

Study raises hopes for omega-3 and female depression

05-Feb-2009 - Higher intakes of omega-3 fatty acids and oily fish may reduce the number of occasions that women suffer depressive symptoms by about 30 per cent, says a new study.

Women with the highest intake of oily fish reduced their number of depressive moments by 25 per cent, while a high intake of the omega-3 fatty acids EPA and DHA reduced this number by 29 per cent, according to researchers from Feinberg School of Medicine in Chicago, the University of North Carolina at Chapel Hill, and the University of California, San Francisco.

However, men did not respond in the same as their female counterparts, according to findings published online yesterday in the journal *Nutrition*.

"Our results are consistent with [...] other epidemiologic studies that have examined the association of fish intake or dietary omega-3 PUFAs with depressive disorders or mental disorders," wrote the researchers. *"In addition, several small, randomized, double-blind trials found that adjunctive treatment with omega-3 PUFAs improved depression."*

Study details

The researchers, led by Laura Colangelo, analysed dietary intakes of fish and EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) amongst 3,317 African-American and Caucasian men and women. The average age of the participants at the start of the study was 35. Symptoms of depression were measured using the 20-item Center for Epidemiological Studies Depression Scale.

Colangelo and her co-workers report that, for the population as a whole, EPA, DHA, and EPA plus DHA were associated with reduced risk of depressive symptoms at the ten-year stage.

The effect was more pronounced in women, they note. Indeed, the highest intake of fish was associated with a 25 per cent reduction in the risk of depressive symptoms, while the highest intakes of EPA, DHA, and EPA plus DHA were associated with a 34, 34, and 29 per cent reduction in risk, compared to women with the lowest average intakes.

The researchers write that a couple of biological mechanisms could be behind the potential effects. Firstly, a study with rats suggested that omega-3 supplementation may increase dopamine levels, and thereby boost mood. Another mechanism may be linked to the inflammatory process

"High dietary intakes of fish and omega-3 fatty acids appear to be related to a lower risk of chronic depressive symptoms in women, but not in men, in this cohort," concluded Colangelo and her co-workers.

Earlier this week, we reported on findings from Canadian researchers that supplements of ethyl-eicosapentaenoic acid (E-EPA) led to improvements in depressive symptoms in menopausal women (*Am. J. Clin. Nutr.*, Vol. 89, pp. 641-651).

The science builds

The number of studies reporting a potential beneficial effect from increased omega-3 fatty acid for depression is increasing. In the last couple of years, studies from various corners of the earth, including Norway (*Journal of Affective Disorders*), and England and Iran (*Australian and New Zealand Journal of Psychiatry*), have reported positive results.

Source: *Nutrition*

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"Higher dietary intake of long-chain omega-3 polyunsaturated fatty acids is inversely associated with depressive symptoms in women"

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