BAD BREATH BIBLE

by Dr. Harold Katz

3rd Edition - Over 2,000,000 in print

A definitive guide to the Symptoms, Causes and Cures of Halitosis
Written by a dentist for his patients.
About the Author
Dr. Harold Katz graduated from the University of California, Los Angeles (UCLA) with degrees in Dentistry and Bacteriology. He is the founder of the California Breath Clinics and has personally treated tens of thousands of patients with breath related issues. Dr. Katz is a recognized expert on the subjects of breath care and oral health with more than one thousand television and radio appearances to his credit, ranging from the Today Show and Good Morning America to the History Channel’s Modern Marvels. Publications like the Wall Street Journal, the Los Angeles Times, the New York Post, Redbook, Shape and Forbes have used Dr. Katz as their authority when it comes to the topics of bad breath, dry mouth and gum disease. He has lectured on oral care subjects at major universities in the United States, Japan, the Philippines, Singapore, and Malaysia.

About The Breath Company®
The Breath Company is founded on the idea that oral care products can be made from pure, natural ingredients that are not only safer to use but also work better. The Breath Company fresh breath formula is recognized by dentists and clinicians as the most effective long term solution for the prevention of bad breath available without a prescription. Many people use The Breath Company products regularly for problems related to bad breath, dry mouth, and gum health. The Breath Company products are available in most Boots stores within the United Kingdom. TheBreathCo.com is a popular online destination for information on oral care.

About this Book
This book is a selection of information about bad breath, dry mouth, gum health, and general oral care written with the average person in mind. It is intended to help explain the importance of oral health to your overall health and how best to keep your mouth feeling healthy and smelling fresh.
I started my advanced clinical research into the problems of bad breath, dry mouth and taste disorders in 1993 when I founded the California Breath Clinics. My thirteen year old daughter was suffering from an embarrassing halitosis problem and I wanted to find something that helped her. At that time, I became convinced that a lot of the highly advertised, traditional oral hygiene products were outdated and, in some cases, not even particularly good for us. It was my goal to make something that was safer, more pure, and substantially more effective. The Breath Company oral care system is the result of that effort. Since its introduction in 1997, TheraBreath (the United States version of The Breath Company) has become a leader in the research and development of new, natural therapies for oral concerns like bad breath, dry mouth, gum health, teeth whitening, canker sores, and probiotic therapies for oral and throat health. This guide contains a brief summary of the breath treatment and oral care information we make available on our website, TheBreathCo.com. This web site is now referenced daily by physicians, dentists, and patients for the latest information available on many oral health related topics. I hope you find this guide helpful. It introduces some important topics regarding oral care that many people may overlook. For example, are you familiar with the ingredients in your oral care products? Do you know why dry mouth causes bad breath? Have you wondered if bad breath can come from indigestion? We’ll cover all of this in these pages. If after reading this information you still have any questions, feel free to email me at patientcare@thebreathco.com or call me at 1-800-973-7374. I am always here to help.

Yours in good health,
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- **GO ONLINE!**
  Access to free online interactive resources.

- **DID YOU KNOW?**
  Quick and helpful facts about oral health.

- **DR. KATZ PRODUCT TIP**
  Advice on the best The Breath Company solutions for specific oral health issues.

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Bad Breath

What Is Bad Breath?

Your mouth is alive with living organisms - bacteria which live and thrive in its warm, dark environment.

There are literally more bacteria alive in your mouth right now than there are people on planet Earth or germs in a toilet bowl.

Some of these bacteria are beneficial, helping your body to resist invaders and digest proteins. Other bacteria may be hostile, eventually resulting in things like sore throat or ear infection. Regardless of their intent, bacteria live and multiply in your mouth, below the surface of your tongue, at the back of your throat and on your tonsils (if you still have them) by the billions. This is a little unpalatable, but nevertheless true.

Just like you, all these bacteria eat. And just like you, after they eat they metabolize and produce waste. Billions of bacteria eating and then secreting waste can result in a lot of foul-smelling material. Certain types of anaerobic, sulphur-producing-bacteria emit noxious smelling waste composed of volatile sulphur compounds. These compounds include hydrogen sulphide (smells like rotten eggs), methyl mercaptan (smells like rotten cabbage), putrescine and cadaverine (both smell like decay) and several other unpleasant odours. Some of these waste compounds are so potent they are also found in nature in the glands of skunks. The pungent smells that come from the waste of this type of bacteria are what we typically refer to as bad breath.

DID YOU KNOW? Germs cause bad breath

Bad breath is the result of billions of bad-breath-related bacteria eating left over proteins in your mouth and converting them to smelly, sulphur based waste. That’s basically it.
Do I Get Bad Breath?

Anyone can get bad breath – even people who are conscientious brushers and flossers. It has less to do with oral hygiene and more to do with things like foods you eat, medications you take and personal habits you have that can provide an environment favorable to anaerobic, sulphur producing, bad-breath-related bacteria. These bacteria are always present in your mouth, but typically in limited numbers. Your body has ways of keeping bacteria in check. Sometimes those natural defenses are insufficient to effectively limit bacteria colonies. This is when even someone with great oral hygiene habits can quickly begin to smell offensive.

Table 1: Some leading causes of bad breath.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein rich foods</td>
<td>Proteins feed bacteria.</td>
</tr>
<tr>
<td>Post-nasal drip</td>
<td>Mucus contains protein that feeds bacteria.</td>
</tr>
<tr>
<td>Dry mouth</td>
<td>Drying out the mouth helps bacteria thrive.</td>
</tr>
<tr>
<td>Smoking</td>
<td>Smoking causes dry mouth.</td>
</tr>
<tr>
<td>Alcohol</td>
<td>Alcohol causes dry mouth.</td>
</tr>
<tr>
<td>Sleep apnea and mouth breathing</td>
<td>Mouth breathing causes dry mouth.</td>
</tr>
<tr>
<td>Acidic juices (Tomato, Citrus, etc.)</td>
<td>Bad breath related bacteria are able to produce waste faster in a highly acidic environment.</td>
</tr>
<tr>
<td>Gum disease</td>
<td>Diseased gum tissue feeds and harbors bacteria and provides opportunities for them to enter the bloodstream.</td>
</tr>
<tr>
<td>Medication that reduces immunity</td>
<td>Your body is less capable of limiting growth of bacteria.</td>
</tr>
<tr>
<td>Medication that causes dry mouth</td>
<td>Drying out the mouth helps bacteria thrive.</td>
</tr>
<tr>
<td>Lactose intolerance</td>
<td>May cause a sour milk odour when eating dairy-based foods.</td>
</tr>
<tr>
<td>Drying agents in oral care products</td>
<td>Alcohol in mouthwash and detergents like Sodium Lauryl Sulphate in toothpaste can cause dry mouth.</td>
</tr>
<tr>
<td>Sweets</td>
<td>Sugars (sucrose, glucose, fructose) are efficient fuel for all types of bacteria ranging from bad-breath-related bacteria to the germs that are responsible for plaque, gum disease and tooth staining. Sugars also encourage tooth decay which feeds bacteria further and exacerbates bad breath problems.</td>
</tr>
</tbody>
</table>
Things To Know About Bad-Breath-Related Bacteria

The bad-breath-related bacteria in your mouth are not contagious. The organisms are not viruses or hostile germs, nor are they infectious. Everyone in the world has the same types of bacteria in their mouth (though they have them at different levels). You cannot catch bad breath from someone else – even by kissing.

Bad-breath-related bacteria provide important benefits to your overall health. You cannot and should not get rid of the bad breath related bacteria from your mouth entirely. Anaerobic sulphur-producing bacteria are part of our normal oral flora and are well established in a typical, healthy mouth. It is not possible to remove them permanently by tongue scraping, antibiotics, or harsh germ-fighting mouthwash. In addition, as they help your body in various functions like digestion of proteins, removing the bacteria is not recommended.

Bad-breath-related bacteria are anaerobic, which means they prefer to live in an environment where oxygen is NOT present. Bad breath-related bacteria thrive in places sheltered from the air. They prefer to grow and multiply in the spaces in between the papillae (fibers) that make up your tongue, at the back of your throat and on your tonsils if you still have them. Saliva is rich with oxygen which helps control these bacteria. In the presence of oxygen, anaerobic bacteria populations dwindle. On the other hand, when your mouth is dry, bacteria populations grow very rapidly. That is why dry mouth tends to create bad breath.

