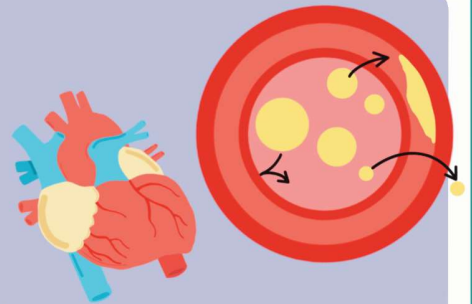


DIETARY INTERVENTIONS TO REDUCE LDL CHOLESTEROL

LDL CHOLESTEROL

Cholesterol is a fatty substance that is produced naturally in the liver, but it also comes from the diet. Whilst the body needs cholesterol to function normally, having high cholesterol—particularly **LOW DENSITY LIPOPROTEIN CHOLESTEROL (LDL-C)**—is a key risk factor in the development coronary heart disease (CHD), which is the most common type of cardiovascular disease (CHD).¹



Non-HDL cholesterol is a collective name for atherogenic particles in the blood. These particles all contain Apolipoprotein B (ApoB) which initiates the binding of cholesterol to the artery wall and other cells. LDL-c makes up **>90%** of all ApoB containing atherogenic lipoproteins making it the principal carrier responsible for depositing cholesterol to cells and arteries.

THERE IS EVIDENCE SHOWING THAT LDL-C RISK RELATES NOT ONLY TO THE AMOUNT OF ELEVATED LDL-C, BUT DURATION OF EXPOSURE, WHICH IS WHY IT IS SO IMPORTANT TO REDUCE LDL-C AS EARLY IN LIFE AS POSSIBLE TO OFFER THE BEST POSSIBLE PROTECTION AGAINST ATHEROSCLEROSIS AND CVD.²

THE ROLE OF DIET³

If cholesterol levels are low or moderate, there is a clear role for diet as a primary intervention to reduce LDL-c levels. If cholesterol becomes high or very high, medical interventions such as statins may be necessary alongside a cholesterol lowering diet.

REPLACE SATURATED FAT WITH UNSATURATED FAT

Saturated fats increase blood cholesterol more than any other nutrient.

Replacing foods high in saturated fatty acids (SFA) with foods high in **POLYUNSATURATED FATTY ACIDS (PUFA)** will have the biggest dietary impact on lowering LDL-c and reducing CVD risk. Each **5%** increase in PUFA is associated with a **10%** lower risk of CHD.⁴

There is also benefit in replacing SFA with **MONOUNSATURATED FATTY ACIDS (MUFA)**, but the effect is not as great. MUFA-enriched diets such as the Mediterranean diet and the DASH diet have been found to have cholesterol lowering effects.

ESC/EAS 2019 GUIDELINES³ RECOMMEND TOTAL FAT INTAKE IS BETWEEN 25-35% OF ENERGY FOR ADULTS. THE TYPE OF FAT SHOULD PRIMARILY COME FROM MUFA AND PUFA AND SATURATED FAT SHOULD BE LESS THAN 7-10% ENERGY.

INFORMATION FOR HEALTHCARE PROFESSIONALS ONLY

DIETARY INTERVENTIONS TO REDUCE LDL CHOLESTEROL

INCREASE DIETARY FIBRE AND WHOLEGRAINS

Fibre offers a modest reduction in LDL-c, but there appears to be a dose-dependent response. Research suggests that increasing fibre intake and including oat beta-glucans in the diet can help to reduce LDL-c.

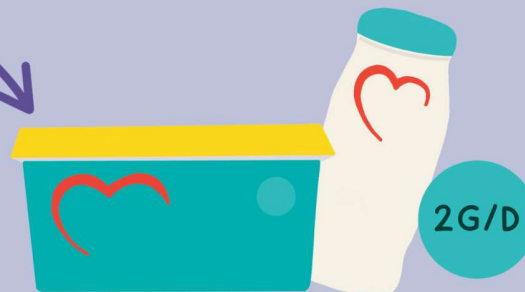
ESC/EAS 2019 GUIDELINES³ RECOMMEND INTAKES OF 25-40G/D TOTAL DIETARY FIBRE, WITH AT LEAST 7-13G OF SOLUBLE FIBRE. FREE SUGAR CONSUMPTION SHOULD NOT EXCEED 10% OF TOTAL ENERGY

INCLUDE FOODS WITH ADDED PLANT STANOLS AND STEROLS

Plant sterols and stanols (phytosterols) are naturally present in foods such as vegetable oils, vegetables, grains and legumes. These phytosterols interfere with cholesterol absorption in the small intestine. Foods with added plant stanol ester providing **1.5-3G** plant stanols daily has been shown to lower cholesterol. High cholesterol is a risk factor in the development of coronary heart disease.

ESC/EAS 2019 GUIDELINES³ RECOMMEND A DAILY CONSUMPTION OF AT LEAST 2G/D PLANT STEROLS OR STANOLS, WHICH HAS BEEN SHOWN TO BE EFFECTIVE IN LOWERING LDL-C SIGNIFICANTLY BY 7-10%.

Intakes of plant sterols and stanols naturally occurring in foods is low, but consumption of **2G/D** can be achieved easily by consuming foods with added plant sterols or stanols such as drinks and spreads.



SIGN UP TO THE BENECOL® HEALTHCARE PROFESSIONAL NEWSLETTER TO RECEIVE FREE EDUCATIONAL RESOURCES ON HIGH CHOLESTEROL & THE ROLE OF PLANT STANOLS AS PART OF A CHOLESTEROL LOWERING DIET.

THIS HAS BEEN DEVELOPED USING THE LATEST EVIDENCE AS PRESENTED ON MYNUTRIWEB.COM



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