

Fish Oils and Inflammatory Bowel Disease

Summaries of the latest research concerning fish oils and inflammatory bowel disease

Fish diet helps patients with Crohn's disease

OTSU, JAPAN. Crohn's disease is an inflammatory disease involving intestinal pain, diarrhea, and malabsorption of nutrients. The disease is characterized by periods of active disease interspersed with periods of remission. Elemental diet (ED) therapy is the preferred treatment in Japan. Conventional treatment with prednisone and salicylates has been only marginally successful in extending the periods of remission. The ED therapy involves tube feeding (enteral nutrition) a mixture of free amino acids, short-chain maltodextrins, and low levels of fat in the form of soybean oil. Not surprisingly, compliance with this diet is poor resulting in shorter periods of remission. Medical researchers at the Shiga University of Medical Science now report that one of the three daily enteral meals can be replaced by a special meal eaten normally. This new CD (Crohn's disease) diet consists of rice, cooked fish, and soup. It is rich in polyunsaturated fatty acids and has an omega-3 to omega-6 ratio of only 0.5. The researchers tried out the new diet regimen on 20 patients with Crohn's disease who had been using enteral ED therapy for over a month. The patients were allowed to eat the CD diet for lunch or dinner and continued with the ED regimen for the other 2 meals. They were also given nutritional education to emphasize the importance of following the diets. The results were very encouraging. Prior to the introduction of the CD diet 9 out of 10 patients experiences a relapse within one year; on the new regimen only 4 out of the 10 had a flare-up within one year. The researchers conclude that the combination ED and CD diet along with nutritional education is effective in extending the remission periods in Crohn's disease. They also point out that the inclusion of the CD diet prevents the development of nutritional deficiencies often seen in patients on the elemental diet alone. *Tsujikawa, Tomoyuki, et al. Clinical importance of n-3 fatty acid-rich diet and nutritional education for the maintenance of remission in Crohn's disease. Journal of Gastroenterology, Vol. 35, 2000, pp. 99-104 /*

Fish oils give hope to patients with Crohn's disease

BOLOGNA, ITALY. Crohn's disease is characterized by periods of active disease interspersed with periods of remission. Now researchers at the University of Bologna report that fish oils prevent relapses. Their experiment involved 78 patients with Crohn's disease who had been classified as having a high risk of relapse. Half the patients were randomized to receive nine fish oil capsules daily, the other half received nine placebo capsules daily. The fish oil capsules contained 500 mg of a marine lipid concentrate each (40 per cent eicosapentaenoic acid and 20 per cent docosahexaenoic acid) and provided a total of 2.7 grams of n-3 fatty acids per day. The capsules were enteric-coated so as to ensure that they dissolved in the small intestine instead of in the stomach and to minimize unpleasant side effects such as flatulence, heartburn, belching, and diarrhea. The results of the fish oil therapy were spectacular. While 69 per cent of the patients in the control group had a relapse during the one-year study period, only 28 per cent in the therapy group did. At the end of the one-year period 59 per cent of the patients in the fish oil group were still in remission as compared to only 26 per cent in the placebo group. The researchers conclude that fish oil therapy (with enteric-coated capsules) is effective in preventing relapses in patients with Crohn's disease in remission. (NOTE: This study was supported in part by Tillotts Pharma of Switzerland, the manufacturer of the enteric-coated fish oil capsules). *Belluzzi, Andrea, et al. Effect of an enteric-coated fish-oil preparation on relapses in Crohn's disease. The New England Journal of Medicine, Vol. 334, No. 24, June 13, 1996, pp. 1557-60/*

Essential fatty acid deficiency and gastrointestinal disorders

BOSTON, MASSACHUSETTS. Researchers at the Boston University Medical Center report that patients with chronic gastrointestinal disorders have abnormal essential fatty acid profiles. Their study involved 25 patients with Crohn's disease, 11 with ulcerative colitis, 4 with celiac sprue, and 7 with short bowel syndrome. The patients and 56 non-obese healthy controls all provided fasting blood samples which were used to determine the fatty acid content of whole plasma. The researchers found that the patients tended to have significantly lower overall levels of saturated fat, monounsaturated fat, and polyunsaturated fat than did the controls. Their fatty acid profile was also shifted so that the percentage of polyunsaturated fat was lower than in the controls. The researchers conclude that patients with inflammatory bowel diseases, sprue, and short bowel syndrome suffer from a deficiency of essential fatty acids. They believe this deficiency is not only a consequence of the disorder, but also contributes to it by interfering with the renewal and formation of new cells in the gut. They suggest that this deficiency needs to be corrected by adding omega-3 and/or omega-6 oils to the diet in the ratio required to eliminate the abnormalities. The researchers caution that some patients may not be able to metabolize the precursor omega-3 (alpha-linolenic acid) and omega-6 (linoleic acid) fatty acids and may need to be supplemented directly with the metabolites, eicosapentaenoic acid (EPA) and gamma-linolenic acid if needed, in the form of periodic intravenous infusions. [58 references] *Siguel, Edward N. and Lerman, Robert H. Prevalence of essential fatty acid deficiency in patients with chronic gastrointestinal disorders. Metabolism, Vol. 45, January 1996, pp. 12-23 /*

