

Diet and lifestyle play a role in cholesterol management and CVD prevention.

Elevated low-density lipoprotein cholesterol (LDL-C) is recognized as a key risk factor in the development of cardiovascular disease (CVD).¹ Lifestyle and dietary interventions play an important role in the primary as well as in the secondary prevention of CVD. Primary prevention, meaning the change in lifestyle prior to an CVD event shall take place as early as possible specifically for people at higher risk for developing CVD. Besides the common advice of reducing excessive bodyweight as well as increasing physical activity the change towards a healthier diet is a key contributor to lower LDL-C and thus CVD risk. The main pillars to manage LDL-C as outlined in the European guidelines for the Management of Dyslipidaemias and CVD Prevention² are to reduce the intake of saturated fats, to avoid the intake of trans fatty acids, and to increase the intake of fruits and vegetables. In addition, the consumption of dietary fibres and of foods and food supplements with added phytosterols/stanols can further contribute to lowering LDL-C as part of a heart healthy diet.

LDL-C lowering works through dietary changes.

A recent study³ challenged the benefits of dietary supplements as a dietary intervention in cholesterol management. This is however in contrast to numerous other studies and reviews which demonstrated a significant LDL-C reduction by following specific dietary options. Those results had been achieved by selected diets and/or the consumption of functional foods respectively dietary supplements enriched with fibres or phytosterols/stanols. Managing healthy cholesterol levels through dietary intervention and thus reducing the risk for developing CVD is specifically reasonable in the primary prevention for those where cholesterol levels do not classify yet for the intake of a cholesterol-lowering medication. However, lifestyle changes through dietary options can also play a role for people with elevated LDL-C levels who require the intervention by cholesterol lowering drugs both in the primary as well as in the secondary prevention of CVD.

Which diets and dietary patterns are beneficial?

Beneficial dietary pattern² which are associated with a reduction of CVD risks are particularly the Mediterranean Diet, the Portfolio Diet and the DASH Diet (Dietary Approach to Stop Hypertension). The Mediterranean diet favours the consumption of fruit, vegetables, legumes, nuts, wholegrain cereal foods and fish. Of importance is the reduction of foods rich in saturated fats such as meat products, sweets, cream, butter, and cheese. Those should be replaced with foods containing mono- and polyunsaturated fatty acids such as olive or rapeseed oil or soft spreads. The consumption of sugar containing sweets and beverages should be strictly limited.

Documented benefits

A recent review⁴ on several dietary pattern found that the Mediterranean diet reduces all-cause mortality and non-fatal myocardial infarction in patients with increased cardiovascular risk. Further a gender specific systematic review⁵ has demonstrated that a Mediterranean diet was beneficial in woman, with a 24% lower risk of CVD and a 23% lower risk of total mortality.

Practical educational materials and resources such as the educational tool “Diet at the heart of CVD prevention” are hosted under “Apps, tools & resources” at the EAS website.

<https://www.dietattheheart.com/>

References:

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3. Laffin et al. Comparative Effects of Low-Dose Rosuvastatin, Placebo, and Dietary Supplements on Lipids and Inflammatory Biomarker. *J Am Coll Cardiol* 2023 3;81(1):1-12.
4. Karam et al. Comparison of seven popular structured dietary programmes and risk of mortality and major cardiovascular events in patients at increased cardiovascular risk: systematic review and network meta-analysis. *BMJ* 2023; 380: e072003
5. Pant et al. Primary prevention of cardiovascular disease in women with a Mediterranean diet: systematic review and meta-analysis. *Heart* 2023; 0:1–8. doi:10.1136/heartjnl-2022-321930.

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Recent scientific reviews confirm that diet and lifestyle contribute significantly to the management of healthy blood cholesterol levels and reduce the risk for cardiovascular disease. **Read more**

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Low density lipoprotein cholesterol (LDL-C) is a key risk factor in cardiovascular disease (CVD). A reduction of LDL-C can be managed by changes in dietary habits and lifestyle. Recent scientific reviews confirmed the benefits of diets such as the Mediterranean diet. Those reviews demonstrated the ability of diets to reduce the risk of CVD and total mortality in risk population groups as well as gender specific for women. **Read more**