

Lipid Peroxidation and Antioxidant Enzyme Activity in Response to Interval Hypoxic Training

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Abstract—This study revealed the metabolic parameters of reactive oxygen species, including erythrocyte superoxide dismutase, catalase, and glutathione peroxidase activity, and oxidative stress markers, including total prooxidant activity and plasma concentration of thiobarbituric acid reactive substances, in response to 14-day interval hypoxic training (IHT). The study included healthy subjects and patients with essential hypertension, who had a decreased activity of the main antioxidant enzymes due to a marked oxidative stress, as revealed by previous studies. In all subjects, the oxidative stress markers decreased and the enzyme activity increased in four days after the IHT course. However, the differences in metabolism of the reactive oxygen species between the patients and the healthy subjects persisted. It is suggested that, even with a different antioxidant enzyme system baseline, IHT may contribute to adaptive activity of this system.

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