SUPPLEMENTAL MATERIAL

Table S1. Limit of detection (LOD) and % below LOD for plasma sLOX-1 and 12 selected plasma inflammatory markers.

Label	Protein name	UniProt	Olink panel	LOD, NPX	% below LOD	*Reference
sLOX-1	Soluble lectin-like oxidized LDL receptor 1	P78380	Target 96 Cardiovascular II	2.91	0.0	-
CD40	CD40L receptor	P25942	Target 96 Inflammation	2.55	0.0	[49]
CD40L	CD40L	P29965	Target 96 Cardiovascular II	1.70	0.0	[13,49]
IFN-gamma	Interferon gamma	P01579	Target 96 Inflammation	4.24	0.1	[46]
IL-8	Interleukin-8	P10145	Target 96 Cardiovascular II	1.69	0.0	[46]
IL-18	Interleukin-18	Q14116	Target 96 Inflammation	2.02	0.0	[48]
LAP TGF-beta-1	Latency-associated peptide transforming growth factor beta-1	P01137	Target 96 Inflammation	1.19	0.0	[50]
MCP-1 (CCL2)	Monocyte chemotactic protein 1 / C-C motif chemokine 2	P13500	Target 96 Inflammation	1.84	0.0	[51]
TNF	Tumor necrosis factor	P01375	Target 96 Inflammation	0.53	0.0	[13,46,47]
MMP-1	Matrix metalloproteinase 1	P03956	Target 96 Inflammation	1.68	0.1	[52]
MMP-7	Matrix metalloproteinase 7	P09237	Target 96 Cardiovascular II	3.09	0.0	[52]
MMP-10	Matrix metalloproteinase 10	P09238	Target 96 Inflammation	1.79	0.0	[52]
MMP-12	Matrix metalloproteinase 12	P39900	Target 96 Cardiovascular II	1.95	0.0	[52]

*Reference to previous studies which observed an association between inflammatory markers and (s)LOX-1 and therefore were selected *a priori* from Cardiovascular II and Inflammation Olink panels measured in the present study. *Abbreviations:* LOD, limit of detection; NPX, normalized protein expression.

Table S2. Estimated regression β-effects (95% CI) for associations of plasma sLOX-1 with plasma inflammatory markers in a pooled model.

Inflammatory marker	n	Pooled model	β (95% CI)	*P* Value
CD40	3,846	1	0.12 (0.09, 0.15)	1.0E-12
	2,914	2	0.11 (0.07, 0.15)	1.3E-08
CD40L	3,854	1	0.16 (0.13, 0.20)	1.8E-23
	2,920	2	0.15 (0.11, 0.19)	2.1E-15
IFN-gamma	3,846	1	0.13 (0.10, 0.16)	4.2E-15
	2,914	2	0.13 (0.10, 0.17)	3.7E-12
IL-8	3,846	1	0.23 (0.20, 0.26)	8.7E-46
	2,914	2	0.23 (0.19, 0.26)	2.2E-33
IL-18	3,854	1	0.29 (0.26, 0.32)	2.1E-75
	2,920	2	0.30 (0.26, 0.33)	2.5E-59
LAP TGF-beta-1	3,846	1	0.19 (0.16, 0.22)	1.0E-30
	2,914	2	0.18 (0.14, 0.22)	8.8E-21
MCP-1	3,846	1	0.16 (0.13, 0.19)	3.3E-22
	2,914	2	0.17 (0.13, 0.20)	3.8E-20
TNF	3,846	1	0.17 (0.14, 0.20)	3.6E-27
	2,914	2	0.16 (0.12, 0.19)	2.2E-19
MMP-1	3,842	1	0.17 (0.14, 0.20)	1.1E-25
	2,910	2	0.18 (0.15, 0.22)	4.3E-23
MMP-7	3,854	1	0.19 (0.16, 0.23)	1.5E-33
	2,920	2	0.18 (0.15, 0.22)	3.3E-23
MMP-10	3,846	1	0.14 (0.11, 0.17)	4.3E-19
	2,914	2	0.13 (0.10, 0.17)	3.3E-13
MMP-12	3,854	1	0.21 (0.18, 0.24)	3.0E-48
	2,920	2	0.20 (0.17, 0.23)	3.5E-33

