



## **Low apolipoproteinA-II is a predictor of coronary heart disease**

Data presented at the American Heart Association Scientific Sessions show for the first time a strong, inverse relationship between apolipoprotein II (apoA-II) and risk of coronary heart disease (CHD).<sup>1</sup> ApoA-II is the second main protein in high-density lipoprotein (HDL). Although its main function is not known, apoA-II has been shown to increase the stability of the HDL particle.

Researchers from the Academic Medical Center, Amsterdam, The Netherlands and the University of Cambridge, UK performed a prospective nested case-control study based on the EPIC-Norfolk cohort, involving 951 healthy men and women aged 45 to 79 years who developed CHD during a mean follow-up of 6 years, and 1,883 controls matched by age, sex, and enrolment date.

Conditional logistic regression analysis showed that plasma apoA-II levels were significantly lower in cases than controls (34.6 mg/dL vs. 35.2 mg/dL). Subjects in the top quartile for apoA-II levels (> 38.3 mg/dL) had a significantly lower risk of CHD than those in the lowest quartile (< 31.2 mg/dL) with an odds ratio (OR) of 0.60 (95% CI 0.47 to 0.77,  $p < 0.0001$ ). After adjustment for conventional risk factors the OR was 0.49 (95% CI 0.35 to 0.69,  $p < 0.0001$ ). Even after additional adjustment for apolipoprotein A-I levels, (known to be atheroprotective) and HDL particle numbers, elevated apoA-II levels were still independently associated with a reduced risk of future CHD events, OR 0.64 (95% CI 0.44 to 0.92,  $p = 0.025$ ).

These data suggest a potential role for measurement of apoA-II levels to assess cardiovascular risk.

### **Reference**

1. Birjmohun RS, Khaw K-T. Apolipoprotein A-II is inversely associated with risk of future coronary artery disease. Presented at the American Heart Association Scientific Sessions 2006, Abstract 1633/B111.