

Omega-3 and bipolar disorders: Jurys still out

24/04/2008- **More well-designed studies are required before any conclusions can be drawn on the benefits of omega-3 for people with bipolar disorders, University of Oxford researchers have reported after reviewing the literature.**

Paul Montgomery and Alex Richardson trawled the literature for studies concerning omega-3 and bipolar disorder and found only five studies that met their inclusion criteria. Ultimately only one study was deemed good enough to be reviewed, and this focussed on ethyl-EPA used in combination with pharmaceuticals.

Despite a growing number of observational studies and uncontrolled trials reporting the benefits of fish oils and omega-3 fatty acids DHA and EPA on the behaviour and learning, especially in kids, as well for improving the symptoms of depression, the science to support benefits for people with bipolar disorder is not there, according to the *Cochrane Database of Systematic Reviews*.

Bipolar disorder is among the top 30 causes of disability worldwide. It is commonly treated with a variety of mood-stabilising drugs, but the medications rarely cause symptoms to disappear completely and they can have serious side effects.

Since other studies have reported benefits for omega-3 fatty acids on brain health, there is the suggestion that supplements may also benefit people with the disorder.

However, Montgomery said there is not enough evidence yet to determine how omega-3s affect bipolar disorder, *"and what evidence is currently available is of such a varied and oftentimes questionable nature that no reliable conclusions may be drawn."*

Omega-3 are polyunsaturated fatty acids (PUFAs) consumed predominantly in the diet from fish, nuts and seeds. The fish oil PUFAs include eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). EPA is proposed to function by increasing blood flow in the body. It is also suggested to affect hormones and the immune system, both of which have a direct effect on brain function. DHA, on the other hand, is involved in the membrane of ion channels in the brain, making it easier for them to change shape and transit electrical signals.

"These findings must be regarded with caution owing to the limited data available," wrote the authors. *"There is an acute need for well-designed and executed randomised controlled trials in this field."*

Commenting independently on the review, Joseph Hibbeln, M.D., from the National Institute on Alcohol Abuse and Alcoholism (NIAAA), said he and his colleagues "strongly recommend" that patients with psychiatric disorders not take omega-3 supplements "in lieu of established psychiatric treatment options."

Growth of the omega-3 market

The European omega-3 market is expected to grow at rates of 8 per cent on average to 2010, say Frost and Sullivan. The market has been buoyed by fears over pollutants from oily fish, such as methyl mercury, dioxins, and polychlorinated biphenols (PCBs), since most extracted fish oil are molecularly distilled and steam deodorised to remove contaminants.

Moreover, fears about dwindling fish stocks have pushed some industries to start extracting omega-3s from algae. Indeed, companies such as Martek Biosciences and Lonza are already offering algae-derived omega-3 DHA as a dietary supplement.

Despite the need for further research to support or refute the link between omega-3 fatty acids and improved mood, a significant body of research have linked the fatty acids to a wide-range of health benefits, including cardiovascular disease (CVD), good development of a baby during pregnancy, joint health, and certain cancers.