Declines in coronary heart disease incidence and mortality among middle-aged adults with and without diabetes.

PURPOSE: The purpose of the study was to investigate secular changes in coronary heart disease (CHD) incidence and mortality among adults with and without diabetes and to determine the effect of increased lipid-lowering medication use and reductions in low-density lipoprotein cholesterol (LDL-C) levels on these changes.

METHODS: We analyzed data on participants aged 45 to 64 years from the Atherosclerosis Risk in Communities Study in 1987-1996 (early period) and the Reasons for Geographic and Racial Differences in Stroke Study in 2003-2009 (late period). Hazard ratios (HRs) for the association of diabetes and period with incident CHD and CHD mortality were obtained after adjustment for sociodemographics cardiovascular risk factors, lipid-lowering medication use, and LDL-C.

RESULTS: After multivariable adjustment, diabetes was associated with an increased CHD risk during the early (HR = 1.99, 95% confidence interval = 1.59-2.49) and late (HR = 2.39, 95% confidence interval = 1.69-3.35) periods. CHD incidence and mortality declined between the early and late periods for individuals with and without diabetes. Increased use of lipid-lowering medication and lower LDL-C explained 33.6% and
27.2% of the decline in CHD incidence and CHD mortality, respectively, for those with diabetes.

**CONCLUSIONS:** Although rates have declined, diabetes remains associated with an increased risk of CHD incidence and mortality, highlighting the need for continuing diabetes prevention and cardiovascular risk factor management.

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