Model 1: inflammatory marker (SD-units) ~ sLOX-1 (SD-units) + age + sex + smoking status (smoking, passive smoking, non-smoking) + BMI SDS. *Model 2:* Model 1 + puberty stage (pre-puberty, puberty/post-puberty). *Abbreviations:* CI, confidence interval; IFN-gamma, interferon gamma; IL, interleukin; LAP TGF-beta-1, latency-associated peptide transforming growth factor beta-1; MCP-1, monocyte chemotactic protein 1; MMP, matrix metalloproteinases; SDS, standard deviation score; sLOX-1, soluble lectin-like oxidized low-density lipoprotein; TNF, tumor necrosis factor.

Table S3. Estimated regression β-effects (95% CI) for the interaction between plasma sLOX-1 and weight status (overweight/obesity vs. normal weight) on plasma inflammatory markers.

Inflammatory marker	n	Interaction model	Overweight/Obesity		Normal weight		$P_{interaction}$
			β (95% CI)	*P* Value	β (95% CI)	*P* Value	
CD40	3,846	1	0.11 (0.06, 0.15)	1.3E-06	0.14 (0.09, 0.19)	5.8E-08	0.34
	2,914	2	0.10 (0.06, 0.15)	2.9E-05	0.12 (0.06, 0.17)	6.3E-05	0.74
CD40L	3,854	1	0.16 (0.12, 0.21)	2.7E-14	0.16 (0.11, 0.21)	1.9E-10	0.86
	2,920	2	0.17 (0.12, 0.22)	1.9E-11	0.12 (0.07, 0.18)	1.6E-05	0.26
IFN-gamma	3,846	1	0.12 (0.08, 0.16)	4.3E-08	0.14 (0.09, 0.19)	2.7E-08	0.53
	2,914	2	0.13 (0.08, 0.18)	2.0E-07	0.13 (0.07, 0.19)	7.4E-06	0.98
IL-8	3,846	1	0.22 (0.18, 0.26)	3.2E-24	0.24 (0.19, 0.29)	2.4E-22	0.48
	2,914	2	0.23 (0.18, 0.28)	1.5E-20	0.22 (0.16, 0.27)	5.0E-14	0.73
IL-18	3,854	1	0.32 (0.28, 0.36)	5.3E-52	0.27 (0.22, 0.31)	1.7E-28	0.09
	2,920	2	0.33 (0.28, 0.37)	2.6E-42	0.27 (0.22, 0.32)	2.4E-22	0.11
LAP TGF-beta-1	3,846	1	0.18 (0.14, 0.22)	7.7E-17	0.19 (0.14, 0.24)	1.2E-14	0.71
	2,914	2	0.19 (0.14, 0.23)	1.1E-13	0.16 (0.10, 0.22)	2.9E-08	0.53
MCP-1	3,846	1	0.17 (0.12, 0.21)	2.7E-14	0.14 (0.09, 0.19)	2.0E-08	0.44
	2,914	2	0.19 (0.14, 0.23)	1.3E-14	0.14 (0.09, 0.20)	5.0E-07	0.22
TNF	3,846	1	0.15 (0.11, 0.19)	5.3E-14	0.18 (0.13, 0.22)	2.0E-14	0.39
	2,914	2	0.16 (0.12, 0.21)	1.2E-12	0.15 (0.10, 0.20)	3.1E-08	0.67
MMP-1	3,842	1	0.18 (0.13, 0.22)	1.8E-16	0.15 (0.10, 0.20)	1.5E-09	0.39
	2,910	2	0.20 (0.15, 0.25)	1.7E-16	0.15 (0.09, 0.20)	3.0E-07	0.13
MMP-7	3,854	1	0.22 (0.18, 0.27)	6.5E-26	0.16 (0.11, 0.21)	3.9E-11	0.0499
	2,920	2	0.22 (0.17, 0.26)	3.6E-19	0.14 (0.09, 0.20)	2.6E-07	0.0494
MMP-10	3,846	1	0.15 (0.11, 0.19)	8.0E-13	0.12 (0.07, 0.17)	1.3E-06	0.29
	2,914	2	0.14 (0.10, 0.19)	1.8E-09	0.10 (0.05, 0.16)	2.2E-04	0.26
MMP-12	3,854	1	0.22 (0.18, 0.26)	3.5E-31	0.19 (0.15, 0.23)	1.5E-18	0.31
	2,920	2	0.21 (0.17, 0.25)	6.0E-23	0.17 (0.12, 0.22)	1.7E-11	0.18

