

SCIENTIFIC VALUES OF BLUEBERRIES INTAKE ON TAS, INFLAMMATORY FACTORS AND EXERCISE PERFORMANCE

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Blueberries contain polyphenolic compounds (mainly anthocyanins) that can improve immune responses with antioxidant, anti-inflammatory, and anti-neurodegenerative effects. They also can relieve fatigue associated with exercise. In addition, some studies have suggested that supplementation of blueberry has effect on oxidative stress, NK (natural killer) cell counts, and inflammation after 2.5h of running. Blueberry intakes can also facilitate recovery from eccentric exercise-induced muscle damage using animal models. Based on previous studies, we hypothesized that blueberry supplementation might improve exercise performance time and recovery rate with anti-inflammation and anti-oxidant effects following exhaustive exercise. Eight young active participants were recruited from the Department of Physical Education in D university at B city. They were divided into two periods: non-supplemented period and supplemented period. Vo2 max and exercise performance time of participants with or without blueberry supplementation were measured with a portable gas analyzer and ECG, respectively. Vo2 max and exercise performance time were increased in the blueberry supplementation period. IL-6 and CRP levels were significantly lowered in blueberry supplementation period following exercise. Our results demonstrate that blueberry supplementation can increase exercise performance and decrease IL-6 and CRP levels caused by increased TAS level.

BIOGRAPHY

Yi Sub Kwak Educational information includes: BS, 1992, MS, 1994, PhD, 2000, Yonsei University, Korea; Research Fellow, Yonsei University College of Medicine, 2000-2002. He was appointed as: Professor, 2003-, he also held a position as Head of Institute of Sport Science, 2007 he held a position of Chair, Graduate School and Department of Physical Education, 2009-, Dong-Eui University; Managing Editor, Journal of Life Science, Busan, 2007-. Publications: Numerous articles in professional journals (in the fields of exercise science, exercise immunology, exercise nutrition, health and science and so on). His honours includes: Best professor in Dong-Eui University, 2005-2016; Excellence award, Beijing International Convention of Sports Science, 2006, he also received excellence Award, Yaubian International Convention of Sports Science, 2007. He is a visiting Fellow of Harris Manchester College, University of Oxford, 2008.

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