



## EFFECTS OF AERATED SOFT DRINKS ON THE pH LEVELS IN THE ORAL CAVITY

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### ABSTRACT

**Aim:** To find the effects of aerated drinks on the pH levels in the oral cavity.

**Objective:** The objective of the present study is to find the effects of pH levels after consuming aerated soft drinks.

**Background:** Maintaining a good pH balance in the mouth allows a healthy balance of good and bad bacteria. Certain foods such as sugary beverages, snacks and some grains increase the acidity in the mouth. The pH of mouth can change dramatically with the types of food we eat. The saliva can help neutralise the acid, but eating acidic foods can increase the acidity of the saliva.

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### INTRODUCTION

Diet is a major aetiological factor for dental caries and enamel erosion (1). This study was undertaken with the aim of assessing the effects of aerated soft drinks on salivary pH among adults (2). It is well established that a good diet is essential for the development and maintenance of healthy teeth (3). Saliva plays an important role in maintaining the integrity of teeth by the way of its buffering action and controlling the demineralisation and promoting remineralisation occurring continuously at the enamel surface (4). The normal pH of saliva is 6.7 to 7.4 but as bacteria breakdown carbohydrates, they release lactic acid, butyric acid and aspartic acid which bring down the pH of saliva.(5) Fall in salivary pH after any dietary intake is a crucial parameter of oral health.(6) When the pH level in mouth goes below 5.5, the acids begin to break down the enamel on teeth.(7) The longer the teeth are exposed to a low salivary pH, the more likely the development of dental caries is.

### MATERIALS AND METHODS

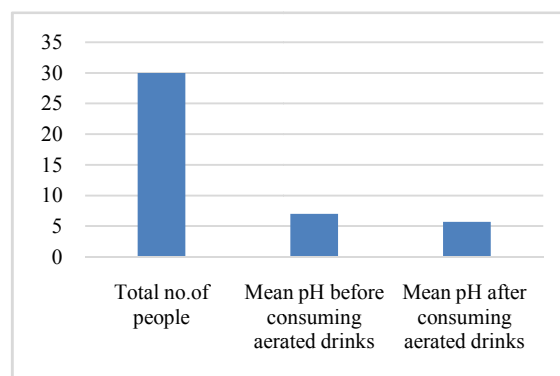
Thirty healthy volunteers were included in the study. The volunteers were between 18-26 years old and free from acute or chronic diseases of general systems or oral cavities. Furthermore they did not have any kind of oral addictions in their past history, such as smoking, alcohol or snuff consumption. One aerated drink is selected for the study to evaluate their influence on human salivary pH. Before consumption of aerated drinks, saliva was collected under room temperature.

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into a test tube through a glass funnel. The participants were then asked to drink 200ml of soft drinks. After 10-15 minutes of consumption of soft drinks, the saliva was collected and the pH values of each saliva sample was analysed statistically.

### RESULTS AND DISCUSSION



It has been observed that the pH is same for all participants. The mean pH before consuming aerated drinks is 7. The mean pH after consuming aerated drinks is 5.7 that shows a decline in salivary pH after consuming aerated drinks. If the time interval is being extended it would bring about a further decline in salivary pH.

### CONCLUSION

The present study clearly indicates that there is a decline in salivary pH after the consumption of soft drinks. The aerated drinks contain substantial quantities of sugar and acidity content that brings down the pH level of saliva which is harmful. Therefore it is important to avoid frequent

consumption of these aerated drinks to reduce the risk for dental caries.

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