Model 1: inflammatory marker (SD-units) ~ sLOX-1 (SD-units) × weight status (overweight/obesity vs. normal weight) + age + sex + smoking status (smoking, passive smoking, non-smoking). *Model 2:* Model 1 + puberty stage (pre-puberty, puberty/post-puberty).
Abbreviations: CI, confidence interval; IFN-gamma, interferon gamma; IL, interleukin; LAP TGF-beta-1, latency-associated peptide transforming growth factor beta-1; MCP-1, monocyte chemotactic protein 1; MMP, matrix metalloproteinases; SD, standard deviation; sLOX-1, soluble lectin-like oxidized low-density lipoprotein; TNF, tumor necrosis factor.

Table S4. Estimated regression β-effects (95% CI) for the interaction between plasma sLOX-1 and puberty stage (pre-puberty vs. puberty/post-puberty) on plasma inflammatory markers.

Inflammatory marker	n	Pre-puberty		Puberty/post-puberty		$P_{interaction}$
		β (95% CI)	*P* Value	β (95% CI)	*P* Value	
CD40	2,914	0.07 (0.01, 0.13)	0.03	0.13 (0.08, 0.17)	4.1E-08	0.13
CD40L	2,920	0.12 (0.06, 0.18)	1.4E-04	0.17 (0.12, 0.21)	1.1E-12	0.24
IFN-gamma	2,914	0.14 (0.08, 0.21)	7.7E-06	0.13 (0.08, 0.17)	7.1E-08	0.68
IL-8	2,914	0.22 (0.16, 0.28)	3.8E-12	0.23 (0.19, 0.28)	1.8E-23	0.72
IL-18	2,920	0.31 (0.25, 0.37)	2.9E-24	0.29 (0.25, 0.34)	1.4E-38	0.66
LAP TGF-beta-1	2,914	0.15 (0.09, 0.22)	1.2E-06	0.19 (0.15, 0.24)	4.6E-16	0.35
MCP-1	2,914	0.17 (0.11, 0.23)	3.0E-08	0.17 (0.12, 0.21)	1.2E-13	0.96
TNF	2,914	0.13 (0.07, 0.19)	1.1E-05	0.17 (0.13, 0.22)	1.0E-15	0.21
MMP-1	2,910	0.22 (0.16, 0.28)	3.7E-12	0.17 (0.12, 0.21)	3.2E-13	0.20
MMP-7	2,920	0.17 (0.11, 0.23)	1.8E-08	0.19 (0.14, 0.23)	1.2E-16	0.69
MMP-10	2,914	0.14 (0.08, 0.20)	3.0E-06	0.13 (0.08, 0.17)	1.5E-08	0.68
MMP-12	2,920	0.18 (0.12, 0.23)	1.3E-10	0.21 (0.17, 0.25)	6.2E-25	0.33

Model: inflammatory marker (SD-units) ~ sLOX-1 (SD-units) × puberty stage (pre-puberty vs. puberty/post-puberty) + age + sex + smoking status (smoking, passive smoking, non-smoking) + BMI SDS. *Abbreviations:* CI, confidence interval; IFN-gamma, interferon gamma; IL, interleukin; LAP TGF-beta-1, latency-associated peptide transforming growth factor beta-1; MCP-1, monocyte chemotactic protein 1; MMP, matrix metalloproteinases; SDS, standard deviation score; sLOX-1, soluble lectin-like oxidized low-density lipoprotein; TNF, tumor necrosis factor.

Table S5. Estimated regression β-effects (95% CI) for associations of plasma sLOX-1 with cardiometabolic risk factors in a pooled model.

