

Review Article

Effect of oxidative stress and exercise-induced adaptations

Baghaiee B (M.Sc)*¹, Nakhostin-Roohi B (Ph.D)², Siahkuhian M (Ph.D)³, Bolboli L (Ph.D)⁴

¹Ph.D Candidate in Exercise Physiology - field of Cardiovascular and Respiration, Department of Sport Science, University of Mohaghegh Ardabili, Ardabil, Iran. ²Assistant Professor, Department of Physical Education and Sport Science, Ardabil Branch, Islamic Azad University, Ardabil, Iran. ³Professor, Department of Sport Science, University of Mohaghegh Ardabili, Ardabil, Iran. ⁴Associate Professor, Department of Sport Science, University of Mohaghegh Ardabili, Ardabil, Iran.

Abstract

Free radicals are unstable molecules in reaction with other molecules lead to a variety of injuries and illnesses. However, to prevent the injuries, enzymatic and non-enzymatic antioxidants react with free radical in various forms. Free radicals and antioxidant enzyme acts by various mechanisms, although age, gender and physical activity affects on these reactions. Different responses and adaptation are experienced to oxidative stress among women and men, young, elderly, subjects with physical fitness and untrained subjects. The present article reviewed the effect of oxidative stress due to exercise-induced adaptations.

Keywords: Oxidative stress, Antioxidants, Disease, Exercise

* **Corresponding Author:** Baghaiee B (M.Sc), E-mail: behrouz_phsport@yahoo.com

Received 20 Dec 2014

Revised 14 Jan 2015

Accepted 27 Jan 2015