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Paraoxonase Activity in Obese Patients Following Exercise-Based Cardiac Rehabilitation Program

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Purpose: The effect of weight on paraoxonase activity was determined in 39 ischemic heart disease patients, 14 of whom with BMI 30 who underwent a 12week aerobic exercise training program.

Background: Paraoxonases have been found to perform a number of biological functions, though the primary role of this group of enzymes is still a topic of speculation. Some of the observed roles have revealed activities of anti-inflammatory, anti-oxidative, anti-atherogenic, anti-diabetic, anti-microbial and organophosphate-hydrolyzing properties

Methods: Paraoxonase activity was measured by its arylesterase activity Spectrophotometrically, at 250 degrees C, wavelength 270 nm.

Results: A 15.9 increase in paraoxonase activity was found following the 12week exercise program. In addition, there was a significant BMI (body mass index) effect with higher mean paraoxonase levels among women during both pre-exercise 16.8 and post-exercise 19.5.2 training, $p<0.05$.

Conclusions: Aerobic exercise training was found to be an effective means in inducing plasma levels elevation of the antioxidative, antiatherogenicparaoxonase in patients with coronary artery disease, and particularly in obese patients.