THE LANCET Diabetes & Endocrinology

Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

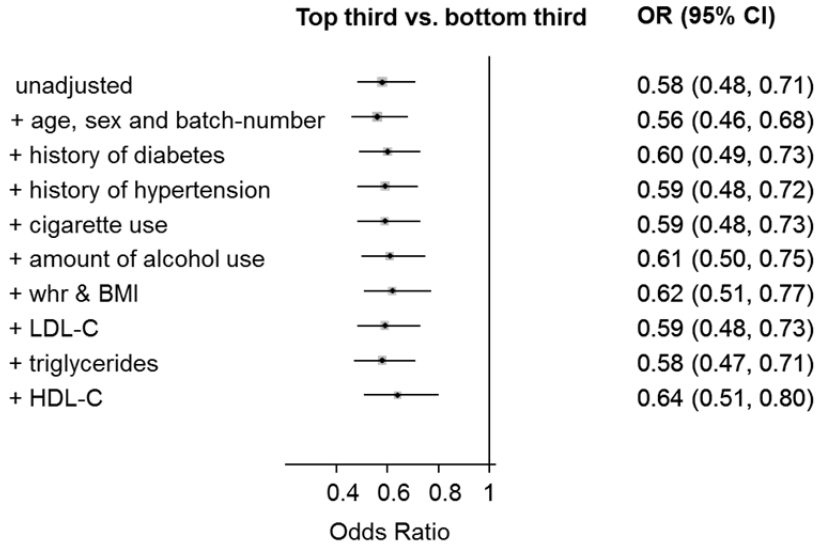
Supplement to: Saleheen D, Scott R, Javad S, et al. Association of HDL cholesterol efflux capacity with incident coronary heart disease events: a prospective case-control study. *Lancet Diabetes Endocrinol* 2015; published online May 27. http://dx.doi.org/10.1016/S2213-8587(15)00126-6.

eTable 1. Cross-sectional correlates of cholesterol efflux capacity in control participants only (n=1749)

	Cholesterol Efflux (r [95% CI])	***P-value***
Demographic & anthropometric markers		
Age (years)	0.06 (0.01, 0.09)	0.01
Female	0.24 (0.2, 0.27)	0.001
Waist to hip ratio	-0.08 (-0.11, -0.04)	<0.0001
BMI	-0.06 (-0.09, -0.01)	0.008
Medical history, tobacco use and blood pressure		
History of diabetes	-0.18 (-0.21, -0.14)	<0.0001
History of hypertension	-0.03 (-0.07, 0.01)	0.14
Systolic blood pressure (mmHg)	0.02 (-0.02, 0.06)	0.40
Diastolic blood pressure (mmHg)	0.02 (-0.01, 0.06)	0.33
Cigarette use	0 (-0.04, 0.03)	0.85
Amount of alcohol consumed	0.12 (0.08, 0.15)	<0.0001
Statin use	0 (-0.04, 0.04)	0.85
Lipid-related markers		
Log-Triglycerides (mmol/l)	-0.02 (-0.05, 0.02)	0.39
Total cholesterol (mmol/l)	0.18 (0.15, 0.22)	<0.0001
LDL-C (mmol/l)	0.05 (0.02, 0.09)	0.002
Apo-B (mmol/l)	0.03 (0, 0.08)	0.09
HDL-C (mmol/l)	0.40 (0.38, 0.42)	<0.0001
ApoA-I (mmol/l)	0.22 (0.18, 0.26)	<0.0001

Partial correlation coefficients adjusted for age and sex were calculated to assess correlations between cholesterol efflux capacity and other traits.

eFigure1. Association of cholesterol efflux capacity progressively adjusted for a number of traits and HDL-C levels



