



HDL cholesterol is an independent risk factor for progression of subclinical cardiovascular disease

Data from the Atherosclerosis Risk in Communities (ARIC) study were investigated to evaluate the role of HDL cholesterol in progression of subclinical cardiovascular disease, as determined by ultrasound assessment of intima-media thickness (IMT). Results were presented at the American College of Cardiology 56th Annual Scientific Sessions, March 24-27, New Orleans, USA.¹

In total, data for 12,615 subjects with three measurements over 9 years of follow-up were analysed. Data were categorised by baseline HDL cholesterol concentration: <40, 40-49, 50-59 and \geq 60 mg/dL. There was a strong, graded association between HDL cholesterol concentration and IMT progression over time, which remained after adjustment for various factors including LDL cholesterol (Table). After adjustment, each one standard deviation decrease in HDL cholesterol (i.e., decrease of 18 mg/dL) was associated with a 7.4 μ m greater IMT progression per 5-year follow-up period ($p < 0.001$).

The authors concluded that HDL cholesterol may be an important modifiable risk factor for the progression of subclinical cardiovascular disease.

Table. 5-year change in IMT, by HDL cholesterol level

HDL cholesterol (mg/dL)*	IMT (μ m), mean (standard error)
60+	0.0 (reference)
50-59	8.1 (6.0)
40-49	19.1 (5.8)
<40	21.2 (5.9)
p-value (for trend)	<0.001

* Most recent HDL cholesterol value, adjusted for age, sex, race, follow-up time, prevalent CHD at baseline and LDL cholesterol

Reference

1. Astor BC, Lee F, Muntner PM. HDL cholesterol is an independent risk factor for progression of intimal-media thickness: results from the Atherosclerosis Risk in Communities (ARIC) study. J Am Coll Cardiol 2007;49 (suppl A): Abstract 1026-35.