

Abstract

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Omega 3 polyunsaturated fatty acids supplementation and blood pressure levels in hypertriglyceridemic patients with untreated normal-high blood pressure and with or without metabolic syndrome: a retrospective study.

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OBJECTIVE: Recent evidence suggests that at least a part of the polyunsaturated fatty acids (PUFAs) heart protective effect is mediated by a relatively small but significant decrease in blood pressure level.

METHODS: We retrospectively evaluated the long-term effect of a PUFA supplementation on the blood pressure level of 111 hypertriglyceridemic subjects with untreated normal-high blood pressure that were prescribed a 2 grams PUFA supplementation in order to improve their plasma lipid pattern.

RESULTS: After 12 months of treatment, systolic blood pressure (SBP) meanly decreased by 2.7 +/- 2.5 mmHg ($p = 0.001$) and diastolic blood pressure (DBP) by 1.3 +/- 3.3 mmHg ($p < 0.001$), while basal heart rate decreased by 4.0 +/- 4.4 bpm ($p < 0.001$). Both SBP and DBP reduction were significantly related to the baseline SBP ($p < 0.001$) and DBP ($p < 0.001$), respectively. Diastolic blood pressure change was also inversely related to the patient's age ($p = 0.004$). No significant difference was perceived in the metabolic syndrome subgroup. In our retrospective study, highly purified omega-3 PUFA long-term supplementation is associated with a significant reduction in SBP, DBP, Pulse pressure (PP), and basal heart rate in hypertriglyceridemic patients with normal-high blood pressure. No significant difference was perceived in the metabolic syndrome subgroup.

CONCLUSIONS: The main determinants of the PUFA anti-hypertensive effect appear to be the basal blood pressure level and age.

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