ±0.3	4.7 ±0.8	5.2 ±2.2	0.08 5	0.535
Cumu lative risk	4.7 ±0.3	4.6 ±0.4	4.6 ±0.2	5.2 ±2.0	0.414	0. 70 6	Cumulati ve risk	4.5 ±0.5	4.7 ±0.5	4.7 ±1.0	5.1 ±2.0	0.02 6	0.107
Chole sterol [mmo l/l]							Cholester ol [mmol/l]						
Child hood (Perio d I)	4.4 ±1.1	4.2 ±0.6	4.1 ±0.6	4.4 ±0.7	0.884	0. 74 4	Adolesce nce (Period I)	4.3 ±1.2	4.3 ±0.9	4.1 ±0.9	4.6 ±1.2	0.13 0	0.235
Adole scenc e (Perio d II)	4.4 ±0.8	4.1 ±0.5	4.0 ±0.6	4.3 ±0.7	0.533	0. 97 0	Adulthoo d (Period II)	4.6 ±0.8	4.5 ±0.9	4.5 ±0.7	4.7 ±0.9	0.49 1	0.422

Cumulative risk	4.4 ±0.9	4.1 ±0.4	4.1 ±0.5	4.3 ±0.7	0.681	0.674	Cumulative risk	4.5 ±0.9	4.4 ±0.8	4.3 ±0.7	4.6 ±0.9	0.194	0.211
Systolic BP [mm Hg]							Systolic BP [mm Hg]						
Childhood (Period I)	97.1 ±15.1	109.9 ±13.4	106.6 ±13.5	110.1 ±16.3	0.018	0.025	Adolescence (Period I)	104.7 ±13.3	106.1 ±16.2	106.5 ±15.6	117.0 ±18.5	<0.001	<0.001
Adolescence (Period II)	104.1 ±10.4	102.2 ±10.3	105.3 ±10.0	104.6 ±10.7	0.888	0.768	Adulthood (Period II)	101.7 ±9.6	99.1 ±10.2	101.4 ±12.1	105.5 ±14.3	0.030	0.009
Cumulative risk	100.6 ±9.2	106.1 ±8.0	106.0 ±8.3	107.3 ±10.9	0.054	0.082	Cumulative risk	103.2 ±8.5	102.6 ±11.1	103.8 ±11.3	111.2 ±13.7	<0.001	<0.001
Diastolic BP [mm Hg]							Diastolic BP [mm Hg]						
Childhood (Period I)	64.6 ±14.7	73.5 ±13.5	71.1 ±11.4	79.7 ±13.7	0.003	0.005	Adolescence (Period I)	67.1 ±12.1	67.4 ±11.7	69.3 ±11.6	78.1 ±15.7	<0.001	<0.001

d I)													
Adole	65.8	65.1 ±9.6	66.4 ±8.3	65.3	0.884	0.	Adulthoo	62.8	61.3	63.0 ±9.1	66.1	0.02	0.008
scenc	±9.0			±9.5		79	d	±8.9	±7.8		±11.9	3	
e						7	(Period						
(Perio							II)						
d II)													
Cumu	65.2	69.3 ±9.0	68.7 ±7.3	72.5	0.016	0.	Cumulati	64.9	64.4	66.1 ±8.5	72.1	<	< 0.001
lative	±8.9			±8.7		02	ve risk	±7.8	±8.0		±11.0	0.00	
risk						2						1	

Q1 – Quartile 1, Q2 – Quartile 2, Q3 – Quartile 3, Q4 – Quartile 4, BMI – body mass index, SBP and DBP – systolic and diastolic blood pressure, LDL-C and HDL-C – low-density and high-density cholesterol, hs-CRP – high-sensitivity C-reactive protein. P1-value is for CIMT quartile 4 compared with CIMT quartile 1. P2-value is test for trend.

Supplementary Table SIII. Multiple linear regressions for cardiovascular risk factors in childhood, adolescence and adulthood as determinants of carotid intima-media thickness in adolescence and adulthood

Variables	Childhood (Period I)			Adolescence (Period II)			Adolescence (Period I)			Adulthood (Period II)		
	β	S.E.	P-value	β	S.E.	P-value	β	S.E.	P-value	β	S.E.	P-value
Age [years]	0.001456	0.003483	0.677	0.002296	0.003778	0.545	0.000235	0.000704	0.738	– 0.000196	0.000776	0.801
Male, yes	0.011489	0.009506	0.230	0.006902	0.010822	0.525	0.020691	0.003997	< 0.001	0.012919	0.004796	0.007
Cholesterol [mmol/l]	0.007200	0.005541	0.197	0.004440	0.006700	0.509	0.006477	0.001974	0.001	0.007549	0.02341	0.001
Fasting glucose [mmol/l]	0.004829	0.003564	0.179	0.004106	0.003765	0.278	0.003741	0.001761	0.034	0.006097	0.001938	0.002
Systolic BP [mm Hg]	0.000098	0.000440	0.824	– 0.000071	0.000576	0.902	– 0.000469	0.000155	0.003	– 0.000273	0.000238	0.251
Diastolic BP [mm Hg]	0.001446	0.000467	0.003	0.000336	0.000714	0.639	0.001508	0.000188	< 0.001	0.001064	0.000301	< 0.001
BMI [kg/m ²]	– 0.001522	0.001611	0.347	0.001186	0.001618	0.466	0.003236	0.000559	< 0.001	0.001487	0.000559	0.008
Adjusted R ²	0.1693			–0.0121			0.2327			0.1171		

BMI – body mass index, BP – blood pressure, CCA – common carotid artery, CIMT – carotid intima-media thickness, DBP – diastolic blood pressure, DM – diabetes

mellitus, HDL-C – high-density lipoprotein cholesterol, hs-CRP – high-sensitivity C reactive protein, ICA – internal carotid artery, LDL-C – low-density lipoprotein cholesterol, SBP – systolic blood pressure, YOTA – the YOung TAIwanese Cohort Study.