It is possible to eliminate the smells associated with bad breath-related bacteria by converting them to non-odourous organic salts without stripping the mouth of the bacteria’s protective benefits. The same bacteria that cause bad breath also help you to digest proteins and fight off hostile germs. Their population and ability to metabolize waste needs to be controlled through an easy to use oral care regimen. This is the principle on which The Breath Company products were developed. Rather than using harsh astringents and drying detergents, The Breath Company uses the natural power of oxygen in the patented OXYD-8® compound to safely and effectively control breath odour and maintain a healthy mouth.
While everyone has some amount of bad-breath-related bacteria living in their mouth, higher populations may indicate more frequent and more intense breath odour. Study continues into why different people have different levels of oral cavity bacteria populations. Theories attribute increases in bacteria populations to hormonal changes, dry mouth, illness, medications, etc. Any event that creates an imbalance in your oral flora can radically change the overall bacteria populations in your mouth. Higher populations of bad-breath-related bacteria leads to stronger and more frequent breath odour problems.

Certain physical traits can predispose you to bad breath as they create an environment more favorable for bacteria. A rough tongue surface, fissures on your tongue, having tonsils, dental pockets or cavities can all provide shelter for bacteria that can then rapidly multiply.
Common Myths About Bad Breath

Myth #1 - Bad breath means you don’t brush your teeth.
Not True. Bad breath is typically the result of an overabundance of bad-breath-related bacteria below the surface of your tongue and at the back of your throat. Anyone can get bad breath, even those who are meticulous with their oral hygiene. The type of oral care products you use can make all of the difference. If you are brushing conscientiously and still get bad breath, you are probably just using the wrong toothpaste.

**DID YOU KNOW?** Avoid harsh soap in toothpaste

Some toothpastes contain sodium lauryl sulphate, a soapy detergent that creates foam but has no cleaning benefit. The additive has recently been linked to serious side effects including canker sores. Read the label of your toothpaste and avoid sodium lauryl sulphate as an ingredient.

**Dr. Katz Product Tip:** Works faster and longer

The Breath Co Toothpaste and The Breath Co Oral Rinse were developed specifically to fight breath odour. Independent clinical trials have verified that nothing works faster or lasts longer to stop bad breath than The Breath Company products.

Myth #2 - A mouthwash that burns means it is working.
Not True. That burn can actually be bad for you. The burning you feel comes from alcohol in the mouthwash irritating the inside of your mouth. Your mouth is supposed to be a moist place and alcohol rapidly dries and irritates it. That is why you feel the burn. The drying effects of alcohol can last for hours. A dry mouth is an unhealthy mouth, as saliva works to prevent germ growth.

Recent research published in The Australian Dental Journal has recently shown a potential link between alcohol-based mouthwash and oral cancer. It is best to avoid this ingredient in your mouthwash while study is ongoing.
DID YOU KNOW?  Vodka vs. Mouthwash

There is as much alcohol in a capful of typical mouthwash as there is in a shot of vodka. It is possible to fail a police Breathalyzer test after rinsing with a mouthwash like Listerine.

Dr. Katz Product Tip:  No alcohol in our products

The Breath Co Oral Rinse is alcohol-free and works without burning. Instead of an alcohol astringent, we use the power of oxygen to attack bad-breath-related bacteria and the odours they cause.

Myth #3: Bad breath comes from inside the sinus cavity.
Not True. Bad breath can be expelled through the sinus cavity but that is not its origin. Bad-breath-related bacteria live and breed within the back of the tongue and in the throat. Post-nasal drip, respiratory infection, and other conditions that allow protein-rich mucus to reach the back of the throat will provide food to the bacteria. The bacteria will then break down the protein in mucus and create volatile sulphur compounds resulting in bad breath and unpleasant mouth tastes. You may smell odour coming out of your nose, but the source is typically the back of the throat.

Myth #4: Bad breath can come from the stomach.
Not True. You go out to lunch and eat the biggest meal in your life. Afterwards you bend over to tie your shoes. Does your lunch fall out of your mouth? Of course not. There is no open tube connecting the large intestine, small intestine and stomach to your oesophagus and your mouth. There are valves, muscles, sphincters and so on that keep digested food in its proper place. If you burp or belch you may release smelly digestive gas - but that is not bad breath. It’s bad gas.

DID YOU KNOW?  Parsley doesn’t work

Breath Assure was an oral care manufacturer in the 1990s that claimed that swallowing their parsley oil capsules could freshen breath “from the inside out.” They were sued for false advertising, had to admit the fact that bad breath starts in the mouth and eventually filed for bankruptcy.
Myth #5: You can check your breath by blowing into your hand. This doesn't work. Your senses become used to the smell of your own bad breath. Your body is designed so that you cannot detect your own odour. It’s a process called acclimation which we have developed over centuries of evolution – it helps us to be able to distinguish strange smells quickly without being overwhelmed with our own particular odours. You breathe your own breath constantly so you become accustomed to your own smell. Blow all day and you may not smell a thing even as people are backing away from you slowly.

DID YOU KNOW?  Don’t waste your breath

It is impossible to smell your own breath by exhaling into your cupped hand and then trying to smell the result. All you end up doing is smelling your hand - not your breath.
6 Quick Ways To Check If You Have Bad Breath

- Run a piece of dental floss between your molars and then smell the floss. If the floss has an odour, brush and floss to clean out decaying matter. It is already being used as a food source for bad breath related bacteria.

- Wipe the top surface of your tongue with an unscented tissue or piece of cotton gauze, wave to dry, then smell it. If you notice a yellowish stain where you wiped it’s likely that you have an elevated sulphide production level and potentially pungent breath.

- Lick the back of your hand. Let that dry for about 10 seconds and then smell. If you smell any type of odour you probably have bad breath. Sulphur salts from your tongue have been transferred to your hand and that is what you are smelling.

- Check the colour of your tongue. Stand in front of the mirror and stick out your tongue as far as possible. If you notice that the very back of your tongue is white or yellow it may be a sign of the bacterial waste that leads to breath odour.

- Ask the opinion of someone you can trust. It’s kind of a personal question, so make sure it is someone you don’t mind blowing on.

- If your mouth tastes bad, it probably smells bad.
Food and Bad Breath

When food sits out too long it starts to spoil because anaerobic bacteria are breaking it down. The same process takes place in your mouth with residual pieces of food left behind every time you eat, only much more quickly.

Bacteria love proteins. Most foods are packed with proteins that bad-breath-related bacteria will rapidly convert to smelly waste. That is why bad breath tends to follow a meal and can occur no matter what you eat. Some foods, however, have more of a tendency to cause bad breath than others.

- **Smelly foods like Onions, Garlic and Curry** contain powerful volatile sulphur compounds called mercaptans and are also protein-rich. Eating them feeds bacteria and augments bacterial odour with these naturally occurring mercaptan smells.

- **Protein dense foods like Meat, Dairy and Beans** are a favorite food source for bad-breath-related bacteria. Providing bacteria with plenty of protein elevates their number and the amount of waste they produce. More waste invariably leads to bad breath.

- **Acidic foods and beverages like Tomatoes, Pineapple, Citrus and Coffee** contain high levels of acids which cause bacteria to reproduce more rapidly. Bad-breath-related bacteria prefer a more acidic environment and are more active at higher levels of mouth acidity.

**Dr. Katz Product Tip:** Stop both bacteria and odour

The Breath Company products are formulated to not only attack bacterial odours but also the smells associated with pungent foods, no matter how stinky. Enjoy smelly foods to your heart’s delight. Just use The Breath Co Toothpaste and The Breath Co Oral Rinse afterwards to keep from smelling of what you’ve eaten, or worse.
Mouth Acidity, Taste Sensation and Bad Breath

Over time, mouth acidity can cause tooth erosion, acid reflux and tooth sensitivity to heat, cold and sweets. Most oral care products tend to be acidic, which can actually make acid erosion problems far worse over time.

An interesting side effect of an acidic mouth environment is that it may alter your sense of taste. **The Breath Company products are pH buffered and restore a more healthy, less acidic oral environment.** Some people actually notice a substantial change in what things taste like when they first start to use The Breath Company products. That is their taste buds adjusting to the change in pH. After a few uses everything will return to tasting normal as the brain adjusts but many users report that food and drink now has a cleaner taste.

