F-9 Effects of exercise, age and gender on SIgA in elderly
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Kazuhiro Shimizu¹, Fuminori Kimura¹, Takayuki Akimoto², Takao Akama³, Takeshi Otsuki⁴, Takahiko Nishijima¹, Shinya Kuno¹, Ichiro Kono³

¹Graduate School of Comprehensive Human Sciences, Tsukuba University, Ibaraki, Japan
²Institute for Biomedical Engineering, Consolidated Research Institute for Advanced Science and Medical Care, Waseda University, Tokyo, Japan
³Faculty of Sport Sciences, Waseda University, Saitama, Japan
⁴Center for Tsukuba Advanced Research Alliance, Tsukuba University, Ibaraki, Japan

Objective: The influence of age and gender on salivary secretory immunoglobulin A (SIgA) in response to moderate exercise training was studied in 158 elderly subjects. Methods: Subjects were assigned to an exercise training group (EXC: 51 males, 74 females) or a non-exercise control group (CON: 11 males, 22 females). The subjects in each group were separated into four age-gender subgroups (60-69-yr-old males, over 70-yr-old males, 60-69-yr-old females, over 70-yr-old females) and compared by age and gender. Subjects in EXC participated in exercise sessions 5-days a week for 6 months. Saliva samples were collected both before and after the study period. Results: The SIgA secretion rates were significantly increased after training (p < 0.05) in all the age-gender subgroups of EXC (60-69 males: 41%; over 70 males: 55%, 60-69 females: 40%, over 70 females: 38%); no age- or gender-related differences were observed. On the other hand, all the age-gender subgroups of CON did not show significant changes in SIgA secretion rate; also, there were no age- or gender-related differences. Conclusions: Enhancement of the mucosal immune function following regular moderate exercise training occurs in the elderly in their 60's and over 70, and in both males and females.