Cardiometabolic risk factor	n	Pooled model	β (95% CI)	*P* Value
BMI SDS †	3,854	1	0.08 (0.05, 0.12)	1.5E-07
	2,920	2	0.08 (0.05, 0.12)	8.9E-06
Waist SDS †	3,464	1	0.09 (0.06, 0.12)	9.9E-08
	2,589	2	0.09 (0.06, 0.13)	9.7E-07
Body fat % (log) †	1,861	1	0.11 (0.06, 0.15)	5.7E-06
	1,483	2	0.10 (0.06, 0.15)	7.2E-06
Fasting plasma ALT, U/L (log)	3,790	1	0.10 (0.07, 0.13)	7.7E-10
	2,902	2	0.09 (0.06, 0.13)	2.6E-07
Fasting serum hs-CRP, mg/L (log)	2,176	1	0.12 (0.08, 0.17)	9.3E-08
	1,160	2	0.15 (0.09, 0.20)	3.8E-08
HOMA-IR, mIU/L (log)	3,794	1	0.02 (-0.01, 0.05)	0.12
	2,881	2	0.04 (0.01, 0.07)	0.009
Fasting whole blood HbA_{1c}, mmol/mol (log)	3,784	1	0.00 (-0.03, 0.04)	0.80
	2,900	2	-0.01 (-0.04, 0.03)	0.69
Fasting plasma HDL-C, mmol/L (log)	3,775	1	-0.07 (-0.10, -0.04)	8.3E-07
	2,892	2	-0.08 (-0.12, -0.05)	7.6E-07
Fasting plasma LDL-C, mmol/L (log)	3,775	1	0.08 (0.04, 0.11)	3.2E-06
	2,892	2	0.05 (0.02, 0.09)	0.004
Fasting plasma triglycerides, mmol/L (log)	3,775	1	0.12 (0.09, 0.15)	2.0E-16
	2,892	2	0.12 (0.09, 0.16)	5.3E-14
SBP SDS	3,472	1	0.05 (0.01, 0.08)	0.005
	2,619	2	0.04 (0.01, 0.08)	0.03
DBP SDS	3,472	1	0.10 (0.07, 0.13)	3.1E-09
	2,619	2	0.09 (0.06, 0.13)	1.6E-06

Model 1: cardiometabolic risk factor (SD-units) ~ sLOX-1 (SD-units) + age + sex + smoking status (smoking, passive smoking, non-smoking) + BMI SDS. *Model 2:* Model 1 + puberty stage (pre-puberty, puberty/post-puberty). † Represents cardiometabolic risk factors which were not adjusted for BMI SDS. *Abbreviations:* ALT, alanine aminotransferase; CI, confidence interval; DBP, diastolic blood pressure; HbA_{1c}, hemoglobin A_{1c}; HDL-C, high-density lipoprotein cholesterol; HOMA-IR, homeostasis model assessment of insulin resistance; hs-CRP, high-sensitivity C-reactive protein; LDL-C, low-density lipoprotein cholesterol; SBP, systolic blood pressure; SDS, standard deviation score; sLOX-1, soluble lectin-like oxidized low-density lipoprotein receptor-1.

Table S6. Estimated regression β-effects (95% CI) for the interaction between plasma sLOX-1 and weight status (overweight/obesity vs. normal weight) on cardiometabolic risk factors.

