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Can you lower LDL -cholesterol?

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Can you lower LDL -cholesterol?

LDL Cholesterol is termed as ?Bad cholesterol? as when deposited in the arteries raises the risk of arteriosclerosis leading to MI and stroke. The following observation has led to the basis of dietary recommendations to reduce LDL cholesterol-containing foods amongst populations at risk of cardiovascular disease. Studies have shown that replacing saturated fatty acids with unsaturated fats might benefit (reduce LDL cholesterol and blood pressure), but might worsen others (HDL cholesterol and triglycerides). The effect of substituting lipids with proteins could be dissimilar in undernourished populations. Hence, the ApoB-to-ApoA1 ratio provides the best overall indication of the effect of saturated fatty acids on cardiovascular disease risk.

Saturated fat along with carbohydrates, was associated with higher systolic blood pressure, whereas protein was associated with lower blood pressure. Larger studies like ?PURE? have shown that replacing saturated fatty acids with polyunsaturated fatty acids was associated with a higher ratio of total to HDL cholesterol and a higher concentration of ApoB. ApoB-to-ApoA1 ratio was the strongest predictor of myocardial infarction and ischemic stroke risk.

Does Plant diet aid in lowering LDL-cholesterol?

Fibers?such as ?-glucans, pectins, and gums?hinder the movement of bile acids into enteric micelles, resulting in reduced reabsorption of cholesterol in the small intestine. Short-chain fatty acids (SCFAs) produced by the fermentation of dietary fiber by gut microbiota result in cholesterol-lowering properties.

Newer options-

Proprotein convertase subtilisin kexin 9 (PCSK9) inhibitors,a newer class lipid-modifying drugs showed reduction in LDL-C to very low levels (i.e. <30 mg/dL) without serious adverse side effects , has significantly and substantially reduced cardiovascular risk, contributing to both primary and secondary prevention and reduction in CAD, myocardial infarction, stroke, and peripheral artery disease. However, the medical community should be alert for statin side effects, including muscle pain, cerebral bleeding, and diabetes risk. The new-generation PCSK9 inhibitors are very promising regarding LDL-C with minimal side effects, which improves therapeutic compliance.

Summary

Dietary Changes

1. Increase soluble fiber intake: Soluble fiber, found in foods like oats, barley, fruits, and vegetables, can help lower LDL cholesterol by binding to bile acids and removing them from the body, which in turn reduces the amount of cholesterol produced in the liver.

2. Choose healthy fats: Replacing saturated and trans fats with unsaturated fats, such as those found in nuts, seeds, avocados, and olive oil, can help lower LDL cholesterol.

3. Eat plant-based foods: A plant-based diet rich in fruits, vegetables, whole grains, and legumes can help lower LDL cholesterol and reduce the risk of cardiovascular disease.

4. Incorporate LDL-lowering foods: Certain foods, such as plant sterols and stanols, can help lower LDL cholesterol.

Lifestyle Modifications

1. Maintain a healthy weight: Excess weight can increase LDL cholesterol levels.

2. Exercise regularly: Regular physical activity can help raise HDL (High-Density Lipoprotein) cholesterol and lower LDL cholesterol.

3. Don't smoke: Smoking can damage blood vessels and increase the risk of cardiovascular disease.

Medications

1. Statins: Statins are commonly prescribed to lower LDL cholesterol levels. They work by inhibiting the enzyme HMG-CoA reductase, which is involved in cholesterol production in the liver.

2. PCSK9 inhibitors: PCSK9 inhibitors are a newer class of lipid-lowering medications that can significantly reduce LDL cholesterol levels. They work by inhibiting the protein PCSK9, which is involved in the degradation of LDL receptors in the liver.

It's essential to consult with a healthcare professional before making any significant changes to your diet or starting new medications. They can help determine the best course of treatment for your individual needs.

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Competing interests

The authors declare that they have no competing interests.

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