Prevention of Diseases Related to Aging by n-3 PUFA

Yaşlanmayla İlişkili Hastalıkların n-3 PUFA ile Önlenmesi

Maria Teresa MITJAVILA[a]

[a]Department of Physiology, Faculty of Biology, University of Barcelona, Barcelona, SPAIN

Yazışma Adresi/*Correspondence:* Maria Teresa MITJAVILA Department of Physiology, Faculty of Biology, University of Barcelona, Barcelona, SPAIN mmitjavila@ub.edu

ABSTRACT Aging is an extremely complex phenomenon often accompanied by socioeconomic changes that have a great impact on the nutritional status and needs of the elderly individual. Nutrition and oxidative stress have been recognized as very important factors in the biology of aging and of many age-associated degenerative diseases.

Marine-derived long-chain n-3 polyunsaturated fatty acids (PUFA) are prone to oxidation in in vitro conditions. However, they have been reported to reduce oxidative stress in in vivo conditions and to have antiinflammatory properties. One of the well-established deleterious effects of dietary deficiency of long-chain n-3 PUFA is on disorders that involve inflammation and oxidative stress such as fotoaging, atherosclerosis, prostate cancer or cognitive and behavioural disorders related to a neuronal deficiency in long-chain n-3 PUFA among many problems observed in old people. We will discuss the effect of long-chain n-3 PUFA supplementation in these different situations and their mechanism of action to better understand their beneficial effects. All these observations on epidemiologic, clinical, and animal studies suggest that the consumption of long-chain n-3 PUFA reduces leading causes of morbidity and mortality among the elderly.

Key Words: n-3 PUFA, aging, oxidative stress, nutrition

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