

S13-02

DIETARY SUPPLEMENTATION IN ALZHEIMER'S DISEASE PREVENTION

J. Rymaszewska, M. Jakubik, B. Stanczykiewicz

Research Unit of C-L Psychiatry & Behavioral Medicine, Dept. Psychiatry, Wroclaw Medical University, Wroclaw, Poland

Concerning aging society problem of dementia is getting more and more significant. The causes of Alzheimer Disease (AD) are still not well known. The potential role of diet in the prevention of dementia including AD arouses increasing interest. Poly-unsaturated fatty acids (PUFA) are essential for brain growth and development playing an important role as critical modulators of neuronal function and regulation of oxidative stress mechanisms, in brain health and disease. Behavioral research studies with animals proved that  $\omega$ -3 acids have antioxidant protection on neurons during pathogenesis of AD. DHA diet supplementation in animal models proved that  $\omega$ -3 acids have positive influence on memory, attention, concentration and locomotor abilities in battery of tests such as 5/9 choice, X- or T-maze and activity wheel. DHA is obtained mainly through dietary intake being not produced by mammals, whereas DHA makes up 60% of fatty acids building neuronal cell membranes. These acids have beneficial effect on cardio-vascular system and may also reduce pathology processes of dementia diseases other than AD. Updated scientific data of  $\omega$ -3 acids dietary intake in elderly will be presented and discussed.