

## STRATEGIES TO REDUCE CARDIOVASCULAR RISK

Intensive lowering of both LDL cholesterol and systolic blood pressure to levels below those currently recommended slows the progression of atherosclerosis, researchers at the Cleveland Clinic have found. “This is very consistent with the thought that atherosclerosis is a multifactorial process with multiple causes and it seems, therefore, that a greater benefit is likely to be observed by targeting multiple risk factors rather than just one,” commented investigator Stephen Nicholls.

Given that reductions in individual risk factors, such as LDL cholesterol or blood pressure, reduce the incidence of adverse cardiovascular events in patients with coronary artery disease, Nicholls and colleagues were interested in determining the effects of targeting multiple risk factors, and particularly in assessing disease progress in patients who could achieve very low levels of these parameters, as studies have shown that very low levels of LDL cholesterol are associated with slower progression of coronary atherosclerotic plaques.

Current guidelines recommend LDL-cholesterol levels of <100 mg/dl and systolic blood pressure of <140 mmHg. However, Nicholls and colleagues found that patients who were able to achieve even lower levels of both (<70 mg/dl and <120 mmHg) had the slowest rate of plaque progression. Stringent control of multiple risk factors might thus afford the greatest protection for patients with coronary artery disease. Nicholls and colleagues have now launched AQUARIUS, a clinical trial designed to determine the effects of the renin inhibitor aliskiren on coronary atherosclerosis in patients with systolic blood pressures in the prehypertensive range (125–140 mmHg). “More work needs to be performed to evaluate what is the most optimal approach to achieve cardiovascular risk reduction,” said Nicholls.

*Sharmini Rajanayagam*

**Original article** Chhatriwalla, A. K. *et al.* Low levels of low-density lipoprotein cholesterol and blood pressure and progression of coronary atherosclerosis. *J. Am. Coll. Cardiol.* 53, 1110–1115 (2009).