

*NSA***Nutrition and Cardiovascular Disease****Nutritional trials for the prevention of coronary heart disease**

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Epidemiological studies as well as randomised dietary trials including moderate amounts of omega-3 fatty acids in the experimental diet suggest that these fatty acids, despite their low concentrations in blood and tissues, may be important in relation with the pathogenesis (and prevention) of CHD. Whereas a striking protective effect of an alpha-linolenic acid (ALA)-rich Mediterranean diet was reported with a 50 to 70% reduction of the risk of recurrence after 4 years of follow-up, it is still not known whether ALA is cardioprotective by itself only or also through its conversion into very long-chain omega-3 PUFAs (EPA + DHA) and then into the corresponding eicosanoids and prostaglandins. According to our current knowledge, dietary ALA should represent about 0.6 to 1 % of total daily energy or about 2 g per day in patients following a Mediterranean diet, whereas the average intake in linoleic acid should not exceed 7 g per day. Supplementation with very long chain omega-3 fatty acids (about 1g per day) in patients following a Mediterranean type of diet was shown to decrease the risk of cardiac death by 30% and of sudden cardiac death by 45%. Thus, in the context of a diet rich in oleic acid and poor in saturated and omega-6 fatty acids, even a small dose of omega-3 PUFAs (one gram under the form of capsules) might be very protective. These data underline the importance of the omega-6/omega-3 ratio in the prevention of coronary heart disease.