

The Evolution of Mouthwash

So Many to Choose From



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Widespread oral disease in early humans has been well established throughout prehistoric times.

Dental caries, abscesses, and chronic periodontal diseases were found in the oldest of Paleolithic remains. Through periods of history, there is documentation of people trying to take care of their teeth and fight bad breath.

History of Mouthwash

Ancient Egyptians are known to be responsible for the first artistic drawings that emphasize the importance of beauty and hygiene. An unclean body was thought to be impure. In addition to washing their bodies in oils, the Egyptians used many products to freshen their breath. They chewed sodium carbonate or rinsed their mouths with honey and water to which goose fat, frankincense, cumin, and ocher had been added. There are surviving recipes for chewable tablets made of dried plant matter such as myrrh, mastic, cypress grass, and lily, which were finely ground, mixed with honey, heated, and dried in balls.¹

Pedanius Dioscorides, a Greek physician and surgeon (40–90 AD) whose writings served as a medical textbook, suggested for treatment of bad breath a mouthwash mixture of the following: a decoct of the leaves of the olive tree, milk, the juice of pickled olives, gum myrrh with wine and oil, pomegranate peelings, nutgalls, and vinegar [QA: **Need reference**].

The ancient Romans included teeth cleaning as part of their religious ceremonies. The patriarchy

Table—Common causes of bad breath.

External

- ▶ Foods: such as onion, garlic, cheese, meats, and fish
- ▶ Drinks: such as alcohol, wine, juices, and soft drinks
- ▶ Tobacco: smoking and chewing

Internal

- ▶ Hygiene: poor dental hygiene by not brushing, flossing, and rinsing

required their slaves to clean their teeth. The Romans included a secret ingredient in their mouthwash: human urine.² They imported urine from Portuguese people because they thought it had more strength. Until the 18th century, urine continued to be an active ingredient in toothpaste and mouthwash because of the ammonia's cleansing abilities.³ Ammonia still continues to be an added ingredient in a lot of dentifrices.

Writings between 120 and 162 AD refer to mouthwashes for help in the treatment of diseases. Research also revealed that the ancient Indians and Chinese thought that caries were caused by worms, and decayed teeth were extracted, if necessary.⁵ The treatments of oral diseases were applied in powders, tablets, ointments, or lotions; ingredients of the various mixtures consisted of herbs, minerals, or,

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First, you must establish why the patient may need to add a mouthwash to his or her regimen. Is it because of bad breath, periodontal disease, dry mouth (xerostomia), respiratory infection, low carbohydrate diet, or tobacco use? Bad breath can be external and internal with 80% of the cause attributed to oral/internal causes (Table).

Certain foods contribute to offensive breath odor. Once the food is absorbed into the bloodstream, it is transferred to the lungs where it is exhaled. Many patients will ask the dental assistant if they have bad breath because they don't want it revealed to them by a loved one or, even

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often, esoteric agents such as ground-up mouse bones and the urine of a child.⁴

Mouthrinse for the Future

With all of the oral care prod-

more embarrassing, by offending someone they work with. Because of adaptation we cannot smell our own breath. In other words, the nerves in our nose become accustomed to our own smell. Dental

professionals can help diagnose a patient's bad breath with the use of a diagnostic machine called a halimeter that measures the volatile sulfur compounds in the breath. There are at least 400 different types of bacteria living in the mouth. To identify which bacteria are causing the problem, a culture test can be administered.⁶

Causes of Bad Breath

Periodontal Disease

Periodontal diseases affect millions of people. These diseases start very early in life and cause the loss of more teeth than all other reasons combined.⁷

Periodontal disease comes in 2 stages: gingivitis and periodontitis. Gingivitis is a superficial infection that is limited to the gum tissue and does not yet affect the underlying bone. The gums may look normal, but they may be red and puffy, bleed when brushed, and emit bad odor. Periodontitis is when the infection spreads from the gums to the underlying bone. In this stage the bone that supports the teeth is lost. There are several types of periodontitis, some more aggressive than others.⁸ If the disease is untreated, tooth loss will occur. Periodontitis can cause spacing between the teeth, loosening of 1 or more teeth, receding gums, and aching, itching, or other discomfort of the gums.⁹ Biofilm is the primary cause of periodontal infection.

Dry Mouth or Xerostomia

Dry mouth or xerostomia is the result of reduced or absent salivary function. Many medications and disease treatments can cause xerostomia including: analgesics, anticholinergics, antihistamines, antihypertensives, anti-inflammatory agents, anti-Parkinson medications, antipsychotics, bronchodilators, decongestants, diuretics, gastrointestinal agents, hypnotics, oral contraceptives, and

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radiation therapy. In addition, some diseases can themselves cause xerostomia, including Sjögren's syndrome and diabetes.¹⁰

Respiratory Infection

Even though most odors come from oral causes, some odors come from the tonsils and sinuses. Some tonsils get deep indentations in them, which get filled with food and plaque that harden into a ball. Sometimes the patient may cough, releasing the ball and leaving a foul taste and smell. Irrigation can sometimes help with this problem.⁶

Low Carbohydrate Diets


Patients on low carbohydrate diets might find themselves with a change in mouth odor. The good news is that the change in their breath probably means the diet is working. For energy, the body converts glucose from carbohydrates into energy. With low carbohydrate diets, the body compensates by burning fat. The body then pro-

duces keto acids that are released through the breath. Ketosis breath has a sweet smell and after taste [QA: Need reference].

Tobacco Use

Use of tobacco can increase the chances of oral cancer and gum disease. Tobacco products damage the gum tissue by affecting the attachment of the bone and soft tissue to your teeth. Smoking can contribute to bad breath, stains on the teeth and tongue, and buildup of calculus and tarter. [QA: Need ref. for this paragraph]

Conclusion

The importance of mouth and teeth cleanliness has been recognized from the earliest days of civilization to the 21st century. Today we have so many new types of mouthwash to choose from to make it an easy daily addition to the homecare regimen. 

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