

Toothpaste modern toothpaste



**ASSIGN
BUSTER**

Toothpaste is a paste or gel dentifrice used to clean and maintain the aesthetics and health of teeth.

Toothpaste use can promote good oral hygiene: it can aid in the removal of dental plaque and food from the teeth, it can aid in the elimination and/or masking of halitosis, and it can deliver active ingredients such as fluoride or xylitol to prevent tooth and gum disease (gingivitis). In most or all developed countries, usage after each meal is encouraged. Most toothpaste contains chemicals which are toxic when ingested, and is not intended to be swallowed. Contents [hide] * 1 History o 1. 1 Early toothpastes 1.

2 The modern toothbrush o 1. 3 Tooth powder o 1. 4 Modern toothpaste * 2 Ingredients and flavors o 2. 1 Active ingredients o 2. 2 Other ingredients o 2.

3 Toxicity * 3 Striped toothpaste * 4 See also * 5 References * 6 External links [edit] History Evidence of oral hygiene practices first appears in the archaeological record around 5000 years ago in Egypt, China, Mongolia and India. [citation needed] [edit] Early toothpastes The earliest known reference to a toothpaste is in a manuscript from Egypt in the 4th century AD, which prescribes a mixture of powdered salt, pepper, mint leaves, and iris flowers. The Romans used toothpaste formulations based on human urine. [1] In the 9th century, the Persian musician and fashion designer Ziryab is known to have invented a type of toothpaste, which he popularized throughout Islamic Spain. [2] The exact ingredients of this toothpaste are not currently known, [3] but it was reported to have been both “ functional and pleasant to taste”. [2] It is not known whether these early toothpastes were used alone, were to

be rubbed onto the teeth with rags, or were to be used with early toothbrushes such as neem tree twigs or miswak.

It is known that these twigs were used by Indians from ancient times. Neem tree twigs are said to have good medicinal effects. [edit] The modern toothbrush The modern toothbrush was invented in China in the late 1400s, but was not widely used in the West until the 1800s. Until the late 1800s, the toothbrush was usually used only with water.

[edit] Tooth powder Tooth powders for use with toothbrushes came into general use in the 19th century in Britain. Most were homemade, with chalk, pulverized brick, or salt as ingredients. An 1866 Home Encyclopedia recommended pulverized charcoal, and cautioned that many patented tooth powders that were commercially marketed did more harm than good. citation needed] [edit] Modern toothpaste Modern toothpaste gel Modern toothpaste gel An 18th century American and British toothpaste recipe containing burnt bread has been found.

Another formula around this time called for dragon's blood (a resin), cinnamon, and burnt alum. [4] By 1900, a paste made of hydrogen peroxide and baking soda was recommended for use with toothbrushes. Pre-mixed toothpastes were first marketed in the 19th century, but did not surpass the popularity of tooth-powder until World War I. In 1892, Dr. Washington Sheffield of New London, Connecticut, manufactured toothpaste into a collapsible tube.

Sheffield's toothpaste was called Dr. Sheffield's Creme Dentifrice. He had the idea after his son traveled to Paris and saw painters using paint from tubes.

<https://assignbuster.com/toothpaste-modern-toothpaste/>

In New York City in 1896, Colgate & Company Dental Cream was packaged in collapsible tubes imitating Sheffield. Fluoride was first added to toothpastes in 1914, and was criticized by the American Dental Association (ADA) in 1937.

Fluoride toothpastes developed in the 1950s received the ADA's approval. To develop the first ADA-approved fluoride toothpaste, Procter & Gamble started a research program in the early 1940s. In 1950, Procter & Gamble developed a joint research project team headed by Dr. Joseph Muhler at Indiana University to study new toothpaste with fluoride. In 1955, Procter & Gamble's Crest (toothpaste) launched its first clinically proven fluoride toothpaste. On August 1, 1960, the ADA reported that " Crest has been shown to be an effective anticaries (decay preventative) dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care.

" Countries limit and suggest different amounts of fluoride acceptable for health. Much of Africa has a slightly higher percentage than the U. S. [citation needed] In June, 2007, the US Food and Drug Administration and similar agencies in Panama, Puerto Rico and Australia advised consumers to avoid certain brands of toothpaste manufactured in China, after some were found to contain the poisonous diethylene glycol, also called diglycol or labeled as " DEG" on the tube. The chemical is used in antifreeze as a solvent and is potentially fatal. [5] Toothpaste is most commonly sold in flexible tubes, though harder containers are available.

The hard containers stand straight up, availing more of the toothpaste and saving shelf space. Because toothpaste tubes are now usually plastic the easiest way to get the last bit out of the seemingly empty tube is simply to cut it open with scissors. Most tubes have enough paste available for 10-30 more brushes. If you cut it across the tube 2/3 from the end, the other 1/3 forms a natural almost airtight cap. [edit] Ingredients and flavors [edit] Active ingredients Fluoride in various forms is the most popular active ingredient in toothpaste to prevent cavities.

Although it occurs in small amounts in plants and animals, and has effects on the formation of dental enamel and bones, it is not considered to be a dietary essential and no deficiency signs are known. Sodium fluoride (NaF) is the most common form; some brands use sodium monofluorophosphate ($\text{Na}_2\text{PO}_3\text{F}$). Much of the toothpaste sold in the United States has 1000 to 1100 parts per million fluoride ion from one of these active ingredients, in the UK the fluoride content is often higher, a NaF of 0.32% w/w (1,450 ppm fluoride) is not uncommon. This consistency leads some to conclude that cheap toothpaste is just as good as expensive toothpaste. When the magazine Consumer Reports rated toothpastes in 1998, 30 of the 38 were judged excellent.

