

Effects of Moderate and High Intensity Exercises on Specific Biomarkers of Saliva

Juliana Siziba, Khayali Sherell Wilson, Arvin B. Laguna, Lorcelie B. Taclan, Uriel Zarsaga, Amelita Fabroa and Reynaldo San Luis III
Adventist University of the Philippines

Abstract

Endurance trainers and athletes are at higher risk for caries and periodontal disease as reported by research studies during the past decades. This experimental study evaluated the effects of moderate intensity exercise (MIE) and high intensity exercise (HIE) on biomarkers of saliva, such as, salivary flow rate and salivary pH. The effects of the MIE and HIE on the biomarkers were analyzed from the said effects on the groups based on gender, diet, regularity of exercise and nationality. Under the guidance and supervision of the researchers, each participant was subjected to MIE and HIE, with samples of saliva collected and analyzed before and after each exercise interval. Findings showed that there is a significant increase in salivary flow rate and a decrease in salivary pH during HIE. It also showed that these changes are more significant in HIE compared to MIE. Females, non-Filipinos, and non-vegetarians are at risk of a decrease in pH during HIE; however, the groups that showed an increase in flow rate during HEI are males, non-vegetarians, regular exercisers, and both Filipinos and non-Filipinos. Although the pH decreased during HIE, the mean levels remained within physiological normal limits. The increase in flow rate contributes to an enhanced cleansing ability of saliva during HIE.

Keywords: *moderate intensity exercise; high intensity exercise; salivary flow, salivary pH*