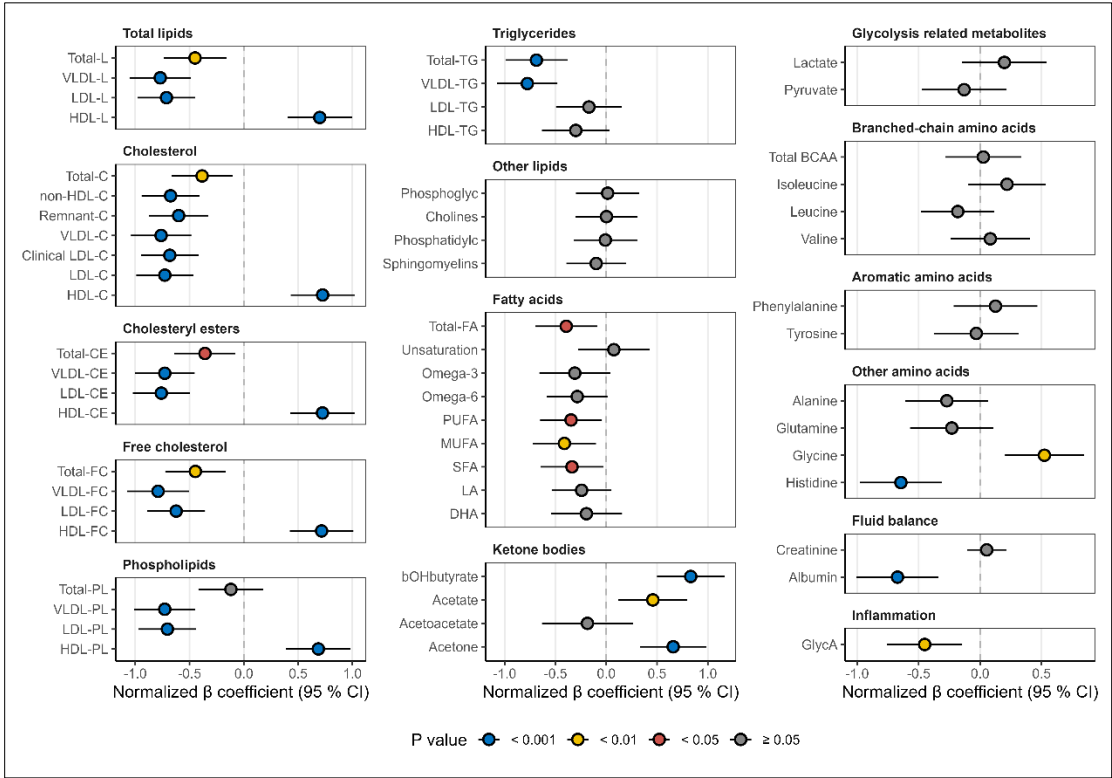


Supplementary table 1 Particle composition by lipoproteins assessed by NMR in the study population, the Dialong study.