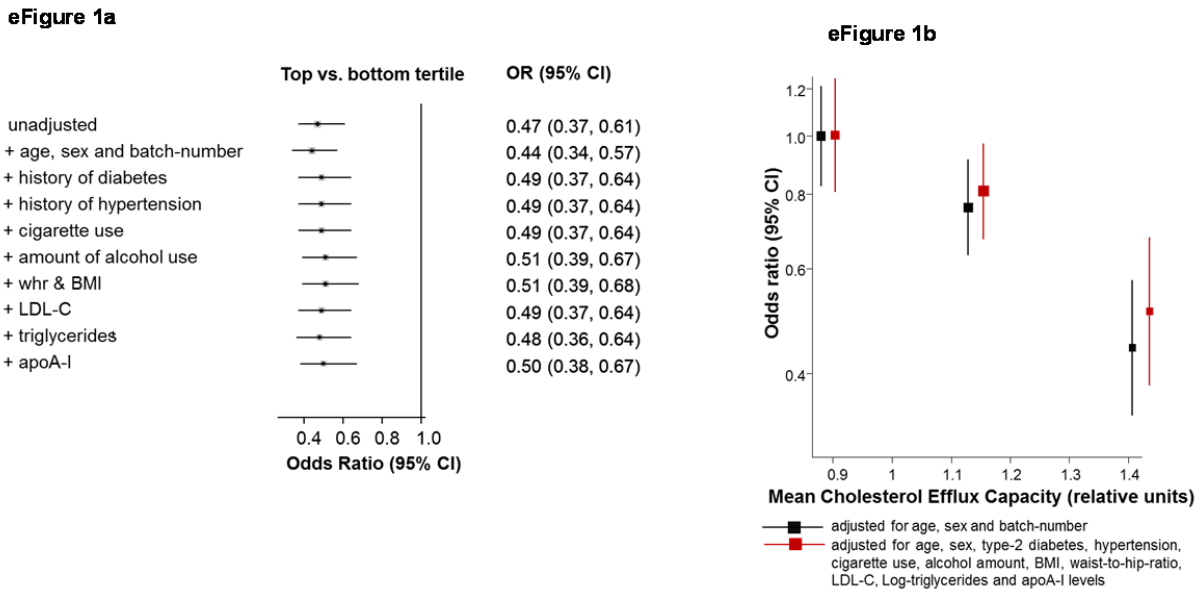
eTable 2. Association of cholesterol efflux capacity with incident CHD events progressively adjusted for vascular risk factors and apoA-I levels.

	OR (95% CI)			OR (95% CI)
Model	***Bottom Tertile*** *(Mean CEC: 0.83 ± 0.09)*	***Middle Tertile*** *(Mean CEC: 1.13 ± 0.09)*	***Top Tertile*** *(Mean CEC: 1.40 ± 0.09)*	***Per-SD increase***
No adjustments[#]	1.00 (0.83,1.21)	0.74 (0.62,0.88)	0.47 (0.37,0.61)**	0.62 (0.49-0.76)
plus age, sex and batch-number	1.00 (0.82,1.21)	0.76 (0.63,0.91)	0.44 (0.34,0.57)**	0.68 (0.54-0.83)
plus history of diabetes	1.00 (0.82,1.22)	0.80 (0.67,0.97)	0.49 (0.37,0.64)**	0.68 (0.54-0.83)
plus history of hypertension status	1.00 (0.81,1.23)	0.78 (0.65,0.94)	0.49 (0.37,0.64)**	0.66 (0.51-0.81)
plus cigarette use	1.00 (0.81,1.23)	0.79 (0.65,0.96)	0.49 (0.37,0.64)**	0.70 (0.54-0.86)
plus alcohol use	1.00 (0.81,1.23)	0.81 (0.67,0.98)	0.51 (0.39,0.67)**	0.70 (0.54-0.86)
plus waist-to-hip ratio & BMI	1.00 (0.81,1.23)	0.81 (0.67,0.99)	0.51 (0.39,0.68)**	0.71 (0.54-0.88)
plus LDL-C	1.00 (0.81,1.24)	0.80 (0.66,0.97)	0.49 (0.37,0.64)**	0.73 (0.56-0.91)
plus log-triglycerides	1.00 (0.81,1.24)	0.80 (0.66,0.96)	0.48 (0.36,0.64)**	0.75 (0.57-0.93)
plus apoA-I levels	1.00 (0.80,1.25)	0.80 (0.67,0.97)	0.50 (0.38,0.67)**	0.72 (0.51-0.93)

***P-value from trend-test* < 0.0001;Analyses were conducted in 1428 cases and 1749 controls on whom apoA-I levels were available.

Odds ratios (ORs) for CHD were calculated using unconditional logistic regression analyses and effect estimates were progressively adjusted for age, sex, batch-number, history of diabetes, history of hypertension, cigarette use, amount of alcohol intake, body-mass index (BMI), waist-to-hip ratio (WHR), LDL-C, log-triglycerides and apoA-1 levels. The total number of participants remained the same for all the models. ORs were calculated using tertiles of cholesterol efflux capacity; the corresponding 95% CIs were estimated from floating absolute variances that reflect the amount of information underlying each group (including the reference group) (19). Data on apoA-I levels were available in 1428 cases and 1749 controls.

