



NEWS RELEASE

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Unhealthy change in Western diet

A diet deficient in omega-3 polyunsaturated fatty acids may have a higher than previously recognised role in increasing the risk to people suffering mood disorders, cardiac conditions and other general health problems.

The findings are contained in a paper from the Australia based Black Dog Institute, published in the American Journal of Psychiatry. The paper's corresponding author is Professor Gordon Parker, the Institute's Executive Director, and is based on a review of omega-3 and its role as a cause and natural treatment of mood disorders.

Omega-3 fatty acids are long-chain polyunsaturated fatty acids found in various plants and marine life.

(Those found in marine life consist mainly of EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) and are highly biologically active. In contrast, those from plants – flaxseed, walnuts and canola oil) are usually in the form of alpha linolenic acid and while the body can convert this into EPA and DHA, it occurs inefficiently to a level of only 10-15 percent.)

Key findings in the Black Dog Institute paper are:

- A plausible link between low seafood consumption causing higher rates of depression and Bipolar Disorder
- omega-3 may act as a supplement to antidepressants. However, it is unclear whether omega-3 supplementation alone has antidepressant properties or whether it has greater potential as an augmentation to standard antidepressants
- Lower omega-3 levels in the mothers' breast milk are associated with higher rates of postnatal depression
- For Bipolar Disorder, it remains to be clarified if omega-3 supplementation has mood-stabilising or antidepressant properties

Professor Parker said there was growing interest in the possible role played by diet – and, in particular, by omega-3 fatty acids – in the increasing rates of depression in Western societies in recent decades.

The Western diet has changed considerably over the past 150 years. Omega-3 polyunsaturated fatty acids from fish, wild game and plants have in many cases been replaced by saturated fats from domestic animals and omega-6 polyunsaturated fatty acids from common vegetable oils (corn, safflower and soybean).

“These changes have led to a 10-fold increase in the ratio of omega-6 to omega-3 fatty acids in the Western diet,” according to Professor Parker. “Further, during the metabolising process, omega-6 ‘competes’ in the body with omega-3 in such a way as to reduce the level of omega-3 in the body.”

Professor Parker said these changes in the level of fatty acids in the diet are thought to be linked to the rise in cardiovascular disease, depression and other neurological disorders, with several epidemiological studies lending weight to this view.

Importantly, the paper reviews the role of omega-3 as a single or augmenting natural treatment for those with depression and Bipolar Disorder.

Omega-3 supplementation is increasingly being trialed by individuals with a mood disorder, as it is viewed as a practical and simple health-based strategy.

However, despite its increasing use, its scientific-assessed status remains unclear. The Review from the Black Dog Institute provides the most up to date and comprehensive overview of this important topic

Professor Parker said much work is still needed to be done to determine which omega-3 fatty acid, and in what ratio to omega-6 fatty acids, is likely to have the greatest benefit and in what dosage.

Professor Parker was joined at a news conference today by Professor Roland Stocker, a Cardiovascular Researcher at the University of NSW Centre for Vascular Research and Dr Anne-Marie Rees, a Psychiatrist and Research Fellow with the Black Dog Institute.

Professor Stocker said the results from observational studies indicate intake of fish to be associated with a lower incidence of heart disease, and patients with previous myocardial infarction to benefit from intake of fish or fish oil.

Omega-3 fatty acids are commonly thought to prevent cardiac death via membrane effects that prevent otherwise fatal cardiac arrhythmia.

However, despite increasing evidence, an anti-arrhythmic effect of omega-3 fatty acids remains unproven. Indeed, a recent controlled study does not indicate a strong protective effect of omega-3 fatty acids against arrhythmia in patients with a rapid heartbeat.

Professor Stocker said that given heart patients suffering from depression have particularly low levels of omega-3 fatty acids, it would be interesting to study the benefit of fish oil supplements on cardiac outcome in these patients.

Dr Anne-Marie Rees said the Institute was currently seeking volunteers for an important omega-3 study.

The study is seeking participants from the Sydney Region and involves investigating whether omega-3 supplements are an effective treatment for depression. Participants for this study need to be aged between 21 and 65; have been depressed for more than six weeks and have NOT recently taken antidepressant medication or omega-3 supplements.

Anyone who meets the criteria is encouraged to contact the Study Coordinator on Ph. 02 9382 4521 or email: omega3study@unsw.edu.au

(The paper, entitled Omega-3 Fatty Acids and Mood Disorders and a shortened, simplified version of the paper published in the American Journal of Psychiatry appears on the Black Dog Institute website blackdoginstitute.org.au).

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