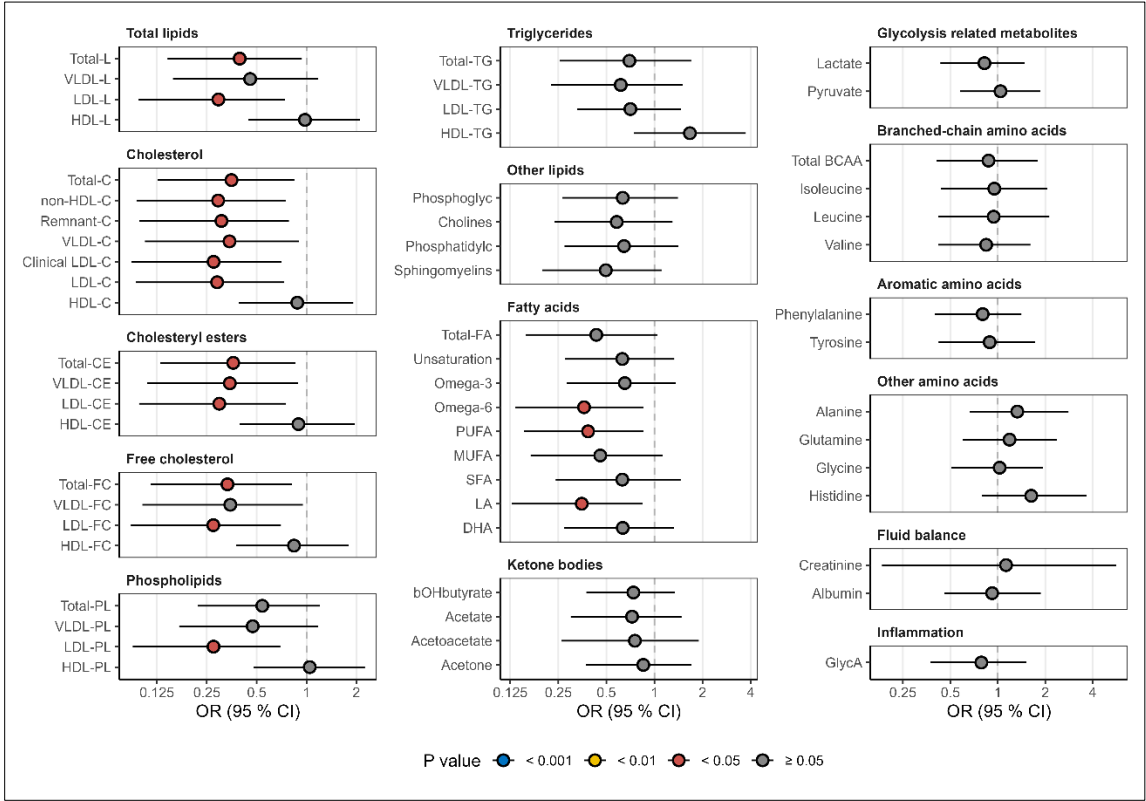
	Diabetes subjects with coronary arteries free from atherosclerosis (n = 14)	Diabetes subjects with previously established CHD or coronary atherosclerosis presence on CTCA (n = 88)	Controls (n = 61)	P value	
				1	2
HDL composition, mmol/l					
HDL-TG	0.094 (0.087, 0.106)	0.088 (0.078, 0.109)	0.10 (0.078, 0.12)	0.4	0.3
HDL-PL	1.60 (1.43, 1.81)	1.46 (1.26, 1.72)	1.34 (1.20, 1.52)	0.2	0.002
HDL-CE	1.08 (1.01, 1.32)	1.05 (0.86, 1.23)	0.90 (0.80, 1.06)	0.3	0.001
HDL-FC	0.32 (0.29, 0.38)	0.30 (0.25, 0.35)	0.26 (0.22, 0.30)	0.3	0.003
HDL-L	3.11 (2.83, 3.61)	2.89 (2.46, 3.42)	2.61 (2.32, 3.01)	0.2	0.002
LDL composition, mmol/l					
LDL-TG	0.12 (0.10, 0.13)	0.12 (0.11, 0.14)	0.13 (0.11, 0.15)	0.5	0.12
LDL-PL	0.41 (0.39, 0.52)	0.48 (0.38, 0.55)	0.61 (0.52, 0.71)	0.4	<0.001
LDL-CE	0.78 (0.72, 1.01)	0.95 (0.69, 1.10)	1.26 (1.04, 1.49)	0.4	<0.001
LDL-FC	0.34 (0.30, 0.41)	0.37 (0.30, 0.43)	0.50 (0.40, 0.55)	0.5	<0.001
LDL-L	1.62 (1.54, 2.07)	1.94 (1.51, 2.24)	2.48 (2.07, 2.91)	0.5	<0.001
VLDL composition, mmol/l					
VLDL-TG	0.33 (0.31, 0.46)	0.37 (0.28, 0.52)	0.54 (0.41, 0.84)	0.5	<0.001
VLDL-PL	0.23 (0.19, 0.28)	0.25 (0.17, 0.32)	0.37 (0.28, 0.43)	0.4	<0.001
VLDL-CE	0.24 (0.20, 0.28)	0.27 (0.18, 0.32)	0.37 (0.30, 0.46)	0.5	<0.001
VLDL-FC	0.14 (0.12, 0.17)	0.16 (0.11, 0.20)	0.23 (0.19, 0.27)	0.4	<0.001
VLDL-L	0.97 (0.79, 1.11)	1.03 (0.74, 1.35)	1.55 (1.25, 1.84)	0.4	<0.001