Cardiometabolic risk factor	n	Interaction model	Overweight/Obesity		Normal weight		$P_{interaction}$
			β (95% CI)	*P* Value	β (95% CI)	*P* Value	
Fasting plasma ALT, U/L (log)	3,672	1	0.11 (0.07, 0.15)	3.6E-07	0.10 (0.05, 0.15)	3.6E-05	0.82
	2,816	2	0.11 (0.07, 0.16)	1.1E-06	0.08 (0.03, 0.14)	0.003	0.35
Fasting serum hs-CRP, mg/L (log)	1,556	1	0.16 (0.11, 0.22)	5.1E-09	0.03 (-0.06, 0.11)	0.57	0.008
	1,142	2	0.18 (0.11, 0.24)	2.4E-08	0.07 (-0.04, 0.18)	0.20	0.11
HOMA-IR, mIU/L (log)	3,676	1	0.08 (0.04, 0.11)	2.1E-05	-0.02 (-0.06, 0.02)	0.39	5.3E-04
	2,794	2	0.09 (0.05, 0.13)	7.0E-06	0.01 (-0.04, 0.06)	0.71	0.008
Fasting whole blood HbA_{1c}, mmol/mol (log)	3,666	1	0.03 (-0.01, 0.08)	0.12	-0.03 (-0.08, 0.02)	0.17	0.04
	2,814	2	0.01 (-0.04, 0.06)	0.67	-0.03 (-0.08, 0.03)	0.35	0.32
Fasting plasma HDL-C, mmol/L (log)	3,658	1	-0.07 (-0.11, -0.03)	2.9E-04	-0.09 (-0.14, -0.05)	3.5E-05	0.45
	2,807	2	-0.08 (-0.12, -0.03)	7.9E-04	-0.12 (-0.17, -0.07)	7.7E-06	0.22
Fasting plasma LDL-C, mmol/L (log)	3,658	1	0.12 (0.08, 0.16)	2.4E-08	0.02 (-0.02, 0.07)	0.32	0.003
	2,807	2	0.10 (0.05, 0.15)	3.3E-05	0.00 (-0.06, 0.06)	0.99	0.006
Fasting plasma triglycerides, mmol/L (log)	3,658	1	0.15 (0.11, 0.19)	2.7E-14	0.10 (0.06, 0.15)	3.9E-06	0.12
	2,807	2	0.15 (0.11, 0.20)	3.4E-12	0.11 (0.06, 0.16)	1.1E-05	0.22
SBP SDS	3,366	1	0.04 (0.00, 0.08)	0.08	0.06 (0.01, 0.12)	0.02	0.47
	2,544	2	0.03 (-0.02, 0.08)	0.25	0.08 (0.02, 0.14)	0.01	0.21
DBP SDS	3,366	1	0.09 (0.05, 0.14)	1.1E-05	0.11 (0.06, 0.16)	2.4E-05	0.61
	2,544	2	0.09 (0.04, 0.14)	3.4E-04	0.12 (0.06, 0.18)	1.5E-04	0.43

Model 1: cardiometabolic risk factor (SD-units) ~ sLOX-1 (SD-units) × weight status (overweight/obesity vs. normal weight) + age + sex + smoking status (smoking, passive smoking, non-smoking). *Model 2:* Model 1 + puberty stage (pre-puberty, puberty/post-puberty). Cardiometabolic risk factors: BMI SDS, waist SDS, and body fat % were not assessed in the interaction model with weight status. *Abbreviations:* ALT, alanine aminotransferase; CI, confidence interval; DBP, diastolic blood pressure; HbA_{1c}, hemoglobin A_{1c}; HDL-C, high-density lipoprotein cholesterol; HOMA-IR, homeostasis model assessment of insulin resistance; hs-CRP, high-sensitivity C-reactive protein; LDL-C, low-density lipoprotein cholesterol; SBP, systolic blood pressure; SDS, standard deviation score; sLOX-1, soluble lectin-like oxidized low-density lipoprotein receptor-1.

Table S7. Estimated regression β-effects (95% CI) for the interaction between fasting plasma sLOX-1 and puberty stage (pre-puberty vs. puberty/post-puberty) on cardiometabolic risk factors.

Cardiometabolic risk factor	n	Pre-puberty		Puberty/post-puberty		$P_{interaction}$
		β (95% CI)	*P* Value	β (95% CI)	*P* Value	
BMI SDS †	2,920	-0.02 (-0.08, 0.04)	0.51	0.13 (0.09, 0.18)	1.8E-09	3.9E-05
Waist SDS †	2,869	0.02 (-0.05, 0.08)	0.61	0.13 (0.09, 0.18)	1.5E-08	0.004
Body fat % (log) †	1,483	0.05 (-0.03, 0.13)	0.20	0.13 (0.08, 0.19)	3.8E-06	0.09
Fasting plasma ALT, U/L (log)	2,902	0.04 (-0.02, 0.10)	0.16	0.12 (0.07, 0.16)	7.6E-08	0.04
Fasting serum hs-CRP, mg/L (log)	1,160	0.13 (0.03, 0.23)	0.01	0.15 (0.09, 0.21)	8.9E-07	0.69
HOMA-IR, mIU/L (log)	2,881	-0.03 (-0.08, 0.02)	0.22	0.08 (0.04, 0.11)	4.1E-05	6.5E-04
Fasting whole blood HbA_{1c}, mmol/mol (log)	2,900	-0.01 (-0.07, 0.06)	0.87	-0.01 (-0.05, 0.04)	0.71	0.93
Fasting plasma HDL-C, mmol/L (log)	2,892	-0.10 (-0.15, -0.04)	6.1E-04	-0.08 (-0.12, -0.04)	2.6E-04	0.55
Fasting plasma LDL-C, mmol/L (log)	2,892	0.09 (0.03, 0.15)	0.005	0.03 (-0.01, 0.08)	0.13	0.17
Fasting plasma triglycerides, mmol/L (log)	2,892	0.08 (0.03, 0.13)	0.004	0.15 (0.11, 0.19)	3.9E-13	0.046
SBP SDS	2,619	0.03 (-0.03, 0.10)	0.32	0.05 (0.00, 0.10)	0.04	0.41
DBP SDS	2,619	0.11 (0.05, 0.17)	6.9E-04	0.08 (0.04, 0.13)	4.6E-04	0.88