**DID YOU KNOW?** Germs prefer an acidic mouth

pH is a term used to describe the acidity of the environment. The oral cavity has a normal pH of 6.5, which is somewhat acidic. Bad-breath-related bacteria thrive in an acidic environment. Acid is one of the primary causes of tooth enamel erosion and tooth sensitivity.

**Dr. Katz Product Tip:** pH balanced mouthwash

The Breath Co Oral Rinse is uniquely pH balanced to buffer mouth acidity, slow bacteria growth and help prevent acid-related tooth enamel erosion that can lead to tooth sensitivity and gum disease. Reducing acidity in your mouth can also help things taste better.

**Table 2 : Acidity for common mouthwash products**

<table>
<thead>
<tr>
<th>pH</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.2</td>
<td>The Breath Co Mouthwash (less acidic than water)</td>
</tr>
<tr>
<td>7.0</td>
<td>Water</td>
</tr>
<tr>
<td>6.5</td>
<td>Rembrandt Mouthwash (more acidic than water)</td>
</tr>
<tr>
<td>5.4</td>
<td>Scope Mouthwash</td>
</tr>
<tr>
<td>4.3</td>
<td>Listerine Mouthwash</td>
</tr>
<tr>
<td>3.7</td>
<td>Colgate Peroxyl Mouthwash</td>
</tr>
<tr>
<td>3.2</td>
<td>The Natural Dentist Mouthwash (most acidic)</td>
</tr>
</tbody>
</table>
Alcohol and Bad Breath

Alcohol is a harsh drying agent typically found in beer, wine and cocktails. However it is also a common ingredient in many mouthwash products despite its tendency to create a very dry mouth. As previously discussed, a dry mouth is an unhealthy mouth. Without the protection of saliva, germs are able to multiply rapidly and give you terrible breath.

To avoid this, follow up a cocktail with an 8 oz. glass of water to rehydrate dry tissue. If you are using a drying, alcohol-based mouthwash, switch to an alcohol-free brand like The Breath Company. Long term use of mouthwash containing alcohol can lead to more serious oral care problems.

**DID YOU KNOW?** Avoid alcohol in mouthwash

Laboratory scientists use alcohol to dry out hard to reach areas in test tubes. The same result takes place when you gargle with an alcohol based mouthwash.

**Dr. Katz Product Tip:** The Breath Co is alcohol-free

*The Breath Co Oral Rinse* contains no alcohol, artificial flavours or colours and doesn’t burn. It is very pleasant to use and incredibly effective. Clinical testing has shown that the mouth produces more saliva after use of The Breath Company products, rather than drying out after the use of an alcohol-based mouthwash.

Smoking and Bad Breath

Smoking quickly dries out the mouth and introduces nicotine and tar, which contribute to making an even more complex unpleasant odour. If you happen to smoke and drink alcohol, bad breath is almost a certainty.

**Dr. Katz Product Tip:** A tip for smokers

While I recommend that anyone who smokes should stop to prevent long term health problems, The Breath Company products are recommended for smokers who are concerned about tobacco breath. *The Breath Co Toothpaste* and *The Breath Co Oral Rinse* work well to keep you smelling like a non-smoker until you decide to quit. It has even been credited for saving a few marriages where cigar smoking was involved.
What’s the Story With Morning Breath?

Saliva is the body’s natural barrier against bacteria. As you sleep throughout the night, your salivary glands slow down because your brain knows you are not eating. For some people over thirty, salivary glands can shut down completely at night. If you have ever woken up from a very dry mouth, this is probably happening to you.

Combine this with the constant flow of air through your mouth as you sleep (amplified if you snore) and you get an extremely dry environment – one that is ideal for bad-breath-related bacteria to quickly multiply and produce a great deal of waste. By the time you wake up, your mouth is coated with the smelly stuff. This is why many people get morning breath.

**DID YOU KNOW?** Everyone gets morning breath

Morning breath is the most common form of bad breath and affects just about everyone. It is also very easy to prevent by using The Breath Company products before bed.

**Dr. Katz Product Tip:** Prevent morning breath

The key to preventing morning breath is to reduce the ability of bad-breath-related bacteria to produce smelly waste as you are asleep, when your mouth tends to be more dry. Using The Breath Co Toothpaste and The Breath Co Oral Rinse immediately before bedtime has been clinically proven to reduce morning breath. Using The Breath Company products also helps to establish a healthy level of moisture and reduce overnight dry mouth symptoms as you sleep. It is an easy way to keep from waking up with morning breath every day.
Post-Nasal Drip, Sinus Problems and Bad Breath

Mucus is made of proteins that bacteria find delicious. When you have post-nasal drip, mucus drains down through your nasal passages and coats the back of the tongue and throat where bacteria live. This feeds the bacteria, which have a field day breaking down these proteins into odourous and sour tasting compounds. Providing a mucous food source for bad-breath-related bacteria can result in the rapid onset of bad breath.

Post-nasal drip happens to be one of the main causes of bad breath in children as they tend to get a lot of runny noses. Colds and sore throats can also feed bad-breath-related bacteria, which is why people with those illnesses can have a characteristic ‘sick’ breath odour.

**DID YOU KNOW? Sinus meds make breath worse**

The use of antihistamines for sinus problems can make a bad breath problem even worse. Antihistamines can dry the sinus area and slow the production of saliva. Less saliva means your body has less capacity to control bad-breath-related germs in your mouth which leads to worse breath.
The Tongue and Bad Breath

The tongue has a topography like a map. Differences in this topography can influence the likelihood and degree of bad breath. Generally, the rougher one’s tongue, the more likely one is to have a bad breath problem. Some tongues have deep grooves or fissures. A fissured tongue tends to lead to bad breath as fissures provide an ideal environment for bacteria to multiply.

Some tongues have papillae (the fibers on the top surface of the tongue) that are slightly longer than the norm. This is known as “hairy tongue”. The longer the papillae, the rougher the appearance of the tongue and the more places there are for bad-breath-related bacteria to hide.

DID YOU KNOW? Don’t scrape too hard

A tongue scraper is not recommended for people with hairy tongue, a condition referring to tongue fibers that are slightly longer than the norm. Scraping can lead to irritation and injury for people with this condition.

Geographic Tongue

Geographic tongue is a condition characterized by large white patches on the tongue often encircled by red borders. It is called “geographic” because these patches tend to move locations over time. Geographic tongue can be triggered by a reaction to food, stress, illness, certain chemicals and hormonal surges. Generally the condition is painless. Some foods can irritate geographic tongue and cause a stinging sensation - these include foods that are acidic, spicy, sour or sweet.

Dr. Katz Product Tip: No more splotchy tongue

People who have geographic tongue have found relief by applying The Breath Co Toothpaste directly to their tongue. The Breath Co Toothpaste contains aloe vera which soothes tongue irritation.
Table 3: Some typical tongue types

<table>
<thead>
<tr>
<th>Tongue Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy Tongue</td>
<td>Note the slight glistening due to the presence of adequate saliva and the nice pink colour. <strong>Topography:</strong> Smooth.</td>
</tr>
<tr>
<td>Coated Tongue (yellow coating)</td>
<td>Yellow coating gets darker in the back showing an increase in the production of sulphur compounds. <strong>Topography:</strong> Slight fissure in the middle.</td>
</tr>
<tr>
<td>Dry Coated Tongue</td>
<td><strong>Topography:</strong> Random fissures</td>
</tr>
<tr>
<td>Coated Tongue (white coating)</td>
<td><strong>Topography:</strong> Deep median fissure</td>
</tr>
<tr>
<td>Black Hairy Tongue</td>
<td>Occurs when papillae (finger-like projections on the surface of the tongue) fail to exfoliate normally. As papilla lengthen they collect debris and bacteria, producing the characteristic dark “furry” appearance.</td>
</tr>
<tr>
<td>Geographic Tongue</td>
<td>Usually not associated with bad breath. Can be associated with stress or a physical reaction to certain toothpaste and mouthwash ingredients (Sodium Lauryl Sulphate, Alcohol, etc.)</td>
</tr>
</tbody>
</table>
Tongue Sensitivity and Burning Tongue Syndrome

If a tongue becomes very dry or irritated the outer layer can become very sensitive. This painful, burning condition is called burning tongue syndrome and tends to occur more frequently as we age.

