

## **Fish-oil Supplements May Reduce Anger in Substance Abusers**

WATSONVILLE, Calif., Jan. 23 /PRNewswire/ -- A new clinical study of omega-3 essential fatty acid (EFA) supplementation in substance abusers suggests that a patented fish-oil supplement can reduce levels of anger, thereby potentially mitigating aggressive behavior.

The double-blind study, conducted at the Veterans Administration New York Harbor Healthcare System in Brooklyn, NY, involved 24 patients with a history of substance abuse who were participants in an outpatient treatment program; some of these patients had exhibited aggressive behaviors. The adult male subjects were randomly assigned to two groups: one receiving 3 grams (5 capsules) per day of omega-3 fatty acids in the form of purified fish oil (EPA(TM)/ProEPA(TM) from Nordic Naturals), the other receiving a placebo. To assess changes in anger level, a modified version of the Profiles of Mood States (POMS) questionnaire was administered at baseline and every month thereafter for a period of 3 months.

The 13 patients who received the fish oil showed a clinically significant and progressive decrease in their POMS anger subscale scores. No change was observed in the 11 patients in the placebo group. In addition, a subset of patients was followed for an additional 3-month period, without supplements: in those previously treated, POMS anger scores progressively increased but did not return to baseline. Again, the placebo group showed no observable change in scores.

Emerging evidence suggests that low levels of omega-3 EFAs, especially eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), play a role in the pathophysiology of anger as well as depressive, suicidal, and aggressive behaviors. EFAs, which are structural components of neuronal membranes, have been shown to influence neuronal function. In this study, the daily fish-oil supplement provided 2250mg of EPA (20:5n-3) and 500mg of DHA (22:6n-3), and 250mg of other omega-3 EFAs.

Lead investigator Laure Buydens, MD, presented her findings at the 44th annual American College of Neuropsychopharmacology meeting in December, 2005. An abstract reporting the results, "N-3 Polyunsaturated Fatty Acids Decrease Feelings of Anger in a Population of Substance Abusers," was published in *Neuropsychopharmacology*.

Founded by husband-and-wife team Joar and Michele Opheim, Nordic Naturals is the leader in omega-3 fish oils and EFA blends with exceptional taste, freshness, and purity levels. The company offers over 50 different fish oil products and EFA blends, including liquids, capsules, and children's chewables.