

Title

Associations between proportion of plasma phospholipid fatty acids, depressive symptoms and major depressive disorder. Cross-sectional analyses from the AGES Reykjavik Study

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Deficits in n-3 polyunsaturated fatty acids (PUFA) have been reported in depressed individuals, but findings from observational and intervention studies have been conflicting. A recent publication in The journal of nutrition, health & aging we found that higher plasma proportions of total long chain n-3 PUFAs (EPA+DHA) were inversely associated with major depressive disorders. This association appeared to be primarily driven by DHA rather than EPA. The association with depressive symptoms (assessed by GDS-15) was less clear, although a similar non-significant pattern was observed as for major depressive disorder. The current study is unique, in that two different measures of depression were available for analysis: a clinical diagnosis of major depressive disorders (MINI) and the self-reported GDS-15 scores assessing depressive symptoms in the preceding week, and that we had data available both on plasma fatty acids and dietary sources of PUFAs. The finding from this cross-sectional study needs to be studied further in an intervention setting to determine the directionality of the association. The results of the current analysis will together with results from the MoodFOOD trial provide important evidence needed to develop dietary guidelines.