While burning tongue syndrome is common to both sexes, it tends to occur more frequently among women. That has caused some physicians to believe that there is a hormonal component to the condition. Diabetics may notice a higher incidence of burning tongue.

The drying effects of alcohol and soap on a tongue already experiencing burning and irritation can be very painful. It is recommended that people experiencing burning tongue symptoms avoid products containing these ingredients to prevent further irritation.

Dr. Katz Product Tip: Be kind to your tongue

The Breath Company products are specifically formulated to be mild and prevent tongue irritation. The Breath Co Toothpaste will help quickly soothe a burning tongue - you can use it directly on your tongue for 90 seconds, twice a day to help extinguish burning tongue syndrome. Follow with The Breath Co Oral Rinse to help reestablish a healthy pH and moisture level in your mouth.

6 QUICK TIPS for Those With Burning Tongue Syndrome

• Avoid oral care products with alcohol or sodium lauryl sulphate as both can dry the tongue further, causing even more pain.

• Avoid acidic beverages like coffee, citrus juices or tomato juice - additional acidity will make the burning sensation worse.

• Take a vitamin C supplement. A vitamin C deficiency can sometimes be a contributing cause to burning tongue.

• Drink enough water. Drink eight glasses of water per day.

• Do not smoke. Smoking dries the tongue and makes it more sensitive.

• See your physician to check for diabetes or thyroid problems.
Bad Breath, Breath Mints and Lozenges

Sometimes you feel like your breath could use a touch up but it’s not practical to brush and rinse. That’s when many of us pop a breath mint.

Traditionally, breath mints were candies designed to mask bad breath with strong flavours like mint (hence the name “breath mint”). The fact that these candies stimulated saliva, which is helpful to freshen breath, was overshadowed by the huge quantities of sugar or sugar derivatives they contained. Sugars feed many types of bacteria – not only bad-breath-related bacteria, but also those that create dental plaque, tooth decay and gum disease. Many people trying to prevent bad breath wind up actually doing the opposite by feeding sugary mints to the oral bacteria responsible for breath odour and decay.

**DID YOU KNOW?** Avoid sugar in oral products

Any type of sugar is unacceptable in an oral care product because it feeds bacteria. Read the ingredient labels of your oral care products. You may be surprised by what some manufacturers use in products designed to improve oral health.

6 THINGS to Look for in a Breath Mint

- **Make sure your breath mint is sugar-free.** Sugars feed bacteria.
- **Avoid mints that use artificial sweeteners such as saccharin and aspartame.** The use of these products can be problematic to your health over the longterm for a variety of reasons.
- **Look for xylitol as a sweetener.** In recent years xylitol has been shown to have anti-cavity properties, is a non-sucrose sweetener and tastes great.
- **Use hard lozenges.** A hard lozenge you can suck on will stimulate production of saliva. This will help freshen your breath and fight germs.
- **Avoid artificial flavours and colours.** You will probably consume thousands of mints in a lifetime. That can be a lot of artificial additives over time. There are many breath lozenges that don’t use artificial additives – use one of those.
- **Natural antimicrobials work great to keep your mouth fresh and germs in check.** Look for ingredients like licorice root extract and clove.
Tonsil Stones and Bad Breath

What are Tonsil Stones?
Tonsil stones are caused by an accumulation of bacteria and debris that become lodged in the tonsils. This debris putrefies in the back of your throat and collects in the small divots or pockets which appear on the surface of the tonsils.

DID YOU KNOW? Smelly globs from the throat

Tonsil stones are white or yellow lumps of gooey bacterial waste that can form at the back of your throat. They are quite common for people who still have their tonsils. People who have had their tonsils removed typically do not experience tonsil stones. Tonsil stones give off a foul odour and lead to very bad breath.

What Causes Tonsil Stones?
The purpose of the tonsils is to trap airborne particulates and other matter to prevent it from entering the body through the throat. They also filter lymph fluid. Unfortunately, the tonsils cannot always differentiate between harmful and benign particles and tend to retain tiny bits of matter indiscriminately. This can be exaggerated if the amount of lymph fluid is more than the tonsils can effectively filter. Often, this matter settles into crevasses in the tonsils.

Dr. Katz Product Tip: Stop smelly tonsil stones

Tonsil stones can be safely removed by irrigating your tonsils through gargling with The Breath Co Oral Rinse. You can also help to avoid the formation of tonsil stones by using The Breath Co Toothpaste and The Breath Co Oral Rinse daily. Our products are formulated to prevent the ability of bacteria to generate large amounts of waste. As tonsil stones are an accumulation of this waste, using our products can effectively prevent their appearance.
Dry Mouth

Why Saliva is Important to Your Overall Health

Saliva is your body’s own natural barrier against hostile germs and other bacteria that tries to enter through your oral cavity. If you think about it, there are very few good ways for germs to enter your body unless you have open cuts or other trauma – your mouth is your body’s “front door.” When your mouth is drier, you have less saliva to control germs and bacterial growth in your mouth and you leave your “front door” wide open for unwanted visitors. This can lead to rapid proliferation of bacterial colonies that not only cause bad breath but sometimes far worse health problems.

Your saliva helps keep your mouth healthy and fresh because it contains a substantial dose of oxygen. Many bacteria are anaerobic, which means that they thrive and make more odour when there is less oxygen. Having a healthy, moist mouth dense with oxygen creates an environment that is hostile to these germs. A dry mouth, on the other hand, helps them feel right at home.

Saliva also provides other important benefits, including aiding in the digestion of food, lubricating the oral cavity and maintaining a stable pH in the mouth. Maintaining healthy levels of saliva is important.

Why Do I Get Dry Mouth?

There are many reasons dry mouth becomes a problem. Sometimes it is due to age. Starting in our twenties we start to produce less saliva. By the time we are in our forties and fifties, dry mouth may be a chronic condition that many people self-medicate with mints and gum.

Dry mouth can also be caused by prescription medication, antihistamines, adult beverages, tobacco, coffee, having to do a lot of talking, alcohol-based mouthwash and many other factors.

GET MORE DRY MOUTH INFORMATION

www.TheBreathCo.com/research/dry-mouth/
Dry Mouth and Medication

Many people are unaware that the medications they’ve been taking for years could be giving them bad breath and making food taste funny. The reported side effects of many medications include dry mouth and an alteration in taste perception.

At last count, over 75% of commonly prescribed medicines listed dry mouth as a potential side effect. Medications that cause dry mouth problems include:

- Information see appendix A: Medications that can cause dry mouth or visit the online resource below for a complete list.

Over the counter drugs not requiring a prescription can also frequently cause dry mouth. This includes stuff that may already be in your medicine cabinet - Rolaids, Motrin, Benadryl, Claritin, Imodium, Zantac and more.

For more information see appendix A: Medications that can cause dry mouth or visit the online resource below for a complete list.

Table 4: Some Meds That Cause Dry Mouth

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
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<tbody>
<tr>
<td>Appetite suppressants</td>
<td>Anorex SR, Adipost, Didrex, Zantryl</td>
</tr>
<tr>
<td>Antacids</td>
<td>Prilosec, Prevacid, Protonix</td>
</tr>
<tr>
<td>Anxiety drugs</td>
<td>Ativan, Valium, Xanax</td>
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<td>Antispasmodics</td>
<td>Anaspaz, Bentyl, Donnatal</td>
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<tr>
<td>Anticonvulsants</td>
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<td>Antidepressants</td>
<td>Celexa, Paxil, Prozac, Wellbutrin, Zoloft</td>
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<tr>
<td>Antihistamines</td>
<td>Actifed, Benadryl, Claritin, Vistaril, Zyrtec</td>
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<tr>
<td>Blood pressure drugs</td>
<td>Accupril, Flomax, Norvasc</td>
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<tr>
<td>Bronchodilators</td>
<td>Alupent, Combivent, Spiriva, Ventolin</td>
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<tr>
<td>Diarrhea treatments</td>
<td>Imodium AD, Lomotil</td>
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<tr>
<td>Diuretics</td>
<td>Diurese, Lasix, Zaroxolyn</td>
</tr>
<tr>
<td>Pain releivers</td>
<td>Motrin, Naprosyn</td>
</tr>
<tr>
<td>Parkinson treatments</td>
<td>Akineton, Permax, Symmetrel, Requip</td>
</tr>
</tbody>
</table>

LIST OF DRY MOUTH INDICATING MEDS

www.TheBreathCo.com/research/medication/
6 QUICK WAYS to Avoid Dry Mouth

Unfortunately we can’t avoid many of the causes of dry mouth. If a doctor has prescribed a medication, we need to take it even if dry mouth is a side effect. However, there are some things we can do to avoid dry mouth.