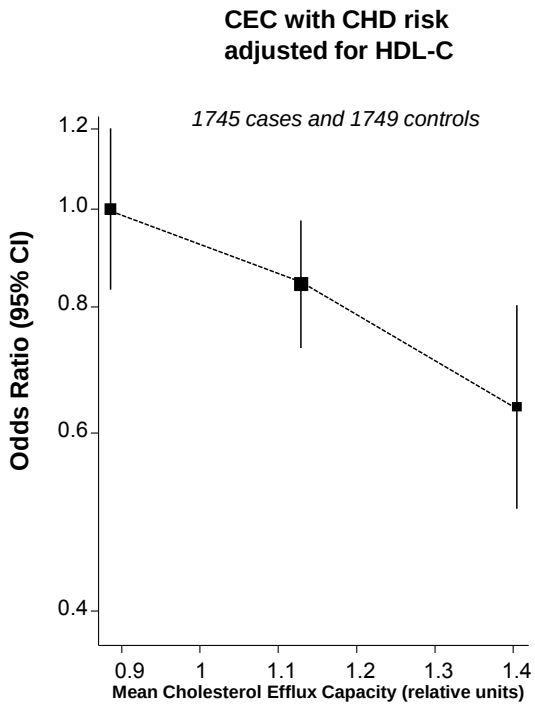
eFigure 2. Association of cholesterol efflux capacity with incident CHD events progressively adjusted for cardiovascular risk factors and apoA-I levels.



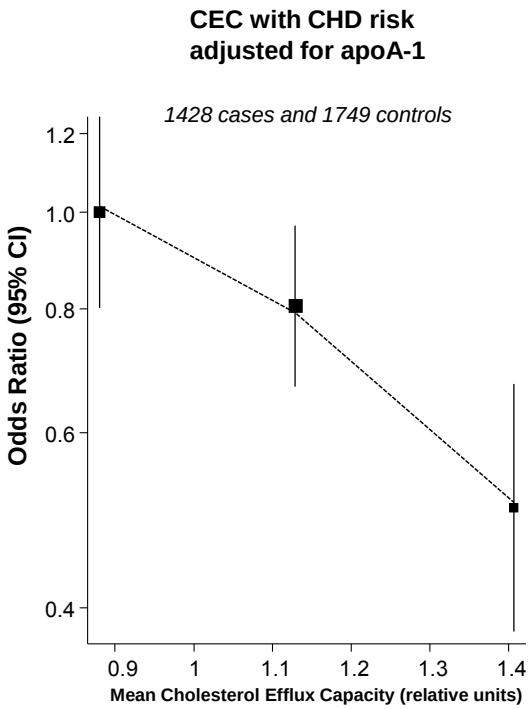
eFigure 1a. Odds ratios (ORs) for CHD were calculated using unconditional logistic regression analyses. Effect estimates and corresponding 95% CIs are shown only for the participants in the top-tertile of the distribution for cholesterol efflux capacity. Effect estimates were progressively adjusted for age, sex, batch-number, history of diabetes, history of hypertension, cigarette use, amount of alcohol intake, body-mass index (BMI), waist-to-hip ratio (WHR), LDL-C, logtriglyceride levels and apoA-I.

eFigure 1b. Shapes of the association for cholesterol efflux capacity with incident CHD risk are shown using tertiles of cholesterol efflux capacity. Analyses are only shown for two models: (i) analyses adjusted for age, sex and batch-number only; and (ii) analyses adjusted for age, sex, history of diabetes, history of hypertension, cigarette use, amount of alcohol intake, body-mass index (BMI), waist-to-hip ratio (WHR), LDL-C, log-triglyceride levels and apoA-I. The number of participants remain the same in the two models.

eFigure 3. Fractional polynomial analyses to assess shape of the association of CEC with incident CHD risk.



adjusted for age, sex, batch-number, type-2 diabetes, hypertension, cigarette use, alcohol amount, BMI, waist-to-hip-ratio, LDL-C, Log-triglycerides and HDL-C levels



adjusted for age, sex, batch-number, type-2 diabetes, hypertension, cigarette use, alcohol amount, BMI, waist-to-hip-ratio, LDL-C, Log-triglycerides and apoA-1 levels

eFigure 4. Analyses of efflux capacity with incident CHD risk by subgroups of selected cardiovascular risk factors