

Fish oils may harm some heart patients

6/15/2005 - **A raft of clinical evidence has linked consumption of omega-3 fatty acids from fish oils to a reduced risk of sudden cardiac death, but a new study suggests that in some patients with life-threatening abnormal heart rhythms they may actually do more harm than good, writes Jess Halliday.**

The surprising results, published today in the *Journal of the American Medical Association* (vol 293, pp2884-2891), were obtained from a randomized controlled trial involving 200 patients with an implantable cardioverter defibrillator who had suffered a recent episode of sustained ventricular tachycardia (VT) or ventricular fibrillation (VF).

VT is an accelerated heart beat initiated within the ventricles, that may prevent the heart from pumping enough blood through the body. Whereas the normal heart rate is 60 to 100 beats per minute, in VT patients it may be 160 to 240 bpm.

VT can occur independently of any apparent heart disease, or following a heart attack or surgery. It can develop into VF, the primary cause of sudden cardiac death, in which the heart ceases to act like a pump due to irregular electrical activity and ventricular contraction.

Based on the results of the new study, the researchers recommend that patients who would have qualified for inclusion in the study group to avoid taking fish oil supplements.

The participants were randomly divided into two groups: one received 1.8g of fish oil with 72 percent omega-3 polyunsaturated fatty acids a day, and the other received a placebo consisting of olive oil.

None was also taking class I or class III antiarrhythmic medications or consuming more than one fatty fish meal per week. Nor had they taken flaxseed oil, cod liver oil or fish oil supplements in the month prior to the trial.

The researchers, led by Dr Merritt Raitt of Oregon Health and Science University and the Portland VA Medical Center, found that VT/VF events were more common in patients receiving the fish oil than in those receiving the placebo:

After six months, 46 percent of the fish oil patients had ICD therapy for VT or VF, compared with 36 percent of the placebo group. At 12 months the incidence rates were 51 percent and 41 percent respectively, and 65 percent and 59 percent at 24 months.

In the 133 patients with VT, the results were even more pronounced, with 61 percent of the fish oil group having VT/VF at 6 months compared with 37 percent of the control group, 66 percent compared with 43 percent at 12 months and 79 percent compared with 65 percent at 24 months.

"The lack of benefit and the suggestion that fish oil supplementation may increase the risk of VT or VF in some patients with ICDs can reasonably be interpreted as evidence that the routine use of fish oil supplementation in patients with ICDs and recurrent ventricular arrhythmias should be avoided," concluded the researchers.

But they were clear to state that their inability to demonstrate an antiarrhythmic effect of fish oil does not call into question the potential benefits of fish oil or dietary fish intake in all patients who have had a heart attack.

Rather, the results cast interesting light on the mechanisms of benefit of omega-3, suggesting either that the benefit is not due to a reduction in abnormal heart rhythms or that fish oil could have different effects on life-threatening heart rhythms in different situations.

According to the latest figures from the American Heart Association, arrhythmia caused 37,893 deaths in the United States in 2002 – 1.6 percent of all deaths that year. \$2.2 billion was paid to Medicare beneficiaries for cardiac dysrhythmias.