- **Drink eight glasses of water a day to stay hydrated.** A glass of water can be a quick fix for a dry mouth. While not as good as your saliva, water is still a great way to keep oral tissues moist.

- **Suck on a lozenge to stimulate saliva.** This tricks your brain into thinking you are eating, triggering your salivary response. Tiny mints are not substantial enough to trigger the response.

- **Avoid alcohol-based mouthwash.** Clinical studies have proven that mouthwash containing alcohol results in dry mouth that can sometimes last for hours.

- **Avoid soap like sodium lauryl sulphate in toothpaste.** Clinical studies have proven that sodium lauryl sulphate can cause mouth dryness, inflammation and canker sores.

- **Do not smoke.** Smoking will dry the mouth.

- **If you must do a lot of talking, stop for sips of water.** Prolonged speaking dries the mouth very quickly.

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**Dr. Katz Product Tip:** Our dry mouth solution

The Breath Co Dry Mouth Lozenges are formulated to help with all types of dry mouth symptoms. They contain a powerful, natural ingredient that stimulates saliva production and helps your mouth stay moist and fresh.

Grab a few for your car, your desk, purse or wherever they can be handy throughout the day.
Oral Health

Canker Sores and Your Toothpaste

What are Canker Sores?
Canker sores are small oral ulcers that can make life unbearable when eating, drinking, speaking or swallowing. They occur on the inside of the mouth and are white or yellow surrounded by a dark red area. Canker sores can form due to a variety of reasons ranging from stress to injury or trauma of oral tissue – sometimes they can even be caused by overly vigorous brushing.

Can Your Toothpaste Give You Canker Sores?
Recent research has also linked a foaming agent called sodium lauryl sulphate common to many toothpastes to the formation of canker sores. This harsh chemical has been proven to create microscopic damage to the oral tissue which lines the inside of your mouth. This tissue damage can then lead to canker sores.

Dr. Katz Product Tip: Help for canker sores

The Breath Co Toothpaste has never contained sodium lauryl sulphate or any other type of foaming agent that has been linked to canker sores. If you are using another toothpaste and experience problems with canker sores, try switching to The Breath Co Toothpaste for one month to see if they go away. If they do, the canker sores may be a reaction to your current toothpaste.

DID YOU KNOW? Canker sores vs. cold sores

The two conditions sound the same but they are very different. Canker sores are ulcers that start inside the mouth or on the tongue and are typically due to stress or injury. They are not infectious. Cold sores typically start on the lip or facial area immediately next to the lip and are an outbreak symptom of the Herpes Simplex virus type 1 (HSV-1). Cold sores are very contagious and the virus can easily be spread to others. Contact with them should be avoided.

INTERESTING NOTE: Most adults who are carriers of HSV-1 picked up the virus during their preschool years from an infected adult.

LEARN MORE ABOUT CANKER SORES
www.TheBreathCo.com/research/canker-sore/
Gum Disease, Bad Breath and Your Health

Gum disease, also known as periodontal disease, is an infection of the tissues and bones surrounding and supporting your teeth. Your mouth is always creating plaque which is a clear and sticky substance that contains damaging bacteria. In the presence of certain sulphur compounds, these bacteria can penetrate your gum line where they cause gum tissues to become infected and break down.

Gingivitis is the first stage of gum disease. It generally involves having swollen, red gums that bleed easily when you floss or brush. Gingivitis is reversible and usually does not cause pain. However, gingivitis can eventually turn into periodontitis which is much more serious.

Periodontis is the second stage of gum disease. It involves your gums pulling away from your teeth and leaving deep pockets between your gums and teeth where bacteria can grow and cause damage to the bone that supports your teeth. Your teeth can become loose and fall out or need to be pulled out due to infection. Periodontitis is so destructive it can necessitate serious periodontal procedures and even oral surgery.

DID YOU KNOW? Bad breath can cause gum disease

The odourous sulphur compounds found in bad breath can initiate gum disease. Consequently, attacking the bugs and odours of bad breath is the first step of a healthy mouth. The secret here is that the sulphur in bad breath can create gum disease—not the other way around!
How are Gum Disease and Bad Breath Related?

Blood and diseased tissue from gum disease are proteins. The bad breath bacteria eat, digest and convert proteins into smelly, sulphur compounds. Not only does this cause bad breath, it creates an ever-worsening cycle of bad breath and gum disease. The sulphur compounds allow bacteria and toxins to penetrate your gumline which worsens the gum disease - this leads to more bleeding and diseased tissue - which leads to more bacteria, which leads to more sulphur compounds, etc.

Bleeding Gums Can Lead to Heart Attacks and Strokes

Studies have suggested that gum disease may be as significant as smoking or high cholesterol when it comes to heart attacks and strokes. Swollen and bleeding gums allow bacteria and toxins to infiltrate your bloodstream and travel to your brain and heart possibly causing a stroke or a heart attack.

The upshot is that gum disease can be extremely damaging to your overall health - not just your oral health and breath. It is very important to visit your dentist regularly and maintain adequate oral hygiene using quality oral care products.

Dr. Katz Product Tip: Reverse gum disease

Gum disease in its gingivitis stage can be reversible, so it is important to take the proper steps as soon as you can to prevent it from becoming periodontitis, which can be very destructive.

The Breath Company products provide healthy oxygen to damaged gum tissue and also attack nasty, anaerobic, sulphur-producing bacteria.
The Breath Company Products

The Breath Co Toothpaste

Brush away bad breath, dry mouth, sensitivity and cavities.

Our world famous original The Breath Co Toothpaste is guaranteed to stop bad breath fast while fighting the germs that cause cavities. Use it daily with The Breath Co Oral Rinse for a healthy mouth, kissably fresh breath and some really impressive dental checkup results!

Works instantly on bad breath • Controls dry mouth symptoms Helps maintain gum health • Free of sodium lauryl sulphate Recommended for canker sores • 24 hour confidence GUARANTEED Vegetarian • Vegan • Kosher • Gluten-Free • Approved for Diabetics

“I tried all of the toothpastes and mouthwashes that were supposed to help with tooth sensitivity. I also had an ongoing breath problem according to my husband. Then I found The Breath Co Toothpaste and something amazing happened. I can eat cold foods again and my breath is great! Wow!” - Kellly A.

www.TheBreathCo.com/products/toothpaste/

The Breath Co Mild Mint Oral Rinse

Nothing works faster and lasts longer to prevent bad breath.

The Breath Co Mild Mint Oral Rinse is unconditionally guaranteed to stop bad breath. The patented formula uses the natural germ fighting power of oxygen to attack the source of bad breath odour and gum irritation. Helps prevent dry mouth symptoms. Mild natural mint flavour.

Works instantly on bad breath • Controls dry mouth symptoms Non-burning and alcohol-free • Helps maintain gum health No artificial flavours or colours • 24 hour confidence GUARANTEED Vegetarian • Vegan • Kosher • Gluten-Free • Approved for Diabetics

Featured: History Channel’s Modern Marvels episode on “Stink”

“I just wanted to say how much I love the The Breath Co Rinse. My daughter is 15 and has breath issues. This is the only product she will use. It doesn’t burn her mouth and she gets results. Thank you for helping fight her bad breath!” - Karen

The Breath Company Products

The Breath Co Icy Mint Oral Rinse

Oral rinse with an invigorating Icy Mint flavour.

We’ve incorporated all the bad breath fighting technology of our original oral rinse and added a cool blast of minty menthol and crisp citrus. The Breath Co Icy Mint Oral Rinse uses the natural oxygenating power of OXYD-8 to destroy the bacteria that cause bad breath odour.

