

A new study in prostate cancer patients has shown that men eating a low-fat, high fish oil diet have significantly less tissue inflammation and cancer proliferation as compared with patients who consumed a typical Western diet.

A low-fat diet supplemented with fish oil reduces inflammation and cancer proliferation in men with prostate cancer

Previous studies have shown that reducing intake of omega-6 fatty acids and increasing consumption of omega-3 rich fish oil delay the development and progression of prostate cancer. However epidemiologic and observational studies have yielded mixed results. A recent study published in the journal *Cancer Prevention Research* has found that men with prostate cancer consuming a low fat diet combined with fish oil supplements have a reduced risk of cancer recurrence.

The study included 48 prostate cancer patients assigned either a low-fat diet supplemented with fish oil, or a Western diet higher in fat. Researchers measured pro-inflammatory compounds in excised prostate cancer tissue and determined the cell cycle progression (CCP) score, which is used to predict cancer recurrence.

Analysis showed that in the fish oil group there was a decline in the inflammatory marker 15(S)-HETE of 7.2%, but a rise of 24.7% in the group eating the Western Diet. Other markers of inflammation (LTB4) were also significantly reduced in the fish oil group but not in the control group. The fish oil supplemented group had a significantly lower CCP score versus the control group.

This study found that cancer cell proliferation scores and other markers of inflammation were significantly lower in those who consumed the low-fat fish oil diet compared to men who followed a higher fat Western diet. These results provide strong support for longer-term, prospective randomized trials evaluating a low-fat fish oil diet in men with prostate cancer.

Colette Galet et al. Effect of a Low-fat Fish Oil Diet on Pro-inflammatory Eicosanoids and Cell Cycle Progression Score in Men Undergoing Radical Prostatectomy. *Cancer Prev Res* 2-13; DOI: 10.1158/1940-6207.CAPR-13-0261.