Fish oils ameliorate ulcerative colitis

SAN FRANCISCO, CALIFORNIA. Ulcerative colitis, a common form of inflammatory bowel disease, is accompanied by an increased level of leukotriene B4 in the lining of the colon. Fish oils are known to inhibit the synthesis of leukotrienes and it has therefore been postulated that they might be beneficial in the treatment of ulcerative colitis. Researchers at the Veterans Affairs Medical Center have just released the results of a study aimed at testing this hypothesis. The study involved 11 male patients aged 31 to 74 years who had been diagnosed with ulcerative colitis. The patients were randomized into two groups with one group receiving 15 fish oil capsules (providing 2.7 grams of eicosapentaenoic acid (EPA) and 1.8 grams of docosahexaenoic acid (DHA) daily); the other group received placebo capsules (olive oil). After 3 months on the supplements all participants underwent a 2-month wash-out period and were then assigned to the opposite treatment to what they had received during the first stage for another 3 months. Clinical evaluations of all patients were performed at the start of the study and every month thereafter. Evaluation of the patients' clinical data at the end of the treatment periods showed a significant beneficial effect of fish oil supplementation. The mean disease severity score for the patients on fish oil declined by 56% as compared to 4% for the placebo group. Eight of the 11 patients (72%) were able to markedly reduce or totally eliminate their use of anti-inflammatory medication and steroids while taking the fish oils. The researchers conclude that fish oil supplementation results in a marked clinical improvement of active mild to moderate ulcerative colitis. *Aslan, Alex and Triadafilopoulos, George. Fish oil fatty acid supplementation in active ulcerative colitis: A double-blind, placebo-controlled, crossover study. American Journal of Gastroenterology, Vol. 87, April 1992, pp. 432-37/*

Fish oils benefit patients with ulcerative colitis

NEW YORK, NY. Researchers at the Mount Sinai School of Medicine report that fish oil supplementation is highly effective in alleviating ulcerative colitis. Their small pilot study involved 10 patients with mild to moderate ulcerative colitis who had not been helped by conventional medical therapy. The patients were given 15 capsules of fish oil daily containing a total of 2.7 grams of eicosapentaenoic acid (EPA) and 1.8 grams of docosahexaenoic acid (DHA). The capsules were taken in 3 divided doses for an 8-week period. All patients underwent rigid

sigmoidoscopy at entry to the study, at 4 weeks, and at the completion of the study. They also kept a daily log of the number of bowel movements, stool consistency, and any side effects. At the end of the 8 weeks 7 out of the 10 patients showed marked to moderate improvement and 4 out of 5 patients on prednisone were able to reduce their daily dose by 20 to 66%. The researchers speculate that the EPA in the fish oil interferes with the synthesis of the highly inflammatory leukotriene B4 in the lining of the colon and that this effect accounts for the improvement. They recommend a large, randomized, placebo-controlled, double-blind trial to confirm the beneficial effects of fish oil supplementation in ulcerative colitis patients. / Salomon, Peter, et al. Treatment of ulcerative colitis with fish oil n-3-omega fatty acid: an open trial. *Journal of Clinical Gastroenterology*, Vol. 12, No. 2, 1990, pp. 157-61 / Coromega *Additional References* 1. Loeschke, K., et al. N-3 fatty acids only delay early relapse of ulcerative colitis in remission. *Dig Dis Sci*, Vol. 41, October 1996, pp. 2087-94 *Conclusion:* Omega-3 fatty acids temporarily retard, but do not prevent relapse of ulcerative colitis. 2. Lorenz-Meyer, H., et al. Omega-3 fatty acids and low carbohydrate diet for maintenance of remission in Crohn's disease: a randomized controlled multicenter trial. *Scandinavian Journal of Gastroenterology*, Vol. 31, August 1996, pp. 778-85 *Conclusion:* Omega-3 fatty acids do not extend remission in Crohn's disease. 3. Hawthorne, A.B., et al. Treatment of ulcerative colitis with fish oil supplementation: a prospective 12- month randomized controlled trial. *Gut*, Vol. 33, July 1992, pp. 922-28 *Conclusion:* Fish oil supplementation produces a modest corticosteroid sparing effect in active ulcerative colitis, but there is no benefit in maintenance therapy. 4. Stenson, W.F., et al. Dietary supplementation with fish oil in ulcerative colitis. *Annals of Internal Medicine*, Vol. 116, April 15, 1992, pp. 609-14 *Conclusion:* Four months of diet supplementation with fish oil in patients with inflammatory bowel disease resulted in reductions in rectal dialysate leukotriene B4 levels, improvements in histologic findings, and weight gain. 5. Lorenz, R., et al. Supplementation with n-3 fatty acids from fish oil in chronic inflammatory bowel disease: a randomized, placebo-controlled, double-blind, crossover trial. *J Intern Med Suppl*, Vol. 225 (731), 1989, pp. 225-32 *Conclusion:* Fish oil supplementation may have some benefit in ulcerative colitis, but not in Crohn's disease. *OILOFPISCES.COM* *INTERNATIONAL HEALTH NEWS* Copyright © 2006 by Hans R. Larsen Oilofpisces.com does not provide medical advice. Do not attempt self-diagnosis or self-medication based on our reports.

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