Data are presented as median (IQR). **1** = P values indicate differences between diabetes subjects with coronary arteries free from atherosclerosis, versus diabetes subjects with previously established CHD or coronary atherosclerosis presence on CTCA. **2** = P values indicate differences between the total diabetes group versus the control group. HDL-/LDL-/VLDL-TG: triglyceride content in HDL/LDL/VLDL. HDL-/LDL-/VLDL-PL: phospholipid content in HDL/LDL/VLDL. HDL-/LDL-/VLDL-CE: cholesteryl ester content in HDL/LDL/VLDL. HDL-/LDL-/VLDL-FC: free cholesterol content in HDL/LDL/VLDL. HDL-/LDL-/VLDL-L: total lipid content in HDL/LDL/VLDL.

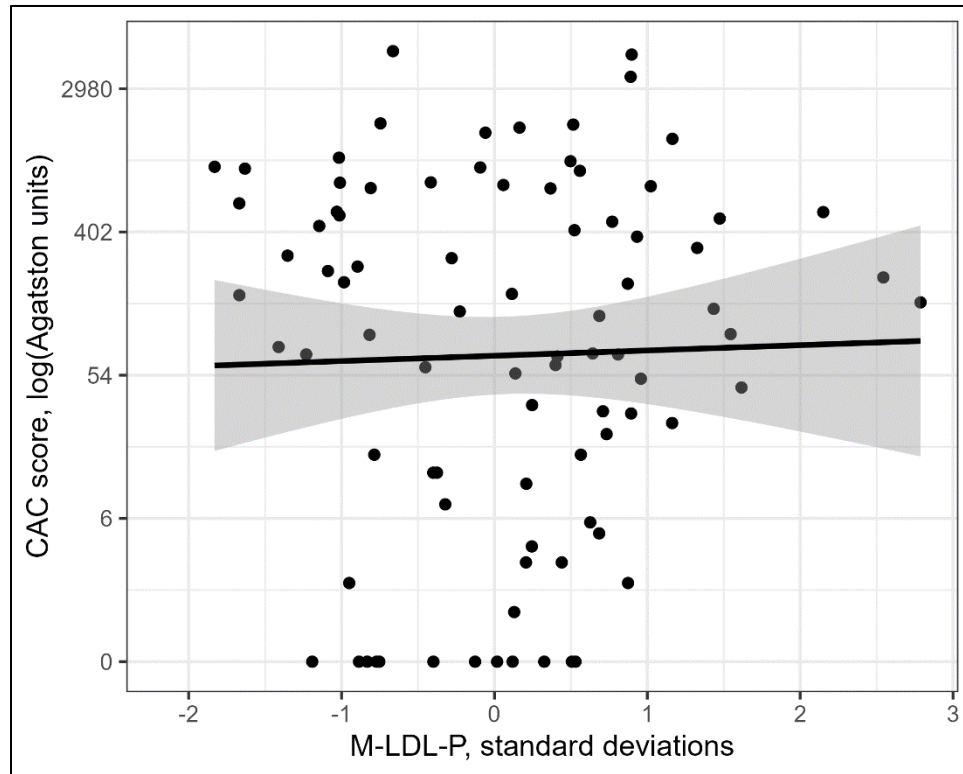
Supplementary figure 1 Lipoprotein composition and concentration of fatty acids, amino acids, ketone bodies and metabolites related to fluid balance and inflammation, assessed by NMR in the study population. The figure shows the levels in the individuals with long-term type 1 diabetes (n = 102) compared to the control group (n = 61). The estimates on the right side of the zero-line indicate higher level in the diabetes group and estimates on the left side indicate lower level in the diabetes group. The beta-coefficients are SD-scaled. The error bars represent 95% confidence intervals (95% CI). The models are adjusted for age, sex, BMI, eGFR and statin treatment. Level of significance is illustrated by color. Units are mmol/l, or g/l (for albumin).



