

Concurrent Session 8A: PUFA/Heart Disease

Reduced erythrocyte concentration of omega-3 polyunsaturated fatty acids in children and adolescents with bipolar disorder

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Background – Reduced long-chain omega-3 polyunsaturated fatty acids (LCn-3PUFA), including eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), are reported in the plasma and red blood cells (erythrocytes) of adults with depression and bipolar disorder (BD). No research has previously examined blood concentrations of LCn-3PUFA in children and adolescents with juvenile BD (JBD).

Objective – To examine the LCn-3PUFA status of children and adolescents with JBD compared to healthy control participants.

Design – Fifteen participants (9-18 yrs) with JBD and 15 age and sex-matched controls were assessed for intake and erythrocyte LCn-3PUFA. Participants with JBD were also assessed for symptoms of depression.

Outcomes – EPA and DHA were significantly lower in participants with JBD compared to controls, but not after controlling for dietary intake. Erythrocyte DHA was also negatively related to clinician ratings of depression.

Conclusions – Lower erythrocyte LCn-3PUFA in JBD was more closely related to intake in the current study. Given previous evidence linking reduced LCn-3PUFA to BD, a randomised placebo-controlled study examining supplementation with LCn-3PUFA as an adjunct to standard pharmacotherapy appears warranted in this participant population.

Withdrawn