Model: cardiometabolic risk factor (SD-units) ~ sLOX-1 (SD-units) × puberty stage (pre-puberty vs. puberty/post-puberty) + age + sex + smoking status (smoking, passive smoking, non-smoking) + BMI SDS. † Represents cardiometabolic risk factors which were not adjusted for BMI SDS. *Abbreviations:* ALT, alanine aminotransferase; CI, confidence interval; DBP, diastolic blood pressure; HbA_{1c}, hemoglobin A_{1c}; HDL-C, high-density lipoprotein cholesterol; HOMA-IR, homeostasis model assessment of insulin resistance; hs-CRP, high-sensitivity C-reactive protein; LDL-C, low-density lipoprotein cholesterol; SBP, systolic blood pressure; SDS, standard deviation score; sLOX-1, soluble lectin-like oxidized low-density lipoprotein receptor-1.

Table S8. Estimated OR (95% CI) for associations of fasting plasma sLOX-1 (and hs-CRP for comparison) with cardiometabolic risk features in a pooled model.

Cardiometabolic risk feature	Predictor	n	Pooled model	OR (95% CI)	*P* Value
High ALT	sLOX-1	3,790	1	1.16 (1.08, 1.25)	4.1E-04
		2,902	2	1.17 (1.08, 1.26)	9.1E-04
	hs-CRP	1,564	1	1.03 (0.97, 1.10)	0.34
		1,157	2	1.00 (0.93, 1.08)	0.93
Insulin resistance	sLOX-1	3,702	1	1.16 (1.07, 1.25)	8.6E-04
		2,800	2	1.17 (1.07, 1.27)	0.001
	hs-CRP	1,539	1	1.03 (0.96, 1.10)	0.36
		1,126	2	1.03 (0.96, 1.11)	0.37
Hyperglycemia	sLOX-1	3,770	1	1.08 (0.98, 1.18)	0.13
		2,890	2	1.10 (0.98, 1.21)	0.11
	hs-CRP	1,551	1	1.02 (0.95, 1.09)	0.51
		1,148	2	1.01 (0.93, 1.09)	0.80
Dyslipidemia	sLOX-1	3,775	1	1.25 (1.17, 1.33)	1.8E-07
		2,892	2	1.25 (1.16, 1.34)	2.5E-06
	hs-CRP	1,554	1	1.07 (1.00, 1.13)	0.043
		1,150	2	1.07 (1.00, 1.14)	0.08
Hypertension	sLOX-1	3,472	1	1.12 (1.02, 1.21)	0.02
		2,619	2	1.09 (0.98, 119)	0.13
	hs-CRP	1,530	1	0.99 (0.90, 1.07)	0.77
		1,135	2	1.00 (0.90, 1.09)	0.96

Model 1: cardiometabolic risk feature (0/1) ~ sLOX-1 or hs-CRP (SD-units) + age + sex + smoking status (smoking, passive smoking, non-smoking) + BMI SDS. *Model 2:* Model 1 + puberty stage (pre-puberty, puberty/post-puberty). *Abbreviations:* CI, confidence interval; high ALT, high alanine transaminase (surrogate measure of hepatic steatosis); hs-CRP, high sensitivity C-reactive protein; OR, odds ratio; SDS, standard deviation score; sLOX-1, soluble lectin-like oxidized low-density lipoprotein receptor-1.

