

# Fish Oils and Menstrual Cramps

## Summaries of the latest research concerning fish oils and menstrual cramps

### Fish oil supplements help prevent menstrual cramps

CINCINNATI, OHIO. Menstrual cramps (dysmenorrhea, menstrual pain) are the most common gynecologic complaint and the leading cause of short-term absenteeism among adolescent schoolgirls. There is compelling evidence that menstrual pain is caused by the action of inflammatory prostaglandins and leukotrienes upon the uterus. These inflammatory compounds are derived from the omega-6 fatty acid, arachidonic acid. Researchers at the University of Cincinnati Medical Center reasoned that interventions, which would decrease the level of the prostaglandins and leukotrienes, would be beneficial in reducing menstrual pain. It is known that fish oils (eicosapentaenoic acid [EPA] and docosahexaenoic acid [DHA]) compete with arachidonic acid for the enzymes needed to produce prostaglandins and leukotrienes and that fish oils also suppress the conversion of linoleic acid (the main omega-6 fatty acid in the diet) to arachidonic acid. The researchers carried out a clinical trial involving 42 girls between the ages of 15 and 18 years. All the girls experienced significant menstrual pain during their periods. The extent of pain was evaluated using the Cox Menstrual Symptom Scale at entry to the study and after 2 months of daily supplementation with a placebo or 1080 mg of EPA + 720 mg of DHA. The treatment period and the fish oil dose were selected to permit optimal incorporation of the EPA and DHA into the phospholipids of the cell membranes. At the end of the study the Cox rating had decreased from an average of 69.9 to an average of 44.0 in the fish oil group. No change was observed in the placebo group. The amount of painkiller (ibuprofen) tablets consumed during the menstrual periods dropped by more than 50% during the fish oil treatment as compared to the placebo treatment. The researchers conclude that fish oil supplementation has a beneficial effect on dysmenorrhea symptoms in adolescents. *Harel, Z, et al. Supplementation with omega-3 polyunsaturated fatty acids in the management of dysmenorrhea in adolescents. American Journal of Obstetrics and Gynecology, Vol. 174, April 1996, pp. 1335-38/*

### Menstrual pain correlated with fat intake

AARHUS, DENMARK. Menstrual pain (menstrual cramps, dysmenorrhea) is believed to be associated with an elevated level of PG2 prostaglandins. PG2 prostaglandins are synthesized from the omega-6 fatty acid, arachidonic acid and are known to be pro-inflammatory. The formation of PG2 prostaglandins competes with the formation of PG3 prostaglandins from the omega-3 fatty acid, eicosapentaenoic acid (EPA), the main component of fish oil. PG3 prostaglandins are anti-inflammatory. Danish researchers have completed a study to determine if the ratio between omega-3 and omega-6 fatty acids in the diet is associated with menstrual pain. Their study involved 181 healthy Danish women between the ages of 20 and 45 years who did not use oral contraceptives and who were not pregnant. The women completed 4-day food frequency questionnaires and recorded their menstrual symptoms, particularly the extent of pain. The researchers noted a strong association between increased pain and a low intake of omega-3 fatty acids from fish, between increased pain and a low intake of vitamin B12 (also present in fatty fish), and between increased pain and a low ratio of omega-3 to omega-6 fatty acids in the diet. They conclude that a higher intake of fish oils correlated with milder menstrual symptoms. / Deutch, B. Menstrual pain in Danish women correlated with low n-3 polyunsaturated fatty acid intake. *European Journal of Clinical Nutrition, Vol. 49, 1995, pp. 508-16/* Coromega  
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