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STAGE DEPENDANT EFFECT OF OMEGA-3 FATTY ACIDS IN EMERGING PSYCHOSIS

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Omega-3 fatty acid supplementation studies are inconclusive. We performed two intervention studies. The first study (Berger et al 2007) was a double blind, placebo-controlled randomized trial comparing 2g Ethyl-eicosapentaenoic acid (EPA) versus placebo in addition to antipsychotic medication in 79 first episode psychosis patients. Mixed model analysis suggests that EPA augmented first episode psychosis patients respond quicker compared to placebo for time to response ($p=0.06$). Post hoc analysis for cumulative response rates confirm a higher response rate at week 6 (42.9% versus 17.6% for all subjects, $p=.036$; 54.2% versus 17.2% for non-affective psychosis, $p=.008$) that was not significant anymore at week 12 (potential ceiling effect). In the second study (Amminger et al, 2010) using 840mg EPA and 700mg docosahexaenoic acid per day as sole treatment in 81 prodromal adolescents only 1 of 38 UHR adolescents (2.6%) in the EPA/DHA group compared to 8 of 38 (21.1%) prodromal adolescents in the placebo group met exit criteria for psychotic disorder (Chi-square Fisher's exact test =6.2, $df=1$, $p=0.028$; OR=9.9). The change from baseline on the PANSS total symptom score ($p=0.006$), and the GAF score ($p=0.025$) were also significant between the treatment groups showing a clinically relevant advantage of EPA/DHA over placebo. Stage of illness may be more relevant for the use of the benign treatments such as omega-3 fatty acids in emerging psychosis and explain previous inconclusive findings. Research designs for future omega-3 fatty acid intervention trials and potential pitfalls will be discussed.