Table S9. Estimated OR (95% CI) for the interaction between fasting plasma sLOX-1 and weight status (overweight/obesity vs. normal weight) on cardiometabolic risk features.

Cardiometabolic risk feature	n	Overweight/Obesity		Normal weight		$P_{interaction}$
		OR (95% CI)	*P* Value	OR (95% CI)	*P* Value	
High ALT	3,672	1.20 (1.10, 1.30)	1.9E-04	1.16 (1.00, 1.32)	0.06	0.73
	2,816	1.21 (1.10, 1.32)	5.1E-04	1.17 (1.00, 1.34)	0.07	0.72
Insulin resistance	3,588	1.24 (1.15, 1.33)	3.3E-06	1.10 (0.91, 1.30)	0.33	0.29
	2,717	1.24 (1.14, 1.35)	3.2E-05	1.16 (0.94, 1.39)	0.18	0.59
Hyperglycemia	3,652	1.16 (1.05, 1.27)	0.01	0.95 (0.75, 1.15)	0.59	0.08
	2,804	1.17 (1.04, 1.29)	0.02	1.00 (0.76, 1.24)	0.98	0.27
Dyslipidemia	3,658	1.29 (1.20, 1.38)	1.3E-07	1.24 (1.08, 1.40)	0.009	0.67
	2,807	1.30 (1.20, 1.41)	1.2E-06	1.23 (1.05, 1.40)	0.03	0.56
Hypertension	3,366	1.16 (1.05, 1.29)	0.006	1.04 (0.87, 1.25)	0.65	0.30
	2,544	1.15 (1.02, 1.30)	0.02	0.95 (0.76, 1.19)	0.68	0.14

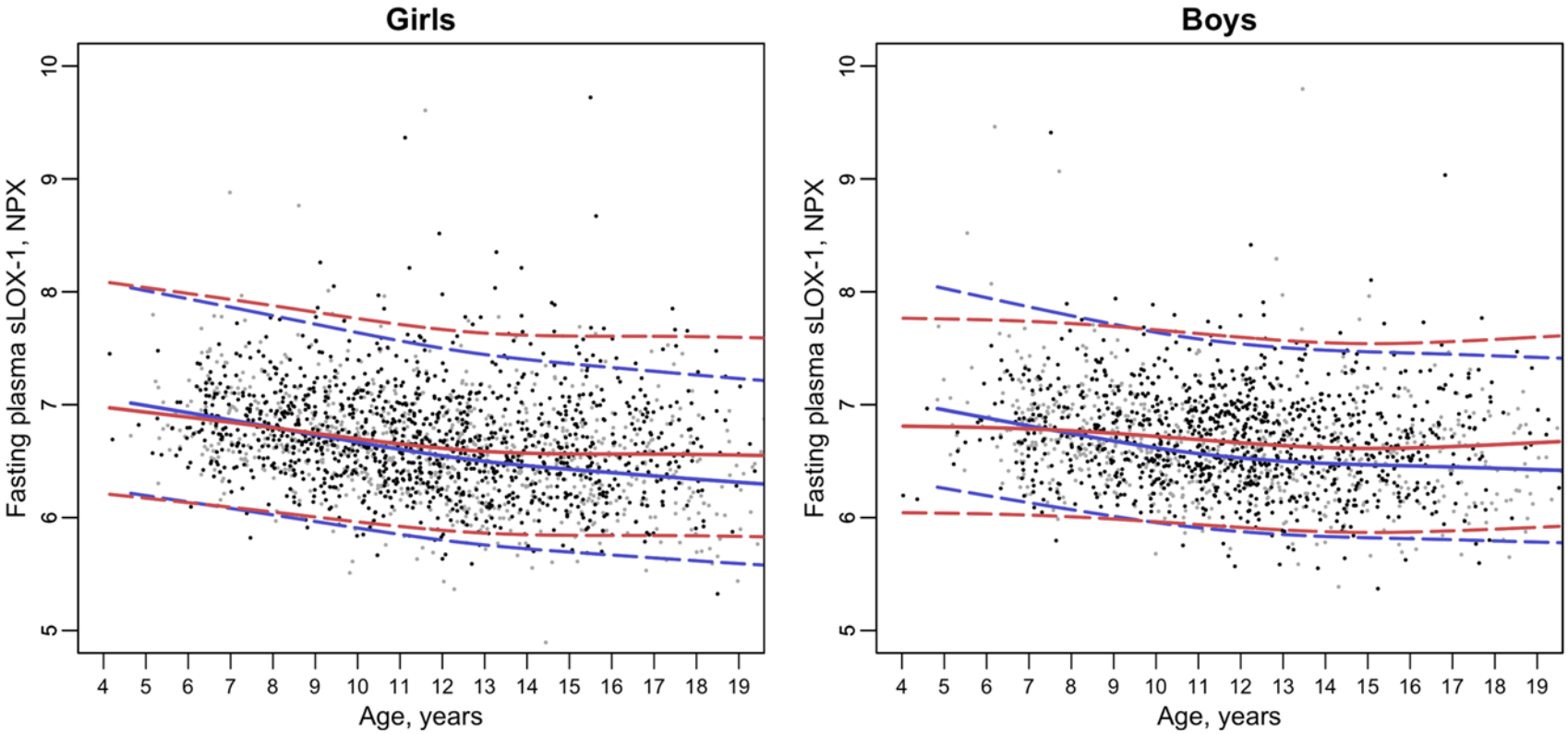
Model 1: cardiometabolic risk feature (0/1) ~ sLOX-1 (SD-units) × weight status (overweight/obesity vs. normal weight) + age + sex + smoking status (smoking, passive smoking, non-smoking). *Model 2:* Model 1 + puberty stage (pre-puberty, puberty/post-puberty).
Abbreviations: CI, confidence interval; high ALT, high alanine transaminase (surrogate measure of hepatic steatosis); OR, odds ratio; SD, standard deviation; sLOX-1, soluble lectin-like oxidized low-density lipoprotein receptor-1.