Works instantly on bad breath • Controls dry mouth symptoms Non-burning and alcohol-free • Helps maintain gum health No artificial flavours or colours • 24 hour confidence GUARANTEED Vegetarian • Vegan • Kosher • Gluten-Free • Approved for Diabetics


“I have been using The Breath Co mouthwash for years and I just tried the new flavour today. I think y’all did a fantastic job in coming up with a new flavour. My mouth feels so fresh afterwards, and you guys didn’t compromise on the formula itself. Thanks so much for this new flavour.” - Tyler

The Breath Co Dry Mouth Lozenges

Unique three-step lozenge relieves dry mouth and restores fresh breath instantly.

Step 1. Our citrus mint formula quickly eliminates any unpleasant flavours and odours in your mouth.

Step 2. The clinical strength powers of Zinc, Oxygen and Xylitol attack the germs that cause bad breath.

Step 3. Our proprietary mouth wetting agent stimulates saliva production to eliminate dry mouth.

Eliminates bad breath instantly • Relieves dry mouth symptoms • Sugar-Free Vegetarian • Vegan • Kosher • Gluten-Free • Approved for Diabetics

www.TheBreathCo.com/products/lozenges/

“Your lozenges are amazing! I suffer from chronic dry mouth because of daily medications I take. I get complete relief by using the lozenges. And my breath is perfect!” - David S.
How to Thoroughly Clean Your Mouth and Freshen Your Breath With The Breath Company products.

These instructions were developed over decades of bad breath treatment at the California Breath Clinics. This oral hygiene approach is very thorough and is designed to restore a healthy mouth environment when severe bad breath has become a problem. If you are new to using The Breath Company products you should follow these instructions for the first two weeks of use. During this initial period the focus is on removing accumulation of volatile sulphur compounds in your oral cavity. After this period it is perfectly ok for most people to simply brush, floss, and rinse.

Remember not to rinse with water while using The Breath Company products as they need to remain undiluted in your mouth. Also, keep the bottle of oral rinse and the toothpaste tube tightly closed and away from the sun when not in use. Never store the mouth rinse in a clear plastic bottle.

Instructions:

1. Take a length of dental floss and wet the entire piece with The Breath Co Oral Rinse. Floss your teeth thoroughly so that the medicated rinse passes between all of your teeth.
2. Gently brush your tongue with a tongue scraper or toothbrush. This will help remove the mucous layer protecting the bacteria on your tongue. Don’t scrub. Be careful to avoid irritating your tongue’s delicate surface.

3. Rinse off the tongue scraper or toothbrush and apply a small amount of The Breath Co Toothpaste. Gently brush the toothpaste onto the newly exposed surface of your tongue, allowing the formula to reach the bacteria that live beneath the tongue’s fibers. Brush the tongue as far back as possible without gagging. **You may spit afterwards but do not rinse your mouth with water.**

4. Place The Breath Co Toothpaste on a dry toothbrush and brush for 2-3 minutes. Make sure to also brush the roof of your mouth and the inside of your cheeks. Bacteria are extremely sticky and end up almost everywhere in your mouth. You do not have to brush hard, but make sure that you are thorough. When brushing your teeth, remember to angle the brush towards your gums, feeling the bristles gently sliding under the gum line. **You may spit afterwards but do not rinse your mouth with water.**

5. Measure one dosage cup of The Breath Co Oral Rinse. Vigorously swish the rinse all over the inside of your mouth for 90 seconds in order to cover all the oral surfaces. The residual The Breath Co Toothpaste will react with the oxygenating properties of The Breath Co Oral Rinse and effectively attack the source of bad breath odour. **You may spit afterwards but do not rinse your mouth with water.**

6. Measure another dosage cup of The Breath Co Oral Rinse. Tilt your head back and gargle with the rinse for 90 seconds, attempting to get it as far back as possible in your throat without gagging. **You may spit afterwards but do not rinse your mouth with water. This completes the cleaning procedure.**

7. Do not eat or drink anything for 10 minutes following this procedure to allow the The Breath Company formula to completely work on the bacteria in your mouth. This should be sufficient to remove stubborn odours, unpleasant tastes and keep your breath fresh for hours.
Frequently Asked Questions

Can bad breath be cured?

Answer: No. Unfortunately there is no such thing as a one time cure-all for bad breath (or headaches, or toothaches, or acne, or dandruff, etc). The bacteria that produce odourous waste are always there and are a natural and required part of your digestive process. It isn’t possible to kill them off permanently. You can prevent bad breath that comes from bad-breath-related bacteria by keeping their populations in check and converting their metabolic products to non-odourous salts. This is how The Breath Company products work to keep breath fresh and clean.

Why do I have bad breath when I brush and floss regularly? My husband is not nearly as meticulous and his breath smells great.

Answer: Oral hygiene and fresh breath are actually two different things. It’s important to brush and floss because that’s how you keep your teeth inside your head forever, but that’s not how you tackle bad breath. Your husband may have a lot of saliva and a smooth tongue. He may not eat foods which stimulate the bacteria, such as high protein or dairy foods. On the other hand, you may have a dry mouth all the time due to stress, a fissured tongue and be a smoker and coffee drinker. If you have a tendency for bad breath, use The Breath Company products to eliminate odour. Your husband will thank you!

Are men or women more likely to have bad breath?

Answer: Bad breath due to foods and bacteria seem to be evenly split between men and women. Certain hormonal triggers in women (birth control pills, pregnancy, the menstrual cycle) can cause mouth dryness which can lead to more bad breath.

Is bad breath hereditary? Can I pass it on to my kids?

Answer: No. One can’t inherit bad breath. But, just as one inherits the shape of a father’s nose, one can inherit a specific tongue feature that can predispose them to having bad breath. Certain tongue features such as a fissured tongue or one with longer papillae (the fibers that make up your tongue) can make this more likely.
Frequently Asked Questions (continued)

What causes the white coating on my tongue?

**Answer:** There are billions of bacteria living in your mouth. When you eat food, they consume what is left over. They will also gobble up dead tissue, phlegm or mucus from post-nasal drip, etc. Once they eat, they metabolize what they consume and excrete it as waste. That yellow or white coating on your tongue is waste left by bad-breath-related bacteria.

Is there a benefit to using a tongue scraper or tongue brush?

**Answer:** Tongue scraping by itself is not particularly effective. It is kind of like using a toothbrush without toothpaste. Excessive or overly aggressive scraping can also result in injury – a painful, dry and burning tongue. For a clean tongue we recommend you use a tongue scraper or toothbrush to gently apply The Breath Co Toothpaste to the tongue surface. This will help remove waste and odour from the bacteria that live deep in the tongue’s papillae or fibers while soothing tongue irritation.

I can smell bad breath coming from my nose when I exhale. Am I imagining things?

**Answer:** It is quite possible that you are smelling bad breath odour when you exhale. This type of odour is typically due to mucus in the nasal passage feeding bacteria at the back of the throat. As you exhale, odour is carried from inside your mouth and out of your nose. If you have post-nasal drip, allergies or other sinus or upper respiratory conditions you are a candidate for this type of sinus-related breath odour.

Once in a while I get small white round dots that appear on my tonsils and sometimes I even cough them up. They have an extremely strong odour. What are they?

**Answer:** Those little round globules are known as tonsil stones or tonsilloliths and they are formed when sulphur gas mixes with the mucus and thick saliva in the back of your throat. This gooey mixture then condenses into concentrated, odourous globs. (see page 18 for more info)
Asked Questions (continued)

How often should I use The Breath Company products?

**Answer:** The only way to effectively stop bacteria from producing volatile sulphur compounds is to use The Breath Company products every twelve hours. Bad-breath-related bacteria reproduce every 10-12 hours which is why the product needs to be used on a regular basis to control their population. I recommend you use The Breath Co Toothpaste and The Breath Co Oral Rinse every morning when you wake and every evening right before bedtime.

Where are The Breath Company products made?

**Answer:** All The Breath Company products are proudly made in the USA at FDA licensed and OSHA compliant facilities employing legal and skilled labor. I take pride in the quality of my products and the safety and well-being of my employees.

How long have The Breath Company products been on the market?

**Answer:** TheraBreath (the US version of The Breath Company) was first developed in 1992 when my daughter was teased in junior high about having a bad breath problem. The products she tried at the time just didn’t work for her. Within a year I had a working prototype of the formula that became The Breath Co Oral Rinse (that my daughter still uses to this day!). It was first sold through dental offices in the US in 1993. By 1995, TheraBreath Toothpaste and Oral Rinse were available in most major US drug stores. We are pleased to now offer our products in the UK under The Breath Company label.

