

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

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Abstract: Endurance trainers and athletes are at higher risk for caries and periodontal disease as reported by research studies during the past decades. This study evaluated the effects of moderate intensity exercise (MIE) and high intensity exercise (HIE) on biomarkers of saliva, specifically on: salivary flow rate and pH. Furthermore, it analyzed the effects on different 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 before and after each exercise interval. Research findings showed that there is indeed an increase in salivary flow rate and a decrease in salivary pH during HIE. Moreover, it showed that these changes have greater impact in HIE compared to MIE. The groups at risk on a decrease in pH during HIE are females, non-Filipinos and non-vegetarians. While the groups that displayed an increase in flow rate during HIE are males, non-vegetarians, regular exercisers, non-Filipinos and Filipinos. Although the pH decreased during HIE, the mean levels remained within physiological normal limits. And the increase in flow rate contributed to an enhanced cleansing ability of saliva during HIE.

Keywords: Moderate intensity exercise; high intensity exercise; salivary flow, salivary pH