Health News from 3Care Therapeutics

Omega-3 May Boost Lung Function During Sports and Physical Activity

Supplements of omega-3 fatty acids may improve lung function in athletes during and after exercise, suggests a new study on wrestlers from Germany and Iran.

Amateur wrestlers experienced improvements in numerous measures of lung capacity, including lung volume and airflows, and found significant improvements following 12 weeks of supplementation with omega-3 combined with training.

According to findings published in the *Journal of Science and Medicine in Sport*, supplementing with omega-3 fatty acids from marine origin during intensive training may significantly improve performance by enhancing respiratory capacity.

“These results also have far-reaching implications for coaches, trainers, and exercise physiologists who work and design training programs for amateur and professional wrestlers,” wrote the researchers from the Urmia University in Iran and the University of Tuebingen in Germany.

“Further investigations are required to elucidate the relationship between omega-3 and pulmonary function, and underlying mechanisms responsible for such a relationship during exercise training,” they added.

Study details

The researchers recruited 40 non-smoking, amateur male wrestlers with an average age of 18.6 and an average BMI 22.75 kg/m2. Participants were randomly assigned to one of four groups: A experimental group which received training and omega-3 supplements (1,000 mg omega-3, with 180 mg EPA and 120 mg DHA,), a placebo group, an active control group (training plus placebo), and an inactive control (omega-3 but no training).

At the end of the study, the omega-3 supplements training group experienced an average 41 per cent improvement in lung capacity and an average improvement of 53 per cent in lung volume and airflows compared to the other groups.

“In the present study we have examined for the first time the response of pulmonary function to omega-3 consumption during specific exercise training,” wrote the researchers.

“These data are the first to be published regarding the beneficial effects of omega-3 on athletes’ pulmonary function during participation in training programs,” they added.

Source: Journal of Science and Medicine in Sport
March 2010, Volume 13, Issue 2, Pages 281-286
“The effects of omega-3 supplementation on pulmonary function of young wrestlers during intensive training”
Authors: B. Tartibian, B.H. Maleki, A. Abbasi

Omega-3 May Boost Kidney Health in Diabetics

Kidney function is often evaluated by measuring creatine levels, with high levels indicative of damage to the functioning of nephrons in the kidney. The new study reports that omega-3 supplementation led to significant decreases of creatine in diabetics, suggesting a potential benefit in this population group

which is at significantly increased risk of kidney disease. Researchers from the University of Hong Kong report their findings in the journal Diabetic Medicine.

"Our results showed a significant decrease in serum creatinine level after fish-oil supplement in Type 2 diabetes mellitus patients," stated the researcher. "Prior studies have suggested that omega-3 supplement has renoprotective effects in diabetes mellitus," they added. However, no benefits to vascular vessel function was observed, nor where there any changes in metabolic profiles, blood pressure, or markers of inflammation or oxidative stress following 12 weeks of supplementation with omega-3-rich fish oil.

Study details

The Hong Kong-based scientists recruited 97 people with type-2 diabetics and randomly assigned them to received either fish oil (four grams per day providing 42 per cent EPA and 25 per cent DHA) or placebo (olive oil) for 12 weeks. "The specific dosage of 4 g per day for 12 weeks was chosen because previous studies have shown that fish oil or its component at this dosage effectively lowers triglyceride levels without significant side effects," explained the researchers.

At the end of the study, the only measurable differences between the groups were for creatinine levels, which were significantly lower in the fish-oil group. Despite the significant differences, the researchers noted that the findings should be interpreted with caution, and called for future prospective clinical studies to confirm the findings of this study.

Source: Diabetic Medicine
Volume 27, Issue 1, Pages: 54-60
"Fish-oil supplement has neutral effects on vascular and metabolic function but improves renal function in patients with Type 2 diabetes mellitus"
Authors: C.-Y. Wong, K.-H. Yiu, S.-W. Li, S. Lee, S. Tam, C.-P. Lau, H.-F. Tse