

## **Comparing effects of Electrical and Conventional smoking on saliva**

### **Abstract**

**Objectives :** Smoking can affect and cause many oral health problems. Presently the use of electrical cigarettes has been increasing worldwide. However, there is limited data comparing between the conventional and electrical smoking affected on oral health. So, the objective of this study is to compare salivary flow rate and salivary pH between these smokers.

**Methods :** Patients were asked to complete questionnaire about their health status, social history regarding tobacco use, oral care and dietary history. Stimulated saliva (by chewing paraffin-wax) and unstimulated saliva were collected from 90 patients (age between 20-40) which divided in to 3 groups equally to non-smokers (control group), conventional smokers and electrical smokers. Individual salivary pH was assessed by pH pocket meter. All collected data were analyzed by one-way ANOVA (SPSS Statistics 23.0)

**Results :** The mean of unstimulated salivary flow rate in conventional smokers was 0.40 ml/min, electrical smokers was 0.58 ml/min and non-smokers was 0.60 ml/min. The mean of stimulated salivary flow rate in conventional smokers was 1.89 ml/min, electrical smokers was 2.24 ml/min and non-smokers was 2.33 ml/min. The unstimulated and stimulated salivary pH in all groups see no difference with mostly normal viscosity.

**Conclusion :** The result from this study suggested that smoking either conventional or electrical cigarettes are affecting on salivary flow rate. Therefore electrical cigarettes may not be a safe alternative smoking method or use for quitting conventional cigarettes. However, electronic cigarettes are still fairly new, their long-term oral health effects research besides salivary study should be done in the future. The data from this study also indicate that performing the saliva test in smoker patients could provide benefit to dental professionals for proper treatment planning and prevention to these patients.