

LDL-cholesterol lowering: The lower the better, the earlier the better and the role of diet and lifestyle

LDL cholesterol (LDL-C) lowering represents the primary target for reducing future CVD risk.¹ LDL-C is not just a risk factor, it is the main cause of atherosclerotic CVD (ASCVD)². It is well established that lowering LDL-C decreases the number and risk of coronary events.^{2,3,4} Good evidence indicates the process of atherosclerosis can manifest before there are any apparent risk factors, progressing for decades before showing first symptoms. Long-term exposure to lower blood LDL-C has been associated with a 54.5% reduction in the risk of CHD.⁵ Even a modest sustained reduction in LDL-C and other causes of arterial wall injury can dramatically lower lifetime risk of ASCVD events by 80%, CVD mortality by 67% and all-cause mortality by 30%.⁶

LDL-lowering: Every small step counts

A prolonged exposure to lower LDL-C beginning early in life is associated with a greater reduction in CVD risk than lowering LDL-C only later in life.⁶ Lowering LDL-C earlier in life, for example via diet and lifestyle adjustment may be beneficial.

Even a modest reduction in LDL-C of less than 0.4 mmol/L if maintained over time can have a substantial impact on CVD risk.⁷ Such a reduction can for instance be achieved through moving to a heart healthy diet and lifestyle.

Healthy diet and lifestyle changes should be considered first

CVD can in part be prevented by promoting good behavioural risk factor modifications. Encouraging healthy changes such as improving diet, enhancing physical activity, stopping smoking or managing body weight can help to lower LDL-C levels, reduce the risk of ASCVD and should be considered before and alongside pharmacological treatment.¹ It is important to detect ASCVD risk as early as possible so that management and appropriate support can begin.

Regarding a heart healthy diet, the focus should be on the sum of all foods and beverages consumed instead of focussing on single nutrients or foods.⁸ Healthy diets are predominantly plant-based dietary patterns such as the Mediterranean and Nordic diet, the dietary approaches to stop hypertension (DASH) diet, the Portfolio diet, as well as vegetarian- or vegan-type diet patterns. These diet patterns emphasise the intake of fruits and vegetables, whole grains, nuts, seeds, legumes (pulses), vegetable oils as well as lean protein.

Replacing saturated and trans fats with unsaturated fat, considering foods high in fibres, esp. soluble fibres like beta glucans from oats and barley and foods with added plant sterols/stanols like margarines and dairy-type foods can further contribute to lowering LDL-C.¹ For more details about a heart-healthy diet, please see Diet at the Heart online e-learning module (www.dietattheheart.com).

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