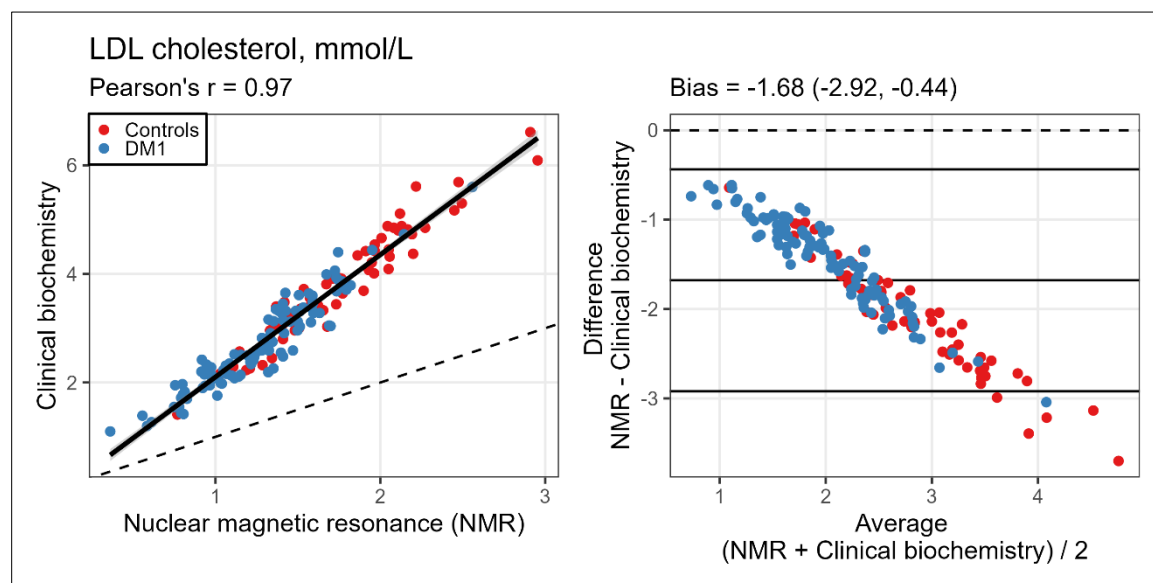
Supplementary figure 2 Lipoprotein composition and concentration of fatty acids, amino acids, ketone bodies and metabolites related to fluid balance and inflammation, assessed by NMR in the diabetes group. The figure shows the associations between the metabolites and presence coronary arteries free from atherosclerosis among the individuals with long-term type 1 diabetes. Estimates are ORs and the error bars represent 95% CI. The estimates on the right side of the zero-line indicate higher odds of having coronary arteries free from atherosclerosis with higher levels of metabolites, and estimates on the left side indicate lower odds of having coronary arteries free from atherosclerosis with higher levels of metabolites. All models are adjusted for age, sex, BMI, eGFR and statin treatment. Level of significance is illustrated by color. Units are mmol/l or g/l (for albumin).



Supplementary figure 3 Scatter plot showing the relationship between the natural logarithm of CAC score and the particle concentration of M-LDL presented on a standard deviation scale, in the diabetes group. The scatter plot shows the individual measurements within the diabetes group, together with the linear regression line. The shaded area around the regression line represents a 95% confidence interval.



Supplementary figure 4 Scatter plots showing the relationship between conventionally measured LDL-C from clinical biochemistry and LDL-C assessed by NMR. The left panel is a simple scatter plot for individual measurements, and a linear regression line in solid black with a shaded 95% confidence interval around. The dotted line indicate indicates the perfect 1:1 relationship between values reported from clinical biochemistry and NMR. The right panel is a Bland-Altman plot, where the x axis represents the average of the two measurements, and the y axis represents the difference between the two measurements. The three solid black lines represent the average bias and 95% confidence interval, and the dotted line indicates the perfect 1:1 relationship between values reported from clinical biochemistry and NMR. Blue dots represent the individuals with long-term type 1 diabetes. Red dots represent the controls.



Supplementary figure 5 Flow chart of the study participants with type 1 diabetes, the Dialong study.

