

# Omega-3 fish oil plus exercise the ticket to fat loss

By Chris Pritchard

ADELAIDE, AUSTRALIA – A daily dose of omega-3 enriched fish oil combined with regular exercise provides significantly greater benefits in the fight against obesity than exercise or fish oil alone, according to a recent study at the Adelaide-based University of South Australia.

While previous research has shown that modifying diet and participating in regular exercise can reduce cardiovascular risk, few studies have evaluated their combined benefits, according to biomedical scientist Dr. Peter Howe, PhD, a research fellow in nutritional physiology in the university's school of health sciences, who supervised the research.

Overweight to obese adults at heightened risk of coronary disease participated in a 12-week intervention trial that examined the effect of omega-3 fish oil taken daily in combination with moderate aerobic exercise three times a week. These people were compared with three groups taking fish oil, sunflower oil or a combination of sunflower oil and exercise.

As well as being overweight, participants were diagnosed as having metabolic syndrome, a cluster of symptoms associated with obesity that include hypertension, high blood triglycerides and insulin resistance or heightened insulin levels, a precursor to diabetes.

"Our research showed that the fish oil and exercise (FOX) group lost significantly more fat mass than any other group in the study," reported Dr. Howe.

"Seeing the impact on body shape and body composition of these participants has been the most exciting outcome of the research."

He added: "Omega-3 fatty acids in fish oil are polyunsaturated fats that can switch on enzymes specifically involved in oxidizing or burning of fat, but they need a driver (in our case, exercise) to increase the metabolic rate in order to lower body fat."

Using Dual Energy X-ray Absorptiometry (DEXA), which gives an image of the body and shows the different densities of tissue, researchers were able to distinguish between fat, muscle and bone. The results showed that the total proportion of fat in the body, particularly in the abdominal region, was reduced significantly in the FOX group, but not by fish oil or exercise alone.

While undergoing DEXA scans, the heart rate of patients was continuously monitored. While blood pressure tended to decrease with fish oil alone, the tendency was once again

greatest in the FOX group. FOX also had a beneficial effect on heart rate variability, triglyceride levels and artery function.

Omega-3 protects blood vessel walls by increasing their elasticity and improving endothelial dilation, enabling increased delivery of nutrients to exercising muscles, Dr. Howe noted.

The research was conducted by the Nutritional Physiology Research Group, a joint initiative of Adelaide's University of South Australia and the University of Adelaide.

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