Table S10. Estimated OR (95% CI) for the interaction between fasting plasma sLOX-1 and puberty stage (pre-puberty vs. puberty/post-puberty) on cardiometabolic risk features.

Cardiometabolic risk feature	n	Pre-puberty		Puberty/post-puberty		$P_{interaction}$
		OR (95% CI)	*P* Value	OR (95% CI)	*P* Value	
High ALT	2,902	1.19 (1.08, 1.30)	0.003	1.13 (0.97, 1.29)	0.13	0.62
Insulin resistance	2,800	1.13 (1.01, 1.25)	0.047	1.26 (1.1, 1.43)	0.006	0.29
Hyperglycemia	2,890	1.09 (0.95, 1.22)	0.22	1.13 (0.91, 1.34)	0.27	0.77
Dyslipidemia	2,892	1.24 (1.13, 1.35)	2.2E-04	1.27 (1.11, 1.44)	0.003	0.78
Hypertension	2,619	1.09 (0.91, 1.29)	0.35	1.08 (0.95, 1.24)	0.23	0.98

Model: cardiometabolic risk feature (0/1) ~ sLOX-1 (SD-units) × puberty stage (pre-puberty vs. puberty/post-puberty) + age + sex + smoking status (smoking, passive smoking, non-smoking) + BMI SDS. *Abbreviations:* CI, confidence interval; high ALT, high alanine transaminase (surrogate measure of hepatic steatosis); OR, odds ratio; SDS, standard deviation score; sLOX-1, soluble lectin-like oxidized low-density lipoprotein receptor-1.

Figure S1. Smoothed age- and sex- specific percentile curves (2.5, 50, 97.5) for fasting plasma sLOX-1 NPX levels.



Generalized Additive Models for Location, Scale and Shape (GAMLSS) were performed in R, using the Box-Cox transformation distribution family to account for skewness, with the best fit determined by the Akaike Information Criterion (AIC). The obesity clinic group is represented by red lines and black points and the population-based group is represented by blue lines and light grey points.
Abbreviations: NPX, normalized protein expression; sLOX-1, soluble lectin-like oxidized low-density lipoprotein receptor-1.