Do The Breath Company products come with a guarantee?

**Answer:** Yes. I guarantee that you will be completely satisfied with every The Breath Company product you buy. If there is ever a problem, simply contact my office using the information listed on the label of every The Breath Company product for refund instructions.
Frequently Asked Questions (continued)

Are The Breath Company products safe for children?
Answer: It is safe to use by any child old enough to use any type of toothpaste or oral rinse. My children all used The Breath Company products growing up and are now giving them to their children.

Are The Breath Company products safe for diabetics?
Answer: Yes. Our products are safe for use by diabetics.

Are The Breath Company products safe for pregnant women?
Answer: Yes. Our products are safe to use by pregnant women. Women who are expecting need to pay particular attention to their oral and gum health. The Breath Company products are formulated to help with oral care problems that pregnant women face.

Are The Breath Company products safe to use after a dental procedure?
Answer: Usually yes, but we encourage you to ask your dentist how long to wait before resuming brushing, flossing and rinsing. The Breath Company products are kind to tooth enamel and porcelain. It is also beneficial to damaged or injured oral tissue and can help soothe irritation after recent dental work.

Do your products contain any sugar or artificial sweeteners?
Answer: No. The Breath Company products are naturally sweetened with Xylitol made from the bark of the white birch tree and/or Sucralose made from sugar that has been modified to not cause tooth decay. Both are safe for use by diabetics.

Do your products contain any animal byproducts?
Answer: No. The Breath Company products are certified as Vegetarian, Vegan and Kosher by independent authorities. They do not contain any animal byproducts. I also reject the idea of animal testing whenever possible.

Do your products contain artificial flavours or colours?
Answer: No. There are absolutely no artificial flavours, colours, soaps, dyes, detergents or alcohol in any The Breath Company products.
Frequently Asked Questions (continued)

Do your products contain gluten?
Answer: No. All The Breath Company products are 100% gluten-free.

What does it mean that your products are Kosher?
Answer: It means that our products are bottled under Rabbinical Supervision and have earned the KSA seal of approval, one of the toughest standards in the world for consumed products. You can be assured all manufacturing and bottling is carefully scrutinized and that no animal products are EVER used in any of our formulas.

Is it safe to swallow your oral rinses?
Answer: Yes - in small amounts. Many people allow a small amount of the rinse to trickle down the back of their throat after gargling in order to reach bacteria at the far back of the throat where normal gargling may not reach. This is perfectly safe.

The Breath Co Oral Rinse doesn’t burn. Doesn’t the “burn” of a mouthwash indicate it is killing bacteria?
Answer: Not necessarily. The concentration of alcohol in the leading alcohol-based mouthwash is just strong enough to feel unpleasant but not strong enough to actually kill bacteria. In addition, attacking bacteria with harsh alcohol can actually lead to more serious oral care issues over time. Alcohol can dry the mouth and reduce its ability to produce healthy saliva - your body’s own defense against germs in the mouth.

✔ Dr. Katz Product Tip: The power of oxygen

The Breath Company products use the power of oxygen to attack germs. This doesn’t burn your mouth and it doesn’t dry your mouth. Since bad-breath-related bacteria don’t like oxygen, this is an extremely effective method to control germs and their odour.
Frequently Asked Questions (continued)

What is the best way to begin using The Breath Company products?

**Answer:** If you are simply concerned with fresh breath and a clean mouth, I recommend you start with The Breath Co Toothpaste and The Breath Co Oral Rinse. Use these twice a day for a month and you will see a huge difference in how your mouth feels, tastes and smells.

I am using The Breath Co Oral Rinse for the first time and things taste a little strange. Is this normal?

**Answer:** Yes. In some cases, a difference in taste may occur for the first few days after starting to use our products. THIS IS ONLY TEMPORARY. If the sensation is unpleasant you can sprinkle some baking soda on your toothbrush and then gently brush your tongue. Do this twice per day for three days as you continue using the products as directed. This counteracts any acidity you may have in your mouth.

Why can’t I use water to rinse with when using The Breath Company products?

**Answer:** The Breath Co Toothpaste and The Breath Co Oral Rinse are designed to work together as a two-step process to knock out bad-breath-producing bacteria and their odours. The Breath Co Oral Rinse reacts with The Breath Co Toothpaste in a patented oxygenating process to thoroughly clean your mouth. Rinsing the toothpaste out of your mouth prior to introducing the oral rinse disrupts this process and makes the regimen far less effective. While it may take a bit to get used to not rinsing with water, we are sure you will be very impressed with the results once you do.

Can I continue to use my regular toothpaste and mouthwash if I use The Breath Company products?

**Answer:** No. We strongly recommend that you don’t use any other toothpastes or mouthwashes in conjunction with The Breath Company products. This is because almost all commercial toothpastes and mouthwashes contain ingredients such as Sodium Lauryl Sulphate (soap) or alcohol that will negate the potency and efficacy of the active ingredients in The Breath Company products.
Appendix A: Medications That Can Cause Dry Mouth

ANOREXIANT
Adipex-P, Fastin, Ionamin, Zantryl ........................................... phentermine
Anorex SR, Adipost, Bontril PDM ........................................... phendimetrazine
Mazanor, Sanorex .................................................................. mazindol
Pondimin, Fen-Phen ............................................................... fenfluramine
Tenuate, Tepanil, Ten-Tab .................................................... diethylpropion

ANTIACNE
Accutane ................................................................................ isotretinoin

ANTIANXIETY
Atarax, Vistaril ................................................................. hydroxyzine
Ativan ................................................................................ lorazepam
Centrax ................................................................................ prazepam
Equanil, Miltown .............................................................. meprobamate
Librium ................................................................................ chlordiazepoxide
Paxipam ............................................................................... halazepam
Serax .................................................................................. oxazepam
Valium ................................................................................ diazepam
Xanax ................................................................................ alprazolam

ANTICHOLINERGIC / ANTISPASMODIC
Anaspaz ................................................................. hyoscyamine
Atropisol. Sal-Tropine ...................................................... atropine
Banthine ........................................................................ methantheline
Bellergal ........................................................................ belladonna alkaloids
Bentyl ........................................................................... dicyclomine
Daricon .......................................................... oxyphencyclimine
Ditropan ........................................................... oxybutynin
Donnatal, Kinesed....hyoscyamine w/ atropine, phenobarbital, scopolamine
Librax .......................................................... chlordiazepoxide with clidinium
Pamine .......................................................... methscopolamine
Pro-Banthine .......................................................... propantheline
Transderm-Scop ................................................ scopolamine
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<th>ANTIкон VulSANT</th>
<th>Felbatol ................................................................felbamate</th>
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<thead>
<tr>
<th>ANTIDEPRESSANT</th>
<th>Anafranil ................................................................clomipramine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Asendin ................................................................amoxapine</td>
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<tr>
<td></td>
<td>Elavil ......................................................................amitryptaline</td>
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<td></td>
<td>Luvox ........................................................................fluvoxoxamine</td>
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<tr>
<td></td>
<td>Norpramin ..................................................................desipramine</td>
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<td></td>
<td>Prozac ......................................................................fluoxetine</td>
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<tr>
<td></td>
<td>Sinequan ..................................................................doxepin</td>
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<tr>
<td></td>
<td>Tofranil ..................................................................imipramine</td>
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<tr>
<td></td>
<td>Wellbutrin ................................................................bupropion</td>
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</tbody>
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<tr>
<th>ANTIDiARRHETic</th>
<th>Imodium AD ................................................................loperamide</th>
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<tbody>
<tr>
<td></td>
<td>Lomotil ........................................................................diphenoxylate with atropine</td>
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<tr>
<td></td>
<td>Motofen ........................................................................difenoxin with atropine</td>
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</tbody>
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<thead>
<tr>
<th>ANTIHISTAMINE</th>
<th>Actifed ..........................................................triprolidine with pseudoephedrine</th>
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<tbody>
<tr>
<td></td>
<td>Benadryl ........................................................................diphenhydramine</td>
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<tr>
<td></td>
<td>Chlor-Trimeton ................................................................chlorpheniramine</td>
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<tr>
<td></td>
<td>Claritin ........................................................................loratadine</td>
</tr>
<tr>
<td></td>
<td>Dimetane .........................................................................brompheniramine</td>
</tr>
<tr>
<td></td>
<td>Dimetapp ........................................................................brompheniramine with phenylpropanolamine</td>
</tr>
<tr>
<td></td>
<td>Hismanal ........................................................................astemizole</td>
</tr>
<tr>
<td></td>
<td>Phenergan ......................................................................promethazine</td>
</tr>
<tr>
<td></td>
<td>Pyribenzamine (PBZ) ....................................................tripelennamine</td>
</tr>
<tr>
<td></td>
<td>Seldane ..........................................................................terfenadine</td>
</tr>
</tbody>
</table>
ANTIHYPERTENSIVE
Capoten ................................................................. captopril
Catapres .............................................................. clonidine
Coreg ................................................................. carvedilol
Ismelin ............................................................... guanethidine
Minipress ........................................................... prazosin
Serpasil ............................................................... reserpine
Wytensin ........................................................... guanabenz