Application of fluoride also prevents moisture build-up in some surfaces. [citation needed] Other ingredients are less commonly used, including Hydroxyapatite nanocrystals and calcium phosphate for remineralization,[6] and strontium chloride or potassium nitrate to reduce sensitivity. [edit] Other ingredients In addition to fluoride, the other fundamental ingredient in most toothpastes is an abrasive. citation needed] Studies have shown that

<https://assignbuster.com/toothpaste-modern-toothpaste/>

abrasives in toothpaste reduce the time needed to remove plaque from the teeth by approximately 50%. Abrasives, like the dental polishing agents used in dentist's offices, also cause a small amount of enamel erosion which is termed "polishing" action.

Some brands contain powdered white mica which acts as a mild abrasive, and also adds a cosmetically-pleasing glittery shimmer to the paste. Many may contain frustules of dead diatoms as a mild abrasive. The removal of plaque and calculus prevents caries and periodontal disease. The polishing of teeth removes stains from tooth surfaces, but has not been shown to improve dental health over and above the effects of the removal of plaque and calculus. Many, though not all, toothpastes contain sodium lauryl sulfate (SLS) or another of the sulfate family.

SLS is found in other personal care products as well, such as shampoo, and is largely a foaming agent although it also acts as a powerful antimicrobial. Due to the anionic charge of SLS, mouthwashes containing cetylpyridinium chloride (which has a cationic charge and thus neutralises SLS) should not be used straight after brushing. SLS may cause a greater frequency of mouth ulcers in some people as it can dry out the protective layer of oral tissues causing the underlying tissues to become damaged[1]. Ingredients such as baking soda, enzymes, vitamins, herbs, calcium, calcium sodium phosphosilicate, mouthwash, and/or hydrogen peroxide are often combined into base mixes and marketed as being beneficial. Some manufacturers add antibacterial agents, for example triclosan or zinc chloride, to prevent gingivitis.

Triclosan is a common ingredient in the UK. Toothpaste comes in a variety of colorings, and flavors. The more usual flavorings are some variation on mint (spearmint, peppermint, regular mint, etc). Other more exotic flavors include: anise, apricot, bubblegum, cinnamon, fennel, neem, ginger, vanilla, lemon, orange, pine. More unusual are flavors include peanut butter, iced tea, and even whisky.

Unflavored toothpaste does exist, however, most are flavored and sweetened. Because sugar promotes growth of bacteria that cause tooth decay, artificial sweeteners are generally used instead. The inclusion of sweet-tasting but toxic diethylene glycol in Chinese-made toothpaste led to a multi-nation and multi-brand toothpaste recall in 2007. [edit] Toxicity With the exception of toothpaste intended to be used on pets such as dogs and cats, and toothpaste used by astronauts, most toothpaste is not intended to be swallowed, and doing so may cause nausea or diarrhea; fluoride toothpaste is toxic when swallowed.

[citation needed] If a large amount of toothpaste is swallowed, Poison Control should be contacted immediately. [citation needed] Extended consumption while the teeth are forming can result in fluorosis. This is why young children should not use fluoride toothpaste except under close supervision. There are several non-fluoride toothpaste options available in the market for those with no tolerance to fluoride. Natural toothpaste can contain peppermint oil, myrrh, plant extract(strawberry extract), special oils and cleansing agents. [edit] Striped toothpaste How stripes are produced in toothpaste How stripes are produced in toothpaste Striping of toothpaste is

solely for the purpose of providing an alternative appearance; it provides no functional benefit to the consumer.

Striped toothpaste can be produced by including two different colored toothpastes in an unusual type of packaging. The collapsible tube has two tanks, one filled with each color paste (see figure). Squeezing the tube pushes the two pastes out the opening. The tube nozzle layers the pastes to produce a striped pattern. As the tube is squeezed, the stripes flow parallel to each other and do not mix. The patterned paste that gets dispensed is simply a narrower version of what is in the tube.

Filling is done using a multi-nozzle filling head that dispenses a different colored stripe in each direction. To keep the stripes parallel to the axis of the tube, the head starts at the bottom and retracts as it fills, staying just above the level of the paste. Tubes with two compartments are generally reserved for toothpastes containing two formulas intended to react together and therefore kept isolated until dispensed (e. g. Colgate Simply White).

To keep the cost of packaging to a minimum, it is now common for tubes to be filled with striped paste (e. g. Aquafresh). [2] [edit] See also * Tooth whitening * Dental floss * Fluoride therapy * Sodium dodecyl sulfate * Toothbrush * List of toothpaste brands * Creamy snuff edit] References 1. ^ "Ingredients in toothpaste".

Retrieved on 2007-12-23. 2. ^ a b Sertima, Ivan Van (1992), *The Golden Age of the Moor*, Transaction Publishers, p. 267, ISBN 1560005815 3.

^ Lebling Jr. , Robert W. (July-August 2003), " Flight of the Blackbird", Saudi Aramco World: 24-33, .

Retrieved on 28 January 2008 4. ^ " Other ingredients in toothpaste".

Retrieved on 2007-12-23. 5. ^ " MSNBC: Throw away Chinese toothpaste, FDA warns". Retrieved on 2007-12-23.

6. ^ Calcium Phosphate Technologies from dentist. net