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## Abstract:

This review article involved explanation about: Cola and other soft drinks corrode teeth. The rising consumption of soft drinks is the reason why more and more children and young people have acid damage to teeth - even burns. Tooth Erosion is a chemical solution of the tooth surface. It occurs when your teeth for a longer period, many times a day is exposed to acid from food, beverages or from the stomach. In this way you risk that tooth enamel dissolves or popular terms "etched" away.

Key Words: Corrosion, After & Reduce

# Introduction:

Having an acid-rich diet can put our teeth at risk and this can happen more easily than you'd expect. As few as four acidic "occasions" throughout the day can put our enamel at risk from Acid Erosion, also known as Acid Wear.



For chemists and scientists, pH is a measure of how acidic (pH < 7) or alkaline (pH > 7 but less than 14) something is. For people concerned about an acidic diet and Acid Erosion, the most important thing to know is this: the lower the pH number, the more acidic a food or a drink is and the more harmful it is to your tooth enamel.

For example, distilled water has a neutral pH of 7, while tomato juice might have a pH of 4 and lemon juice might have a pH of 2 - making the lemon juice the most acidic of the three.

Knowing the pH value of the foods we eat and the beverages we drink help us have a clearer picture of how acidic our diet really is. And knowing the acidity of our diet is an important step in making sure we protect our tooth enamel from Acid Erosion. The rule of thumb is the lower the pH, the higher the acidity an therefore the higher the risk it may cause Acid Erosion



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# **Causes of Tooth Erosion**:

- Excessive soft drink consumption (high level of phosphoric and citric acids)
- Fruit drinks (some acids in fruit drinks are more erosive than battery acid)
- Dry mouth or low salivary flow (Xerostomia)
- Diet (high in sugar and starches)
- Acid reflux disease (GORD)
- Gastrointestinal problems
- Medications (aspirin, antihistamines)
- Genetics (inherited conditions)
- Environmental factors (friction, wear and tear, stress, and corrosion)



# **Types of Tooth Erosion**:

- Friction, wear and tear, stress, and corrosion (or any combination of these actions) can cause erosion of the tooth surface. More clinical terms used to describe these mechanisms include:
- This is natural tooth-to-tooth friction that happens when you clench or grind your teeth such as with bruxism, often occurring involuntary during sleep.
- This is physical wear and tear of the tooth surface that happens with brushing teeth too hard, improper flossing, biting on hard objects (such as fingernails, bottle caps, or pens), or chewing tobacco.
- This occurs from stress fractures in the tooth such as cracks from flexing or bending of the tooth.
- This occurs chemically when acidic content hits the tooth surface such as with certain medications like aspirin or vitamin C tablets, highly acidic foods, GORD, and frequent vomitingfrom bulimia or alcoholism



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#### Treatment of Acid damage and Dental Erosions:

How can dental erosions treated? If they are discovered at an early stage, it will usually be sufficient for the future you avoid consuming / exposing your teeth to it, as in your case have caused the damage. In some cases, your dentist will take impressions of your teeth to keep track of whether your tooth enamel continues to degrade. If you have pain, the dentist has several options to help you eg with fluoride treatment, varnishing or small plastic fillings. Has there been major damage, it may be necessary to undertake extensive and costly treatment with bite raising and / or orthodontic treatment in order to build the bite up again with new dental crowns.

# Advice against Caries and Acid Damage:

Drink acidic beverages rapidly or to a suction pipe. - Do not take small sips over a long time and do not rinse the liquid around in your mouth. - Rinse mouth with water or milk immediately after that has been sour on the teeth. - Avoid brushing teeth immediately after ingestion of acidic products, or after vomiting. - Take extra, if you suffer from dry mouth. - If you chew sugarless gum such V6 immediately after eating increases the pH to normal levels within a few minutes and reducing the risk of acid damage as well as caries. - Seek medical attention if you suffer from eating disorders or have a lot of belching.



