LDL cholesterol levels alone do not adequately assess coronary heart disease risk in Type 2 diabetes

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Baseline data from the Atorvastatin in Factorial with Omega-3 fatty acids Risk Reduction in Diabetes (AFORRD) trial have been used to inform the distribution of coronary heart disease (CHD) risk estimates in Type 2 diabetes. 883 patients without known CHD, not on lipid-lowering therapy and with triglycerides < 8.0 mmol/l were recruited from 57 UK general practices. CHD risks were estimated from demographic, clinical and biochemical data using the UKPDS Risk Engine. The 800 randomised participants were mean (SD) age 63.5 (11.7) years, body mass index 30.8 (6.2) kg/m^2 and median (IQR) T2DM duration 4 (2–8) years. 57% were male, 90% Caucasian. Median 10-year CHD risk was 19.2% (10.8–31.2) and did not differ between the 22.1% (27.5% of men, 15.0% of women) with LDL levels < 2.6 mmol/l and those ≥ 2.6 mmol/l (17.8% (10.0–28.4) vs. 19.5% (11.2–31.9) respectively, P = 0.09). CHD risk estimates were ≥ 15% (equivalent to ≥ 20% 10-year cardiovascular disease risk) in 60.5% and 63.5% respectively.

Conclusions: CHD risk estimates in T2DM vary widely, emphasising the need for individual patient assessment with global risk evaluation tools to help inform appropriate management. Many patients at UK target LDL levels may still be at substantial CHD risk.