

Fish Oils and Asthma

Summaries of the latest research concerning fish oils and asthma

Fish oils help asthma patients

LARAMIE, WYOMING. Asthma is an increasingly common affliction in the Western world. It is estimated that between 20 and 25 per cent of all children suffer from one or more symptoms of asthma at some point. There is evidence that a high dietary intake of linoleic acid (n-6 PUFA) may exacerbate asthma symptoms. Linoleic acid is found in particularly high concentrations in vegetable oils such as safflower, sunflower, and corn oils. Researchers at the University of Wyoming now report that adjusting the dietary intake of polyunsaturated fatty acids (PUFAs) may be effective in reducing asthma symptoms in many patients. Their experiment involved 26 non-smoking asthma-sufferers aged 19 to 25 years. The normal dietary intake of n-6 PUFA was determined for all participants at the start of the study and after one month. For the first month participants were given fish oil capsules containing enough EPA and DHA to adjust their intake ratio of n-3 PUFAs (fish oils) to n-6 PUFAs to 0.1:1. During the second month the participants had their n-3 PUFA to n-6 PUFA ratio adjusted to 0.5:1. The average fish oil intake required to produce the 0.5:1 ratio was 3.3 grams per day. Extensive testing showed that more than 40 per cent of the participants experienced a significant improvement in their breathing ability and better resistance to asthma attacks while on the high fish oil diet. The researchers conclude that dietary supplementation with fish oils or other enriched sources of n-3 PUFAs may be a viable therapy for asthma. *Broughton, K. Shane, et al. Reduced asthma symptoms with n-3 fatty acid ingestion are related to 5-series leukotriene production. American Journal of Clinical Nutrition, Vol. 65, April 1997, pp. 1011- 17/*

Oily fish protects against childhood asthma

SYDNEY, AUSTRALIA. Researchers at the University of Sydney report that the regular consumption of oily fish is associated with a much reduced risk of developing asthma in childhood. Their study involved 574 children aged 8 to 11 years. The children's parents completed detailed questionnaires about the frequency of the intake of more than 200 foods for a one-year period. The children were evaluated for current asthma as defined by airway hyperresponsiveness and a tendency to wheeze with or without exercise. The researchers found that children who regularly consumed fresh, oily fish (such as mullet, orange roughy, Atlantic salmon or rainbow trout which contains more than two per cent fat) had a four times lower risk of developing asthma than did children who rarely or never ate oily fish. The risk reduction persisted even after adjustment for other risk factors such as parental asthma and smoking, early respiratory infections, race, and place of birth. Consumption of non-oily fish and canned fish was not associated with a reduced asthma risk. Fish oil contains the two omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). The researchers speculate that EPA may prevent the development of asthma or reduce its severity by reducing airway inflammation and responsiveness. A very recent study suggests that long-term fish oil supplementation may reduce asthma severity. *Hodge, Linda, et al. Consumption of oily fish and childhood asthma risk. Medical Journal of Australia, Vol. 164, February 5, 1996, pp. 137-40/*

Hyperactive children lack essential fatty acids

WEST LAFAYETTE, INDIANA. Children suffering from attention-deficit hyperactivity disorder (ADHD) are inattentive, impulsive, and hyperactive. Researchers at Purdue University now report that hyperactive children have lower levels of key fatty acids in their blood than do normal children. Their experiment involved 53 boys aged 6 to 12 years of age who suffered from ADHD, but were otherwise healthy and 43 matched controls. Analyses showed that the boys with ADHD had significantly lower levels of arachidonic, eicosapentaenoic, and docosahexaenoic acids in their blood. The hyperactive children suffered more from symptoms associated with essential fatty acid deficiency (thirst, frequent urination, and dry hair and skin) and were also much more likely to have *asthma* and to have had many ear infections. The researchers conclude that ADHD may be linked to a low intake of omega-3 fatty acids (linolenic, eicosapentaenoic, and docosahexaenoic acids) or a poorer ability to convert 18-carbon fatty acids to longer more highly unsaturated acids. The researchers conclude that supplementation with the missing fatty acids may be a useful treatment for hyperactivity. *Stevens, Laura J., et al. Essential fatty acid metabolism in boys with attention-deficit hyperactivity disorder. American Journal of Clinical Nutrition, Vol. 62, No. 4, October 1995, pp. 761-68/*

Fish oils improve lung function in asthma patients

PARIS, FRANCE. Asthma involves an inflammation of the airway (pharynx, larynx and lungs). Epidemiological studies have shown that populations with a high intake of fish oils have a lower incidence of inflammatory diseases such as asthma. French researchers have completed a small trial to see if oral fish oil supplementation would benefit asthma patients. A total of 12 allergic asthmatic patients who were routinely receiving inhaled salbutamol, steroid and sodium nedocromil therapy participated in the one- year randomized, double-blind trial. Half the patients received 1 gram of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) daily; the other half received a placebo. Participants were evaluated every month and lung function tests performed every three months. A significant improvement in lung function was observed among the patients in the fish oil group. Forced expiratory volume in 1 second (FEV1) increased by 23% after 9 months of supplementation. The researchers point out that the treatment was well-tolerated and urge large-scale, long-term trials to confirm their findings. / Dry, J. and Vincent, D. Effect of a fish oil diet on asthma: results of a 1-year double-blind study. *Int Arch Allergy Appl Immunol*, Vol. 95, 1991, pp. 156-57 / Coromega *Additional References* 1. Hodge, L., et al. Effect of dietary intake of omega-3 and omega-6 fatty acids on severity of asthma in children. **European Respiratory Journal**, Vol. 11, February 1998, pp. 361-65 *Conclusion:* Fish oil supplementation did not alter the clinical severity of asthma in 39 children. 2. Arm, J.P., et al. The effects of dietary supplementation with fish oil lipids on the airways response to inhaled allergen in bronchial asthma. **American Review of Respiratory Diseases**, Vol. 139, June 1989, pp. 1395-400 *Conclusion:* Fish oil supplementation decreases some asthma symptoms, but not overall severity of the disease. 3. Arm, J.P., et al. Effect of dietary supplementation with fish oil lipids on mild asthma. **Thorax**, Vol. 43, February 1988, pp. 84-92 *Conclusion:* Fish oil supplementation does not alter the severity of asthma. *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. Please consult your health-care provider if you wish to follow up on the information presented.