

Omega-3 linked to better memory in former depressives: Study

By Stephen Daniells, 11-Jan-2012

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Higher levels of omega-3 fatty acids in membranes of red blood cells (erythrocytes) is associated with better mental function in older people recovering from depression, suggests new research.

The study's findings – which indicated that higher omega-3 levels were associated with cognitive function and immediate recall in particular, in older people with previous depression – add to a growing body of data that support the potential cognitive benefits of omega-3.

Researchers from Taipei Medical University and King's College London also report that the benefits were observed for all types of omega-3; the long chain omega-3s from fish and other marine sources (EPA and DHA), as well as ALA from plant sources.

"Our findings suggest that erythrocyte total omega-3 PUFA [polyunsaturated fatty acid] concentrations are positively associated with cognitive function, particularly immediate recall, in older people with previous major depression," report researchers from Taipei Medical University and King's College London.

"Lower concentrations of omega-3 PUFAs or ALA in erythrocyte membranes may be good predictors of cognitive impairment in this specific group."

Intriguing results, but caution needed

The results were greeted with caution by Harry Rice, PhD, VP of regulatory & scientific affairs for Global Organization for EPA and DHA Omega-3s (GOED).

"While the results of this cross-sectional study were intriguing, I'm hesitant to draw any conclusions given the lack of control for potential confounds like diet," Dr Rice told NutraIngredients-USA.

"What this study does provide is a potential basis for developing future research to explore the association between omega-3 status and cognitive function in this particular population."

"Should future research demonstrate a true association, then it stands to reason that a logical next question would be- 'Does increasing omega-3 intake lead to repletion of omega-3 levels and thus increased cognitive function?'" he said.

Study details

Led by Taipei-based Shih-Yi Huang, PhD, the researchers recruited 132 older people who had recovered from major depression. The average age of the participants was 68. Blood samples, collected during a fast, were used for omega-3 measurements.

While initial results showed that higher levels of EPA and total omega-3, and a lower ratio of the omega-6 fatty acid arachidonic acid (AA) to EPA in erythrocyte membranes were associated with better cognitive scores, these associations were not significant after the researchers took education into account.

However, significant associations were observed for specific individual cognitive tests, particularly for immediate recall in relation to total omega-3 levels in erythrocytes, and ALA levels in erythrocytes, and these were only observed in people with recurrent depression, said the researchers.

"Specific associations between omega-3 PUFA concentrations and immediate recall may indicate discrete mechanisms of action," wrote the researchers.

"As described previously [by other researchers], hypercortisolemia-related hippocampal volume loss in recurrent late-life depression is linked to episodic memory impairment, including immediate recall, and omega-3 PUFAs have been found to reduce cortisol concentrations in people with depression, which thus lowers the risk of cortisol-related brain dysfunction."

Dr Huang and his co-workers called for additional prospective studies to further explore these associations and

elucidate the underlying mechanisms. They also said that the value of omega-3 supplementation for older people with depression.

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"Associations between n-3 PUFA concentrations and cognitive function after recovery from late-life depression"

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