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## **The effect of dietary supplementation with fish oil fatty acids on surgically induced endometriosis in the rabbit.**

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### **Abstract**

As a means of assessing the effects of natural inhibition of cyclooxygenase enzymes on arachidonic acid metabolism in vivo, the authors supplemented the diet of 38 New Zealand white rabbits with fish oil containing eicosapentaenoic acid and docosahexaenoic acid (EPA/DHA) or olive oil (control). Endometriosis was surgically induced 10 days later using a previously described experimental technique. Peritoneal fluid PGE<sub>2</sub> and PGF<sub>2</sub>-alpha concentrations were significantly lower in the EPA/DHA group versus controls (P less than 0.05, P = 0.05, respectively). Total endometrial implant diameter 8 weeks after induction of endometriosis was significantly smaller in the experimental group (3.1 +/- 0.2 cm) compared with the controls (4.0 +/- 0.3 cm) (P less than 0.03). The authors conclude that dietary supplementation with fish oil, containing the n-3 polyunsaturated fatty acids EPA and DHA, can decrease intraperitoneal PGE<sub>2</sub> and PGF<sub>2</sub>-alpha production and retard endometriotic implant growth in this animal model of endometriosis.