ANTIINFLAMMATORY ANALGESIC
Dolobid .............................................................. diflunisal
Feldene ............................................................. piroxicam
Motrin, Advil ..................................................... ibuprofen
Nalfon ............................................................... fenoprofen
Naprosyn .......................................................... naproxen

ANTINAUSEANT/ANTIEMETIC
Antivert ........................................................... meclizine
Dramamine ....................................................... dyphenhydramine
Marezine .......................................................... cyclizine

ANTIPARKINSONIAN
Akineton .......................................................... biperiden
Artane ............................................................ trihexyphenidyl
Cogentin ........................................................ benztropine mesylate
Larodopa ........................................................ levodopa
Sinemet .......................................................... carbidopa with levodopa

ANTIPSYCHOTIC
Clozaril ............................................................ clozapine
Compazine ....................................................... prochlorperazine
Eskalith .......................................................... lithium
Haldol ............................................................. haloperidol
Mellaril ................................................................. thioridazine
Navane ................................................................. thiothixene
OraP ................................................................. pimozide
Sparine .............................................................. promazine
Stelazine .......................................................... trifluoperazine
Thorazine ......................................................... chlorpromazine

**BRONCHDILATOR**
Atrovent ............................................................. ipratropium
Isuprel ............................................................... isoproterenol
Proventil, Ventolin ................................................... albuterol

**DECONGESTANT**
Ornade ...................................... phenylpropanolamine with chlorpheniramine
Sudafed ................................................................. pseudoephedrine

**DIURETIC**
Diuril ................................................................. chlorothiazide
Dyazide, Maxzide .......................... triamterine and hydrochlorothiazide
HydroDIURIL, EsiDrix .......................... hydrochlorothiazide
Hygroton .......................................................... chlorthalidone
Lasix ................................................................. furosemide
Midamor ............................................................. amiloride

**MUSCLE RELAXANT**
Flexeril .......................................................... cyclobenzaprine
Lioresal ............................................................... baclofen
Norflex, Disipal ...................................................... orphenadrine

**NARCOTIC ANALGESIC**
Demerol ........................................................ meperidine
MS Contin .......................................................... morphine

**SEDATIVE**
Dalmane ........................................................ flurazepam
Halcion .............................................................. triazolam
Restoril .............................................................. temazepam
ANTIDEPRESSANTS
Prozac, Norpramin, Pertofrane, Elavil, Adapin, Valium (occasionally) Imavate, SK-Pramine, Tofranil, Aventyl, Vivactil, Zoloft, Paxil Sigequan

ANTIPARKINSONISM
Akineton, Artane, Laradopa, Parsidol

ANTIHISTAMINES (Cold Medications)
Actifed, Benadryl, Comtrex, Dimetapp, Pheran, Triaminic, Vistaril, Historal

ANTIHYPERTENSIVES (High Blood Pressure Medication)
Beta Blockers, Diuretics, Anti-Coagulants, Rautensin, Isemelin, Aldomet, Serpasil, Minipress, Inversine, Hyperoid, Catapres, Inderal, Inderide, Aquatensin, Moderatic, Diazide

ANTISPASMODICS & ANTICHOLINERGICS (gastrointestinal)
Quarzan, Vistrax, Combid, Pro-Banthine, Anaspaz PB, Donnatal, Pathibate

ANTISPASMODICS & ANTICHOLINERGICS (Urinary type)
Pyridium, Cystospaz, Ditropan, Urispas, Trac-Tabs

ANTIPSYCHOTIC AGENTS
Haldol, Rau-Sed, Serpasil, Thorazine, Stelazine, Comazine, Moban Daxolin, Lithane, Lithonate
Appendix B: Success Stories / Testimonials

The Breath Company products work exactly as advertised. I’ve tried other toothpastes and mouthwashes and the principle behind each was to simply cover up mouth odour. As a teacher I work closely with dozens of students daily and I need to feel the certainty that my breath isn’t a distraction to the students I am working with. Only The Breath Company products has given me this certainty, and for this reason I have used their products exclusively for the past ten years. The products work! - Dan

I appreciate that The Breath Company is targeting a bad breath solution in the “correct” way and I haven’t seen anything like it from other vendors. I have learned things from their informative articles that I have never heard anywhere else, and I work in the medical field. - Darrel

This product is fantastic! It really does give me the confidence that my teeth are clean and my breath is fresh. I’m not afraid to talk when I get near people anymore. Fantastic! - Robert

Hello Dr. Katz and team, THANK YOU THANK YOU THANK YOU THANK YOU for your WONDERFUL products!! I’m 36...I had bad breath for at least 20 years. I tried everything...everything. I gave up hope and I became a constant gum chewer... But your product cured it...I can’t believe it. My wife can’t believe it. (she’s more excited than I am because it’s her who smells my breath not me!) Even my morning and after workout breath is fresh! Whoa crazy!!! I can finally talk to someone without worrying... I feel like I just won lotto! I don’t know who will read this email but I really wanted to say thank you to Dr. Katz from bottom of my heart! THANK YOU! - Sam

This product has saved me many times from the humiliation of very bad breath once I drink coffee or eat certain foods. I have tried so many products that made the breath worst and listerine is one of those items. I LOVE DR. KATZ PRODUCTS, THANK YOU!!! Gabriella
Appendix B: Success Stories / Testimonials (cont’d)

I’ve been using The Breath Company products for about a year and it has changed my life. I started having chronic halitosis when I started my teenage years. People would cover their noses when I talked to them or back away from me. It was so heart breaking. When I started using your products I notice results with the first week. Now I don’t have to be afraid to open my mouth and speak to people or to sing if I want to. I have been liberated. I don’t know how to thank you. You have changed my life. I will use your products for the rest of my life. BTW, I now have a boyfriend that I can kiss ALL THE TIME. - Kim H.

I’ve been plagued with those little white things in my tonsils for the past 2 years !!! I’ve been put on and off antibiotics, Zyrtec, anti-depressants, prescription throat sprays, nasal sprays and etc. I’ve gone to several special specialists and to absolutely no AVAIL! I was told that my tonsil stones were stress, allergies, depression. I would literally gargle with harsh mouthwashes for 15 to 20 times a day only to make my condition worse. Your products made me so happy, grateful, and relieved. I only used your products for two days and the improvement is tremendous. Thank you sooo much. - Trisha

Thank you for giving me back my social life. I suffered from severe halitosis all my life. I bought countless mouthwashes, mints, and every kind of toothpaste but nothing worked. You should receive a nobel prize for inventing The Breath Company. I no longer have to make sure I have gum in my mouth or stand a long distance from people when conversating. - Sincerely, Sheila

These are just a small sampling of the hundreds, if not thousands, of customer testimonials we have on file.
Did you know...

...there are literally more bacteria living in your mouth right now than there are people living on planet Earth?

...a capful of typical mouthwash contains as much alcohol as a shot of vodka?

...it’s impossible to test your own breath by exhaling into your cupped hand and then trying to smell the result?

These are just a few of the little known facts that you will discover in The Bad Breath Bible!

It was researched and written by Dr. Harold Katz, the internationally recognized expert on bad breath and halitosis issues.

Since 1994, no one has helped more people fight bad breath than Dr. Katz. Over 6 million people in 98 countries have used his clinically proven, The Breath Company® System formulas to eliminate bad breath and regain lost confidence.

Visit us online at www.TheBreathCo.com