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Comparison of Salivary Vitamin E and C Levels in Men Based on Daily Smoking Habits

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ABSTRACT

Introduction: Vitamins C and E have antioxidant properties and protect body cells from damage. Smoking, with its destructive effects, can induce oxidative stress in the body cells. The present study aimed to evaluate the level of salivary vitamins C and E in smokers and nonsmokers.

Methods and Materials: In this experimental research, 28 heavy-smoker men (more than one cigarette pack per day), 28 light male smokers (less than one cigarette pack per day), and 28 nonsmoker men aged 25-40 years old were included. Unstimulated saliva was collected using the spitting method. The salivary Vitamin C and E amounts were measured using the Colorimetry method. Data were analyzed by SPSS21 statistical software. ANOVA, Tukey tests, and descriptive statistics analyzed the data.

Results: The mean salivary vitamin C in nonsmoker, light smoker, and heavy smoker men was 2.17 ± 0.39, 2.14 ± 0.37, and 1.97 ± 0.252 mg/dl, respectively. There were no significant differences among the three groups in salivary Vitamin C ($p > 0.05$). The mean salivary vitamin E in nonsmoker, light smoker, and heavy smoker men was 1.2 ± 0.48, 0.659 ± 0.363, and 0.42 ± 0.25 mg/dl, respectively. There were significant differences among the three groups in salivary vitamin E ($p = 0.05$). Salivary vitamin E of light and heavy smoker men was lower than nonsmokers.

Conclusion and Discussion: The results of this study demonstrate that, despite the reduction in Vitamin C, smoking does not significantly affect salivary vitamin C levels in non-stimulated saliva. However, smoking does reduce the amount of vitamin E in non-stimulated saliva.

Keywords: Cigarette smoking, Saliva, Vitamin E

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