#### **Prevention of Dental Erosion:**

There are a number of things you can do:

- Have acidic food and drinks, and fizzy drinks, sodas and pops, just at mealtimes. This will reduce the number of acid attacks on your teeth.
- Drink quickly, without holding the drink in your mouth or 'swishing' it around your mouth. Or use a straw to help drinks go to the back of your mouth and avoid long contact with your teeth.
- Finish a meal with cheese or milk as this will help cancel out the acid.
- Chew sugar-free gum after eating. This will help produce more saliva to help cancel out the acids which form in your mouth after eating.
- Wait for at least one hour after eating or drinking anything acidic before brushing your teeth. This gives your teeth time to build up their mineral content again.
- Brush your teeth last thing at night and at least one other time during the day, with fluoride toothpaste. Use a small-headed brush with medium to soft bristles.

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# **References:**

- 1. U.S. Department of Health and Human Services (8 August 2007). Preventing Chronic Diseases: Investing Wisely in Health. National Center for Chronic Disease Prevention and Health Promotion.
- 2. Dugmore, C.R; Rock W.P (13 March 2004). "A multifactorial analysis of factors associated with dental erosion" (PDF). British Dental Journal 196 (5): 283–6; discussion: 273. Retrieved 2009-05-21.
- 3. Beezy Marsh. "Fruit juice can cause tooth decay". Daily Mail. Retrieved 2009-05-21.
- 4. "'Health juices' harm baby teeth". BBC News Online. 2 August 2007. Retrieved2009-05-21.
- 5. Mandel, Louis. "Dental erosion due to wine consumption". American Dental Association. Retrieved 2008-01-03.
- O'Sullivan, E.; Milosevic A. (November 2008). "UK National Clinical Guidelines in Paediatric Dentistry: diagnosis, prevention and management of dental erosion" (PDF).International Journal of Paediatric Dentistry 18 (Supplement 1): 29–28. Retrieved 2009-05-21.
- 7. Edwards, M.; Creanor S.L.; Foye R.H.; Gilmour W.H. (December 1999). "Buffering capacities of soft drinks: the potential influence on dental erosion". Journal of Oral Rehabilitation 26 (12): 923–927. Retrieved 2009-05-21.
- 8. Gandara, B.K; E.L Truelove (October 1999). "Diagnosis and management of dental erosion". Journal of Contemporary Dental Practice 1 (1): 16–23.PMID 12167897. Retrieved 2009-05-21.
- 9. Monagas, J; Suen A; Kolomensky A; Hyman PE (November 2013). "Gastrointestinal issues and dental erosions in children". Clinical Pediatrics 52 (11): 1065–1066.
- 10. William B. Carey (editor), Allen C. Crocker, William L. Coleman, Heidi M. Feldman, Ellen Roy Elias (2009). Developmental-behavioral pediatrics (4th ed.). Philadelphia, PA: Saunders/Elsevier. p. 634. ISBN 9781416033707.
- 11. Adrian Lussi (2006). Dental erosion from diagnosis to therapy; 22 tables. Basel: Karger. p. 120. ISBN 9783805580977.
- 12. Acid Attack. Academy of General Dentistry. 6 February 2008.
- 13. The Cleveland Clinic Department of Dentistry. Dental Health: Tooth Sensitivity. WebMD. Retrieved 2008-03-09.
- 14. Davenport, Tammy (14 September 2007). "Signs and Symptoms of Tooth Erosion.". About.com. Retrieved 2008-03-09.

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- 15. Amaechi B T, Higham S M; Higham (2005). "Dental erosion: possible approaches to prevention and control". J Dent 33 (3): 243–52.
- 16. Edwards, M.; R A Ashwood, S J Littlewood, L M Brocklebank & D E Fung (12 September 1998). "A videofluoroscopic comparison of straw and cup drinking: the potential influence on dental erosion". British Dental Journal 185 (5): 244–249.