Dietary fats and heart disease

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[A head]
Dietary fats and heart disease

[THE 30-SECOND DIGEST]

Saturated fats have been implicated as one of the main dietary contributors to heart disease. These fats do not block our arteries directly, but can raise the concentration of blood cholesterol, which can form deposits inside arteries called 'plaques'. The plaques can then become unstable and rupture, causing blood clot formation and a heart attack or stroke. For this reason, dietary guidelines limit the amount of saturated fats we should eat. However, this recommendation has been challenged because of a seeming lack of evidence for a direct relationship between saturated fats and heart disease mortality, and the complexity of the relationship between saturated fats and blood cholesterol. When we eat less saturated fats, the effect on blood cholesterol and other risk factors often depends on what the fats are replaced with. This can be another type of fat (polyunsaturated or monounsaturated fat) or carbohydrate, all of which will lower blood cholesterol and heart disease risk, to variable extents, with greater benefits from unsaturated fats. Moreover, not all foods that contain saturated fats have the same effect on blood cholesterol, including dairy foods like butter and cheese. In comparison to butter, the saturated fats in cheese are absorbed in the gut to a lesser extent, which reduces the relative potential of cheese to raise blood cholesterol.

[3-SECOND BITE]

Reduction of dietary saturated fats can help to reduce heart disease, with greater effects if replaced by unsaturated fats rather than simple carbohydrates.

[3-MINUTE SNACK]

In contrast to the effects of eating less saturated fats, consuming long-chain omega-3 polyunsaturated fats, chiefly from oily fish, do not lower blood cholesterol, but are known as ‘heart healthy’ fats because they confer protection against heart disease, heart attacks and strokes. These effects of long-chain omega-3 fats have been attributed to a reduced tendency of the blood to clot, improved function of blood vessels and stabilisation of an irregular heartbeat.

[RELATED TOPICS]

Fats
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Omega-3 Fatty Acids
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[3-SECOND BIOGRAPHIES]

Hugh Sinclair
1910–90
The first protagonist of the idea that deficiency of long-chain omega-3 fatty acids from marine sources were involved in coronary thrombosis, as reported in his seminal paper in *The Lancet* (1956), 'Deficiency of essential fatty acids and atherosclerosis, etcetera'.

Ancel Keys
1904–2004
The first to suggest that hard animal fats were more important in influencing blood cholesterol and risk of coronary heart disease (Keys A. 1952*, Public Health Reports*). Keys went on to reveal a close connection between the amount of dietary saturated fatty acids and the frequency of heart attacks in his Seven Countries study (*Circulation 1970, 41, I186*).

[Bruce Griffins & Julie Lovegrove]