Intake of the right fatty acids can help to prevent heart attacks

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There is much confusion at present about the importance of fatty acids in preventing heart attacks. Recent studies have questioned the need to reduce the intake of saturated fatty acids in the diet and to increase that of polyunsaturated fatty acids. In an article in the British Journal of Nutrition based on a desk study, researchers of Wageningen University, part of Wageningen UR, clarify what is the best intake. A low intake of saturated and trans fatty acids, a minimum intake of 10 grams per day for women and 15 grams per day for men of the polyunsaturated fatty acid linoleic acid and a minimum intake of 250 mg per day of certain fish fatty acids give the best guarantee of a low risk of a heart attack.

In 2010 a lot of fuss arose over a publication in the American Journal of Clinical Nutrition summarising the results of sixteen epidemiological studies into the relationship between saturated fat in the diet and the likelihood of suffering a heart attack. No relationship was found in this analysis, while it has always been stated in dietary advice publications that a high intake of saturated fat increases the risk of a heart attack. The explanation for the absence of a relationship is that, in these studies, the intake of saturated fat was measured only once. In order to demonstrate a relationship between saturated fat and a heart attack the intake of saturated fat must be measured for a minimum of 22 days in order to obtain a reliable estimate.

The negative result of this epidemiological analysis is contradicted by the results of the controlled dietary trials carried out during the past 40 years, in which saturated fat is replaced by polyunsaturated fat. These

trials showed that this replacement reduces both the bad cholesterol and the risk of a heart attack.

There are strong indications from epidemiological research that trans fatty acids increase the risk of a heart attack. These indications are supported by controlled dietary trials that show that these fatty acids increase the bad cholesterol and reduce the good cholesterol. No clear effect has been established of monounsaturated fatty acids on the heart attack. In well-controlled dietary trials the polyunsaturated fatty acid, linoleic acid, reduces the bad cholesterol and the risk of a heart attack. There are still insufficient data to enable a pronouncement to be made on the importance of alpha-linolenic acid for a heart attack. Epidemiological research and controlled dietary trials show that an intake of 250 mg per day of the fish fatty acids EPA and DHA reduces the risk of a heart attack. This corresponds to eating fish a minimum of once a week.

Recommendations

The desk study of the Wageningen researchers leads to the recommendation that one should follow a diet that contains as little as possible trans fat, that is low in saturated fat and contains a minimum of 250 mg per day of the fish fatty acids EPA and DHA. The Dutch diet contains more than the minimum necessary quantity of alpha-linolenic acid and linoleic acid and therefore no specific recommendations are needed for these fatty acids, nor for the monounsaturated fatty acids. In order to reduce the risk of a heart attack, the recommended diet should therefore contain more vegetable and fewer animal foods. This means a diet of vegetable oils containing many unsaturated fatty acids, that is rich in wholemeal cereal products, legumes and vegetables and fruit, that contains fish at least once a week, and fewer meat and dairy products.

Fatty acids

Saturated fatty acids are found particularly in meat and dairy products. Trans fatty acids have largely disappeared from the diet in the Netherlands and are now found predominantly in low quantities in meat, dairy products, cake and biscuits. Monounsaturated fatty acids occur mainly in vegetable oils such as olive oil, and the polyunsaturated fatty acid linoleic acid in sunflower oil and soya oil. The fish fatty acids EPA and DHA are found mainly in oily fish such as herring, mackerel and salmon. The forerunner of the fish fatty acids, alpha-linolenic acid, occurs in vegetable oils such as soya oil and rapeseed oil.

More information: Read the article The confusion about dietary fatty acids recommendations for CHD prevention in the British Journal of Nutrition.

Provided by Wageningen University

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