EFFECTS OF SUGARS ON ORAL HEALTH

*Nandhan A. S.
1st Year BDS, Saveetha Dental College.

*Corresponding Author: Nandhan A. S.
1st Year BDS, Saveetha Dental College.

INTRODUCTION
This article focuses on sugars and oral infectious disease, with an emphasis on the relation between sugars and dental caries. Sugars play a harmful role in tooth decay. The bacteria that form together to become plaque use sugar as a form of energy. They multiply faster and the plaque grows in size and thickness. Some of the bacteria turn the sugar into a kind of glue that they use to stick themselves to the tooth surface. This makes it harder for the bacteria to get washed away with your saliva.

A recent study spotlighted by NPR talks about the effects that sugar has on your teeth:
Sugar also plays a vital role in formation of cavities. Tooth decay is cause by acids produced by bacteria found in the mouth. A little of sugar in the food we eat gets left in the mouth even after we swallow and these traces of sugar are what bacteria thrives on.

Dental Erosion
Dental erosion also known as Acid erosion is a type of tooth wear. It is defined as the irreversible loss of tooth structure due to chemical dissolution by acids not of bacterial origin. Dental Erosion is the most common chronic disease of children ages 5-17. Erosion is initially found in the enamel and if unchecked may proceed to the underlying dentin.

The most common cause of erosion is by acidic foods and drinks. In general foods and drinks with a pH below 5.0-5.7 have been known to trigger dental erosion effects. Numerous clinical and laboratory reports link erosion to excessive consumption of soft drinks. Other possible sources of erosive acids are from exposure to chlorinated swimming pool water and regurgitation of gastric acids.

CAUSES OF DENTAL EROSION
1. Extrinsic acidic sources
Acidic foods and drinks lower the pH level of the mouth so consuming themcauses the teeth to demineralise. Drinks low in pH level that cause dental erosion include soft drinks, wine, beer, etc.

Saliva acts as a buffer, regulating the pH when acidic drinks are ingested. Drinks vary in their resistance to the buffering effect of saliva. A number of medications such as vitamin C, aspirin and some iron preparations are acidic and may contribute towards acid erosion.

2. Intrinsic acidic sources
Dental erosion can occur by non-extrinsic factors too. Intrinsic dental erosion is known as perimolysis, whereby gastric acid from the stomach comes into contact with the teeth. GERD is quite common and an
Dental Caries also known as tooth decay or cavity is a destruction of the hard tissues of the teeth. It is a result of food debris accumulation on the tooth surface, which lead to bacterial formation that exceeds salivary remineralization and results in extensive decay that causes pain. Tooth decay occurs in stages:

1. **Initial Stage**: Formation of dental plaque on the tooth surface.
2. **Stage of Initial Demineralization**: The formation of enamel lesions due to bacterial acid attack on the tooth surface.
3. **Stage of Progression**: The lesion becomes deeper and wider, leading to the formation of cavities.
4. **Stage of Cavitation**: The tooth structure is destroyed, causing tooth decay.
5. **Stage of Healing**: The tooth returns to its original state with the help of saliva and fluoride remineralization.

**Effect of Sugar in Oral Health**

Sugar is a primary source of energy for oral bacteria, which produce lactic acid, a byproduct of glycolysis under anaerobic conditions. The lactic acid creates a transient, transiently worsening acidity that can lead to enamel demineralization and tooth decay. The frequency and severity of acid attacks on teeth depend on the frequency and amount of sugar consumption. Sugars and starches can cause tooth decay if consumed without deleterious effects when they are ingested as part of meals rather than eaten as a standalone snack.

**Prevention**

Preventive measures include frequent brushing and flossing to prevent plaque build-up. A diet rich in calcium and fluoride can help strengthen enamel. A diet low in sugar and sucrose can also be a good preventive measure.

**REFERENCES**